A FRAMEWORK FOR THE REVERSE LOGISTICS MANAGEMENT OF CONSUMER RETURNS IN ONLINE RETAILING

by

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ABSTRACT

The effective reverse logistics management (RLM) of consumer returns is critical for the survival of online retailers, given the inevitable nature of product returns in the online retailing industry and the rising volume thereof due to increased online shopping. This study aimed to address the challenges and gaps in RLM practices by examining consumer returns, reverse logistics (RL) processes, practices, and important factors, ultimately developing a framework for the effective RLM of consumer returns in online retailing. The primary objective of this study was to develop a comprehensive framework that online retailers can use to manage consumer returns efficiently, thereby enhancing performance and consumer satisfaction. The secondary objectives of the study aimed at examining RLM, determining the factors that influence RLM implementation and success, exploring consumer return types and RL processes from RL literature and inputs by industry experts, and investigating important factors for the effective RLM of consumer returns in online retailing. This multimethod qualitative study was conducted in three phases. Phase one involved a literature review to conceptualise RLM. Phase two used a qualitative content analysis of 289 journal articles to explore key elements of RLM. Phase three comprised 13 semi-structured interviews with industry experts to explore RLM in online retailing. Rigorous methods such as triangulation, thick description, and audit trails were employed to ensure the trustworthiness of the study. The study revealed that return prevention and control, service quality, and cost efficiency are critical for effective RLM. Service quality emerged as the most significant factor, indicating that online retailers should prioritise service-oriented and consumer-centric practices. The developed framework is a practical guide and benchmark for online retailers to manage consumer returns effectively. It also provides a foundation for future research to test and refine the framework in various settings, contributing to the broader field of RLM. Regarding policy, the study offers key insights and recommendations that can inform policymakers in developing guidelines and regulations to support effective RLM practices. The framework can serve as a policy tool to standardise RLM procedures, enhance consumer satisfaction and improve the sustainability of online retail operations.

Key words: Reverse logistics; Reverse logistics management; Consumer returns; Product returns; Reverse logistics practices; Reverse logistics processes; Reverse logistics barriers; Reverse logistics framework; Online retailing; Returns management

OPSOMMING

Die doeltreffende omgekeerde logistiekbestuur van terugsendings deur verbruikers is van kritieke belang vir die oorlewing van aanlyn kleinhandelaars, gegewe die onvermydelike aard van terugsendings van produkte in die aanlyn kleinhandelbedryf en die stygende volume daarvan weens ’n verhoging in aanlyn inkopies. Hierdie studie het probeer om die uitdagings en gapings in omgekeerde logistiekbestuurspraktyke aan te pak deur terugsendings deur verbruikers, omgekeerde logistiekprosesse, -praktyke en belangrike faktore te ondersoek, en uiteindelik ’n raamwerk te ontwikkel vir die doeltreffende omgekeerde logistiekbestuur van die terugsendings van verbruikers in aanlyn kleinhandel. Die primêre doelwit van hierdie studie was om ’n omvattende raamwerk te ontwikkel wat aanlyn kleinhandelaars kan gebruik om terugsendings deur verbruikers doeltreffend te bestuur, en op hierdie wyse prestasie en verbruikersbevrediging te bevorder. Die sekondêre doelwitte van die studie was daarop gerig om omgekeerde logistiekbestuur te ondersoek, die faktore te bepaal wat die implementering en sukses van omgekeerde logistiekbestuur beïnvloed, die tipes terugsendings deur verbruikers en omgekeerde logistiekprosesse van omgekeerde logistiekliteratuur en insette van bedryfskenners te verken, en belangrike faktore te ondersoek vir die doeltreffende omgekeerde logistiekbestuur van terugsendings deur verbruikers in aanlyn kleinhandel. Hierdie multimetode kwalitatiewe studie is in drie fases uitgevoer. Fase een het ’n literatuuroorsig om omgekeerde logistiekbestuur te konseptualiseer behels. Fase twee het ’n kwalitatiewe inhoudsontleding van 289 joernaalartikels gebruik om sleutelelemente van omgekeerde logistiekbestuur te verken. Fase 3 het bestaan uit 13 halfgestruktureerde onderhoude met bedryfskenners om omgekeerde logistiekbestuur in aanlyn kleinhandel te verken. Gestrenge metodes soos triangulasie, dik beskrywing en ouditspore is aangewend om die betroubaarheid van die studie te verseker. Die studie het onthul dat die voorkoming van terugsendings, die beheer van terugsendings, diensgehalte en kostedoeltreffendheid van kritieke belang is vir doeltreffende omgekeerde logistiekbestuur. Diensgehalte was die mees beduidende faktor, en het aangedui dat aanlyn kleinhandelaars voorkeur moet gee aan diensgeoriënteerde en verbruikersentriese praktyke. Die ontwikkelde raamwerk is ’n praktiese gids en maatstaf vir aanlyn kleinhandelaars om die terugsendings van verbruikers doeltreffend te bestuur. Dit bied ook ’n grondslag vir toekomstige navorsing om die raamwerk in verskeie omgewings te toets en te verfyn, wat sal bydra tot die wyer veld van omgekeerde logistiekbestuur. Wat beleid betref, bied die studie sleutelinsigte en -aanbevelings wat beleidmakers van ontwikkelende riglyne en regulasies kan aansê om doeltreffende omgekeerde logistiekbestuurspraktyke te ondersteun. Die raamwerk kan dien as ’n beleidsinstrument om omgekeerde logistiekbestuur-prosedures te standaardiseer,

verbruikersbevrediging te bevorder en die volhoubaarheid van aanlyn kleinhandelbedrywighede te verbeter.

Sleutelwoorde: Omgekeerde logistiek; Omgekeerde logistiekbestuur; Terugsendings van verbruikers; Terugsendings van produkte; Omgekeerde logistiekpraktyke; Omgekeerde logistiekprosesse; Omgekeerde logistiekstruikelblokke; Omgekeerde logistiekraamwerk; Aanlyn kleinhandel; Terugsendingsbestuur

OKUCASHUNIWE

Ukusebenza kahle kokuphathwa kokubuyiselwa kwempahla (RLM) ebuyiselwe abathengi kubalulekile ekusebenzeni ngempumelelo kwabathengisa ku-inthanethi, uma sibheka isimo esingenakusigwema sokubuyiselwa komkhiqizo embonini yokuthengisa ku-inthanethi kanye nenani elikhulayo lalokhu ngenxa yokudlondlobala kokuthenga ku-inthanethi. Inhloso yalolu cwaningo ukuxazulula izinselelo kanye negebe ekusebenzeni kwe-RLM ngokuthi sihlole imbuyiselo yabathengi, inqubo yokubuyiselwa kwempahla (RL), izindlela zokusebenza, nemithelela ebalulekile, ngokunjalo nokuqhamuka nohlaka olusebenza kahle lwe-RLM ngokwembuyiselo yabathenga ku-inthanethi. Inhloso enkulu yalolu cwaningo ukuthi kwakhiwe uhlaka oluphelele olungasetshenziswa abathengisi ku-inthanethi ukuze bengamele kahle imbuyiselo yabathengi, ngendlela ezothuthukisa ukusebenza nokwaneliseka kwabathengi. Inhloso yesibili yalolu cwaningo ukuthi kuhlolwe i-RLM, kuhlonzwe imithelela ethikameza ukuqaliswa kokusebenza ngempumelelo kwe-RLM, ukuhlola izinhlobo zembuyiselo yabathengi nezinqubo ze-RL ezivela emibhalweni ekhuluma nge-RL ngokunjalo nemibono yongoti kule mboni, kanye nokuphenya imithelela ebalulekile ngokusebenza kahle kwe-RLM ngokwembuyiselo yabathenga ku-inthanethi. Lolu cwaningo lusebenzise izindlela eziningi zokuhlolwa kweqophelo lwahlukaniswa izigaba ezintathu. Isigaba sokuqala sibandakanya ukubuyekezwa kwemibhalo ukuze sibe nesithombe esanele nge-RLM. Isigaba sesibili sisebenzise ukucwaningwa kwengqikithi yeqophelo kumajeneli angama-289 ukuze sihlole imithelela ebalulekile ye-RLM. Isigaba sesithathu sihlanganise izinhlolovo ezivulelekile eziyi-13 ezibanjwe nongoti kule mboni ukuze sihlole i-RLM ekuthengiseni nge-inthanethi. Lapha kusetshenziswe izindlela ezinqala ezifana nonxantathu, incazelo enzulu, nezindlela zokuhlola ukuze kuqinisekiswe ukuthenjwa kwalolu kocwaningo. Ucwaningo luveza ukuthi ukusebenza kahle kwe-RLM kuyinto ebalilekile uma sifisa ukuvimbela nokulawula imbuyiselo, iqophelo lokusebenza, kanye nokumelana nezindleko. Iqophelo lokusebenza livele njengento ebaluleke kakhulu, likhombisa ukuthi abathengisi ku-inthanethi kufanele babeke phambili umsebenzi kanye nabathengi babo. Kubaluleke kakhulu ukuba nohlaka lokulawula ukusebenza kanye nemikhawulo yabathengisi ku-inthanethi ukuze kulawuleke kahle imbuyiselo yabathengi. Lokhu kuhlinzeka ngesisekelo socwaningo lwesikhathi esizayo ukuze luhlole futhi luthole kahle uhlaka olulungiselelwe ngezindlela ezihlukahlukene, okuzolekelela kakhulu emkhakheni we-RLM. Mayelana nenqubomgomo, ucwaningo luhlinzeke ngolwazi olubalulekile nezincomo ezingazisa abasunguli benqubomgomo bakwazi ukuqhamuka nemihlahlandlela nemithethonqubo yokweseka ngokufanele izindlela zokusebenza kwe-RLM. Uhlaka lungasebenza njengenqubomgomo enemiyalelo emile ye-RLM, ukwenza ngcono ekwaneliseni abathengi kanye nokuphucula ukusimama kwemisebenzi yokudayisa ku-inthanethi.

Amagama amqoka: Ukubuyiselwa kwempahla; Ukuphathwa kokubuyiselwa kwempahla; Imbuyiselo yabathengi; Ukubuyiselwa komkhiqizo; Izindlela zokubuyiselwa kwempahla; Izinqubo zokubuyiselwa kwempahla; Imikhawulo yokubuyiselwa kwempahla; Uhlaka lokubuyiselwa kwempahla; Ukudayisa ku-inthanethi; Ukuphathwa kwembuyiselo

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LIST OF ABBREVIATIONS

3P

3P - Third party

3PL - Third party logistics

3PRL - Third party reverse logistics

3PS - Third party service

4P

4PL - Fourth party logistics

A

ABC -Activity-based costing

AI - Artificial intelligence

APS - Advanced planning and scheduling

B

B2C - Business to consumer

BEE - Black economic empowerment

BSC - Balance scorecard

C

CA - Content analysis

CAQDAS - Computer-assisted qualitative analysis software

CEMS - College of Economic and Management Science

CEO - Chief executive officer

CFI - Cross-functional integration

CI - Consumer integration

COR - Cost-orientated return

CPA - Consumer Protection Act

CR - Cost recovery

CRC - Centralised return centre

CRM - Customer relationship management

CRR - Consumer return request

CSM - Customer service management

CSR - Corporate social responsibility

D

DC - Distribution centre

DOA - Defective/Dead on arrival

E

EDI - Electronic data interchange

EOU - End of use

ERP - Enterprise resource system

F

FL - Forward logistics

FM - Financial management

FMCG - Fast moving consumer goods

I

IT - Information technology

K

KPI - Key performance indicator

L

LCA - Life cycle assessment

LSP - Logistics service provider

M

MIS - Management information system

MPS -Marginal propensity to save

MRP - Materials requirement planning

O

OEM - Original equipment manufacturer

P

PM - Performance measurement

PMS - Performance management system

POPI - Protection of Personal Information

POS - Point of sales

PRM - Product recovery management

PRP - Proactive return prevention

Q

QCA - Qualitative content analysis

R

RA - Return avoidance

RC - Resource commitment

RCE - Return cost evaluation

RCM - Retunr cost management

RERC - Research ethics review committee

RF - Radio frequency

RFC - Request for credit

RFID - Radio frequency identification

RL - Reverse logistics

RLC - Reverse logistics control

RLIT - Reverse logistics information technology

RLM - Reverse logistics management

RMA - Return merchandise authorisation

RMS - Return management system

ROI - Return of investment

RPA - Return prevention and avoidance

RRP - Reactive return prevention

RSC - Reverse supply chain

RSCM - Reverse supply chain management

RSP - Return service performance

RTV - Return to vendor

S

SAP - Systems, Applications and Products in Data Processing

SAPICS - South African Production and Inventory Control Society

SC - Supply chain

SCI - Supply chain integration

SCOR - Supply chain operation reference

SCRM - Supply chain relationship management

SLA - Service level agreement

SMS - Short message service

SOP - Standard operating procedures

SOR - Service-orientated returns

SPP - Strategic planning and procedures

SRO - Secondary research objective

SWOT - Strength Weakness Opportunity and Threat

T

TA - Thematic analysis

TCO - Total cost of ownership

TLIT - Traditional logistics information technology

TMS - Transport management system

U

UNISA - University of South Africa

UX - User experience

V

VOC - Voice of the customer

W

WMS - Warehouse

Chapter 1 - Introduction to the study

1.1 INTRODUCTION

"Returns are turning into the e-commerce Achilles' heel" (Bozzi, Neves & Mont'Alvão, 2022:27). Reverse logistics (RL) formed a part of retailing for more than a hundred years, with US retailers Sears Roebuck and Montgomery Ward delivering products by railroad. However, recently e-commerce led to an explosion of RL, which involves product returns from consumers to online retailers (Anderson, 2020:1). RL is an unavoidable fact of online retailing (Chen, Li & Zhan, 2016:175; Lamba, Yadav, Barve & Panda, 2020:381; Kiro, 2015:66) and consumer returns can be regarded as one of the most significant problems that online retailers experience (Bieniek, 2023:1; Dobroselskyi, Madleňákb & Laitkepc, 2021:318). Any kind of consumer considers the ability to return products as a vital part of a retailer's value proposition (Anderson, 2020:11). With a poor RL function, many consumers are likely to disregard online shopping (Dobson, 2023:4; Yang, 2014:160), which can be detrimental to the online retailer's profitability, market share and corporate image (Davidavičienė, & Al Majzoub, 2021:2; Jra, Cunhaa, Almeidaa, & Marinsa, 2017:29).

Consequently, *reverse logistics management (RLM)* plays a critical role in the sustainability of online retailers (Anderson, 2020:11), enabling them to reduce costs, limit negative impacts on the environment (Eriksson & Käck, 2023:4) and increase consumer buying confidence, satisfaction and retention (Castillo, 2023:7; Lin & Hsu, 2017:218; Jalil, 2019:1). Therefore, RLM of consumer returns in online retailing can be an important area in research (Foo & A-Jalil, 2021:45). This study focuses on the *RL processes, RL practices and important factors for the effective RLM of consumer returns*[1] *in online retailing*. In the following sections of this introduction, the key concepts of this study will be defined, followed by an overview of this chapter.

RL can be broadly defined as the process of moving returned products from the point of consumption to the point of origin for the purpose of recapturing value or proper disposal (Chen, Anselmi, Falasca & Tian, 2017:252). Badenhorst (2022:227) narrowly defined *RL* as "the management of all the activities involved in the flow of goods, demand information, and money in the opposite direction to the primary logistics flow; a reduction in the generation of waste, and the management of the collection, transport, disposal, and recycling of hazardous as well as non-hazardous waste in a way

[1] In this study, "consumer returns" will be used as a synonym for consumer product returns and product returns from consumers to online retailers.

that maximises the long-term profitability of the business". RL can include several *processes*, including a consumer return request (Bernon, Rossi & Cullen, 2011:491), gatekeeping (Agrawal, Singh & Murtaza, 2015:77), collection, transportation, inspection and sorting, returns processing, product disposition (Badenhorst, 2022:232) and redistribution (Hjort, Hellström, Karlsson & Oghazi, 2019:781).

Furthermore, RL can involve various *practices*, including information technology (IT) and systems, collaboration between supply chain (SC) parties, outsourcing strategies, RL standardisation and formalisation (Badenhorst, 2016:5; Badenhorst, 2017:606-607), gatekeeping and return avoidance strategies, establishing centralised return centres (CRCs) (Badenhorst, 2016:5), RL network/facility design (Agrawal, *et al.* 2015:88), cross-functional collaboration, strategic planning for RL, top management support, staff training (Badenhorst, 2017:606-607), disposition strategies (Khor & Udin, 2013:73), performance measurement (Bernon *et al.* 2011:499), commitment of resources (Morgan, Richey Jr. & Autry, 2016:307), and cost management (Ravi & Shankar, 2015:881). In general, *product returns* can be defined as the physical return of products backward in the SC (Andresen & Istad, 2019:9). Furthermore, a *consumer return* involves a consumer's decision to return a purchased product to the retailer or seller for a credit, refund or exchange (Badenhorst, 2022:231).

While no clear definition exists for RLM, the concepts of RL, returns management and RLM are often used interchangeably by industry professionals and scholars. For example, Reid (2023:1) and Winser, Tan and Leong (2023:421) stated that RL is often known as returns management. Additionally, Nandyala (2023:2) considered returns management and RLM as the same concepts for managing returns. Anderson (2020:5) added that managing RL can include any management approach based on the preference of organisations. According to Chen *et al.* (2017:252) *returns management* can be defined as a supply chain management (SCM) process that manages returns, RL, gatekeeping and return avoidance within the organisation and across key SC members. Jenkins (2021:2) indicated that *RLM* can be viewed as a management process, which starts with a consumer returning a products and continues with the movement of the returned product in the opposite direction of traditional forward logistics (FL) to any point in the SC. Based on these descriptions, this study considers RLM and returns management as concepts that cover all areas of managing consumer returns, from the return request stage to the stage of redistribution. Subsequently, this study defines *RLM* as an organisational process that involves the management of returns, RL processes and RL practices within the organisation[2] and across the SC for the purpose of long-term

[2] In this study the term organisation is used as a synonym for the terms "business", "firm" and "company".

economic and environmental sustainability.

Chapter 1 serves as an introduction to this study that focuses on the effective RLM of consumer returns in online retailing. Figure 1.1 provides an overview of chapter one.

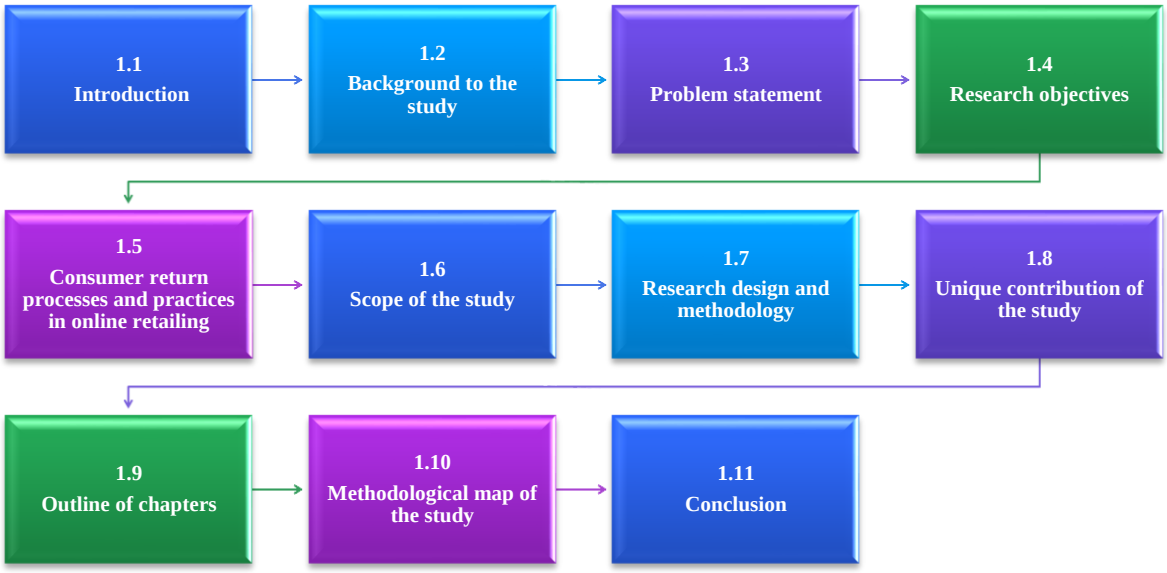


Figure 1.1 Overview of Chapter 1
Source: Compiled by the researcher

Figure 1.1 shows that Chapter 1 starts with the introduction, followed by the background, problem statement and research objectives of the study, whereafter an overview of the consumer return processes and practices in online retailing and a scope of the study will be provided. Thereafter, the research design and research methodology of the study will be discussed, followed by a discussion on the unique contribution of the study. Finally, the chapter will be end with an outline of the chapters, methodological map and the conclusion.

1.2 BACKGROUND TO THE STUDY

The e-commerce market can undoubtedly be characterised as one of the most promising and fast-growing markets in the world (Dobroselskyi *et al.* 2021:318). In South Africa, the e-commerce market is expanding at an unprecedented rate (Irine, 2023:7). Due to COVID-19, lockdowns and a decline in brick-and-mortar retail sales, online retailing in South African grew by 66% in 2020 (Daniel, 2021:1) and continued to grow by 25% in 2023 (Irine, 2023:1). Globally, South Africa is the 42nd largest e-commerce market with an estimated revenue of $7,217.8 million in 2023 (Irine, 2023:1). In fact, predictions show that South Africa's e-commerce market will be worth more than R400 billion (or US $21 billion) by 2025, expecting to exceed $25 billion by 2028 (Irine, 2023:1, 7).

Even before the e-commerce era, RL was regarded as problematic in SCs (Eliav, 2022:2). However, the massive increase in online retail sales contributed to an influx of product returns (Ashan & Rahman, 2021:3; Eliav, 2022:2; Wang, Dang & Nguyen, 2021:2), adding to the challenges of controlling consumer returns (Bozzi *et al.* 2022:27; Eliav, 2022:2). This caused reverse logistics management (RLM) to be more challenging and critical than ever before (Eliav, 2022:1). Despite the importance of RLM, many online retailers lack the capability to effectively manage consumer returns to win and retain their customers (Ashan & Rahman, 2021:3). Consequently, online retailers are increasingly facing problems with consumer returns (Das, Kumar & Rajak, 2020:8; Ashan & Rahman, 2021:3), and need to rethink the significance of RLM to manage consumer returns effectively (Rajagopal *et al.* 2015:47).

RL in online retailing involves the returns flow of online purchases from the consumer to the online retailer (Yan, Yong, Qinli & Stokes, 2012:251). Statistics show that 30% of all products ordered online are returned by consumers (Biswas & Abdul-Kader, 2018:1016; Castillo, 2023:2) for various reasons, including faulty, poor quality or damaged goods, late deliveries, inaccurate product descriptions on the website, a change of mind and incorrect fit (Ashan & Rahman 2022:138; De Araújo *et al.* 2018:348). Online consumers are limited to the presentation of products on websites and platforms, lacking the ability to touch, listen to, fit or smell products, which can lead to misconceptions about products and increased buyer risks (Dobroselskyia *et al.* 2021:319; Lin & Hsu, 2017:218; Nel & Badenhorst, 2020:115). Additionally, a factor that directly increases consumer returns in online retailing can be the uncertainty related to fit-dependent products, like clothes and shoes (Gustafsson, Jonsson & Holmström, 2021:878).

Consequently, the return rate of products bought online can be significantly higher than products bought from brick-and-mortar retailers (Castillo, 2023:2). In fact, Castillo (2023:2) and Kushwaha (2020:30) mentioned that online retailers experience an average return rate of 30% as opposed to traditional retailers that experience a return rate of 8.9%. Similarly, Espinosa, Stock, Ortinau and Monahan (2021:791) found that in-store return rates ranged from 5% to 10% of purchases, while online return rates ranged from 15% to 40% of purchases. Additionally, RL can be more complicated for online retailers in terms of their dependence consumers, lacking infrastructure to support operations, requiring systems, generating additional costs (Bozzi *et al.* 2022:22, 31), and supplying on-demand consumer return services through home product return pickups within limited timeframes (Eliav, 2022:1). Subsequently, RL and RLM in online retailing can be a more costly, complex and multifaceted process, which requires effective management and coordination of all parties involved (Eriksson & Käck, 2023:1). Ultimately, online retailers must pay more attention to the implementation of RL than their brick-and-mortar counterparts.

The intense competition in the online environment forces organisations to formulate and implement strategies to distinguish themselves from their competitors (Karlsson, Oghazi, Hellström, Patel, Papadopoulou & Hjort, 2023:3). Organisations may differentiate themselves through their RL strategies, processes and capabilities, which can positively impact financial, social and environmental performance (Shaik & Abdul-Kader, 2014:94). Additionally, the acceptance of consumer returns can be an important service feature offered by online retailers. Studies show that between 80 to 94% of consumers will stop purchasing from online retailers if product returns or exchanges are mismanaged (Dobson, 2023:4; Lin & Hsu 2017:218). Additionally, without clear RL processes, 27% of online consumers are likely to abandon their shopping carts and purchase products from competitors instead (Castillo, 2023:2). Therefore, improvements in RL will improve the online retailer's ability to effectively manage consumer returns (Davidavičienė & Al Majzoub, 2021:21), which in turn can increase consumer buying confidence, satisfaction, retention (Castillo, 2023:7; Lin & Hsu, 2017:218; Jalil, 2019:1), and the overall performance of the online retailer (Davidavičienė & Al Majzoub, 2021:21).

Nel and Badenhorst (2020:114) indicated that consumer returns can significantly impact the profitability of online retailers. While ineffective RL can reduce the profitability of online retailers by 8% to 15% (Kushawa, 2020:29), improved performance of RL can increase the overall financial performance of online retailers (Davidavičienė & Al Majzoub, 2021:1). Additionally, ineffective RLM of consumer returns can lead to a competitive disadvantage and a loss of market share (Foo & A-Jalil, 2021:57). Evidently, the significance of RL in online retailing can be vital for the survival of online retailers (Anderson, 2020:11; Yan *et al.* 2012:251). Despite this significance, many online retailers still fail to recognise the importance of RL and RLM, and view consumer returns as a cost and necessary evil to normal business (Bozzi *et al.* 2022:27; Chen *et al.* 2017:252; Dobson, 2023:2; Schooling, 2023:1). Consequently, many online retailers' ignorance about the importance of RL can be one of the biggest challenges in the online retailing industry (Davidavičienė & Al Majzoub, 2021:21; Wang, Liu & Wei, 2013:45), resulting in a loss of market share, reduction in profitability and poor corporate image (Davidavičienė & Al Majzoub, 2021:2; Jra, Cunhaa, Almeidaa & Marinsa, 2017:29).

With the drastic increase of online retailing, efficiencies of logistics and changing consumer requirements, the field of consumer returns and RL requires relevant research (Harris & Martin, 2014:1; Robertson, Hamilton & Jap, 2020:174). While a growing field in academic research, Frei, Jack and Brown (2020:1613) found that consumer returns are a unique and understudied topic, with only a few publications over the last two decades. This study in RL of online consumer returns confirmed this opinion of Frei *et al.* (2020:1613) with the qualitative content analysis (QCA) of RL

literature, which identified that only 4% of RL literature focused on consumer returns. Although research in RL and online retailing is gaining more attention (Das *et al.* 2020:50; Nel & Badenhorst, 2020:115), more empirical research is needed on effective RLM in online retailing (Chen *et al.* 2017:253). Additionally, Robertson *et al.* (2020:176) called for more academic research to determine practices that retailers can implement for more efficient consumer return processes.

Subsequently, this study addressed the perceived gap in research focusing on the RLM of consumer returns in online retailing. More specifically, this study explored and investigated consumer returns, RL processes, RL practices and important RLM factors in online retailing, and developed a framework for the effective RLM of consumer returns, thereby assisting online retailers to effectively deal with consumer returns, reduce costs, remain competitive, improve consumer satisfaction, increase market share and improve profitability.

Against this backdrop, the next section provides the problem statement of this study.

1.3 PROBLEM STATEMENT

From the background (section 1.2) it is evident that e-commerce sales and consequential returns increased phenomenally. Additionally, it was established that RL and RLM can be more complicated in online retailing and can significantly impact online retailers' performance in terms of cost, market share, image and customer service. Despite this, evidence shows that the importance of RL is not acknowledged nor effectively managed, with many online retailers failing to adopt consumer returns within their overall organisational strategy (Biswas & Abdul-Kader, 2018:1016; Robertson *et al.* 2020:172). Most online retailers focus on forward flows, giving limited attention to RL flows (Lamba *et al.* 2020:381). In fact, many online retailers consider managing returns and RL a headache (Hjort *et al.* 2019:767), costly and an unwanted burden (Schooling, 2023:1). Therefore, most online retailers still need to implement practices to effectively manage consumer returns to not only win and retain their customers (Ashan & Rahman, 2021:3) but also improve their profitability (Nel & Badenhorst, 2020:114). Accordingly, online retailers must view effective RLM as a critical part of their consumer acquisition and retention strategies (Schooling, 2023:1).

RL may be the most complex challenge for online retailers dealing with consumer returns (Davidavičienė & Al Majzoub, 2021:21) and developing a suitable approach to manage returns continues to be a growing challenge (Bieniek, 2023:1). Due to the complexity of RL and a lack of resources, many online retailers are unwilling and unable to manage RL effectively (Wang, Dang *et*

al. 2021:2)[3]. RL means that online retailers must repeat the same processes (as forward delivery) twice, resulting in duplication of operational expenses without the benefit of revenue (Bozzi *et al.* 2022:18). Consequently, RL and product returns generate cost for online retailers, including returned product handling costs, transportation costs, inventory holding costs, order-picking costs and tied up capital (Gustafsson, Jonsson & Holmström, 2021:877). Additionally, poorly managed RL processes can lead to consumer dissatisfaction, adding to the indirect costs of reputational damage and a loss of brand value (Bozzi *et al.* 2022:12). Subsequently, the costs of managing consumer returns are considerably higher than traditional FL because RL processes can be logistically more complicated and exception-driven (Robertson *et al.* 2020:174). According to Kushawa (2020:29), ineffective RL can reduce the profitability of online retailers by 8% to 15%. Moreover, failure to systematically collect, monitor or report consumer return data to senior management can generate considerable financial losses (Frei *et al.* 2020:1613). Evidently, consumer return processes can be complicated, ineffective and prone to internal and external fraud (Frei *et al.* 2020:1613).

Karlsson *et al.* (2023:5) found that online retailers often adopt an ad hoc approach to RLM instead of being guided by clear strategic thinking, which suggests that online retailers fail to comprehend the strategic implications of RLM. Neglecting RLM can lead to operational challenges (Franklin, 2022:1), consumer dissatisfaction and an increased RL cost (Foo & A-Jalil, 2021:45), which can be detrimental to the online retailer's profitability, market share and corporate image (Davidavičienė & Al Majzoub, 2021:2). Online retailers must realise the impact of consumer returns and RL on sales revenue, consumer satisfaction, costs and long-term profitability (Jalil, 2019:1; Nel & Badenhorst, 2020:116; Wang *et al.* 2021:2). Additionally, online retailers must determine and understand the reasons for consumer returns (Nel & Badenhorst, 2020:116), identify strategies and develop ways to improve their RL function (Zhang, Chang, Dong, Yue & Teo, 2022:3192). Gaining a deeper understanding of the RL process can help online retailers to increase efficiencies, reduce costs, maintain consumer satisfaction and loyalty (Eliav, 2022:1), and distinguish it from other organisational processes (Davidavičienė & Al Majzoub, 2021:4). Therefore, it can be critical for online retailers to understand every aspect of the RL process, establish efficient RL process to reduce costs and develop a comprehensive understanding of the reasons for consumer returns (Reid, 2023:2)

However, a lack of knowledge about the significance of RLM can cause various problems, including poor return processes, a lack of internal and external information and knowledge sharing, and a lack of research from the academic community (de Araújo *et al.* 2018:346). Lamba *et al.* (2020:398)

[3] The second surname is added since two different publications in the same year with the same starting surname is included in the bibliography. The other reference that this applies to include Wang, Wang *et al.* (2021).

indicated that a lack of understanding effective RL practices can be a main barrier in online retailing, inviting scholars to work with the industry to improve RL processes and practices. Therefore, RLM in online retailing must still mature, requiring scholars to identify problems in the management of consumer return processes and provide solutions to manage consumer returns effectively (Bernon, Cullen and Gorst, 2016:585; Robertson *et al.* 2020:175). According to Mishra and Napier (2014:46), exploratory research is needed to understand what prevents organisations from embracing RL and develop frameworks focused on RL implementation. Similarly, Frei *et al.* (2020:1613) contended that many retailers underestimate the scale of consumer returns, and more support in research must be provided in terms of frameworks and guidelines for the management of consumer returns. Furthermore, Lamba *et al.* (2020:388) mentioned that developing an effective RL framework can help online retailers to identify RLM barriers, save costs and realise profits.

Through a bibliometric analysis of RL literature, Bensalem and Kin (2019:15) revealed that RL is an emerging field of study with a strong identity. Although research in RL and online retailing is gaining more attention (Das *et al.* 2020:50; Nel & Badenhorst, 2020:115), more empirical research is needed on RLM (Chen *et al.* 2017:253) and RL in online retailing (Prajapati, Kant & Shankar, 2019:517). Additionally, Ratchford, Soysal, Zentner and Gauri (2022:170) indicated that most research on product returns is conducted from a theoretical perspective, in a brick-and-mortar context, meaning that more empirical research is needed on consumer returns in online channels. Similarly, Hjort *et al.* (2019:768) mentioned that in-depth research on RL processes and practices in online retailing is lacking, with Karlsson *et al.* (2023:1) adding that research on RLM strategy is scarce. While several studies focussed on optimal return policies to manage product returns, Robertson *et al.* (2020:175) suggested that more research must be conducted to explore alternative practices to manage consumer returns. Subsequently, few studies focused on RLM in the online retailing industry (de Araújo *et al.* 2018:346), warranting more academic research to determine practices that retailers can implement for efficient consumer return processes (Robertson *et al.* 2020:176).

From a local perspective, Mostert, Nieman and Kotzé (2017:2) suggested that effective RLM can be important in the retail industry of South Africa, indicating that more research must be conducted in the industry. Furthermore, Heyns and Kilbourn (2022:11) found that the ease of returning products is one of the most important factors for South African consumers in online shopping. Additionally, Badenhorst (2018:14) indicated that it can be important for South African organisations to understand the significance and impact of RL practices, which means that more empirical research in South Africa must be conducted to increase this understanding. Furthermore, Makaleng and Hove-

Sibanda (2022:24) suggested that more qualitative research on RL strategies for enhanced organisational competitiveness must be conducted in South Africa.

Essentially, with rising consumer return rates, online retailers must find ways to manage consumer returns cost effectively (Jenkins, 2021:14), making RL in online retailing a relevant area for both practitioners and academics to explore (Harris & Martin, 2014:1, 11). To this end this study responds to the call of Ratchford *et al*. (2022:156) for more research to be conducted on practices that can help retailers to manage online product returns more effectively. Accordingly, this study addressed the perceived gap in research by focusing on the RL processes, RL practices and important factors for the effective RLM of consumer returns in online retailing in South Africa. Considering the background, challenges that online retailers can experience in managing consumer returns effectively, and the notable gap in research and literature on the RLM of consumer returns in online retailing, the following problem statement was formulated:

> ***What are the RL processes, RL practices and important factors for the effective RLM of consumer returns in online retailing?***

Following this problem statement, the research objectives of this study will be outlined in the next section.

1.4 RESEARCH OBJECTIVES

The aim of this study was to fill the perceived gap in research and literature by focussing on consumer returns, RL processes, RL practices and RLM factors to serve as input in developing a framework for the effective RLM of consumer returns. The subsequent sections provide the primary and secondary research objectives of the study.

1.4.1 Primary research objective

The primary research objective of the study was to *develop a framework for the effective RLM of consumer returns in online retailing.*

1.4.2 Secondary research objectives

The secondary research objectives (SROs) of this study were as follows:

(1) to examine RLM and determine the factors that influence RLM implementation and success (SRO-1)

(2) to explore and analyse RL literature for consumer return types and pre-receipt RL processes of consumer returns (SRO-2)
(3) to explore and analyse RL literature for post-receipt RL processes of consumer returns (SRO-3)
(4) to explore and analyse RL literature for RL practices to manage consumer returns (SRO-4)
(5) to determine consumer return types and RL processes in online retailing, based on inputs from industry experts (SRO-5)
(6) to explore and identify important RL practices for managing consumer returns in online retailing, based on inputs from industry experts (SRO-6)
(7) to investigate and determine important factors for the effective RLM of consumer returns in online retailing (SRO-7)

Figure 1.2 provides an overview of the research objectives of this study.

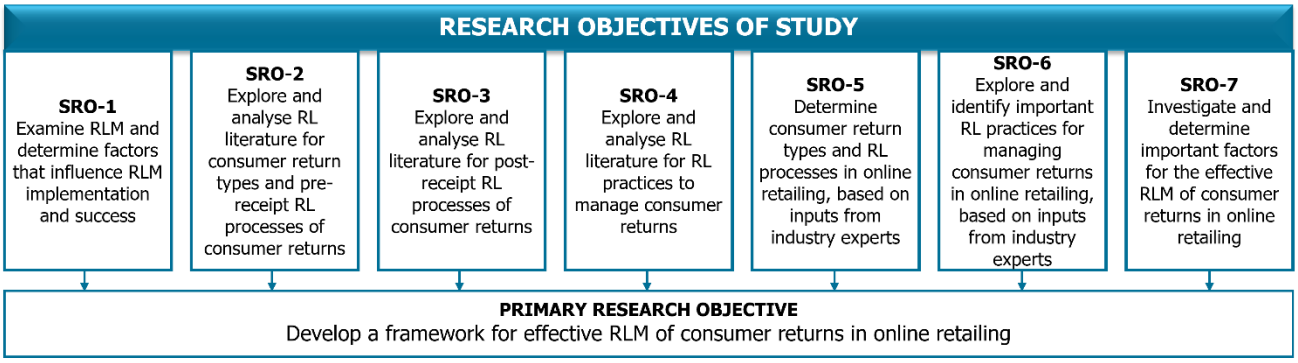


Figure 1.2 Overview of research objectives of the study
Source: Compiled by the researcher

Essentially, this study (1) established an overview of RLM, (2) identified drivers and benefits of effective RLM, barriers and problems to effective RLM and characteristics of effective RLM, (3) explored and analysed RL literature for consumer return types, RL processes of consumer returns and RL practices for managing consumer returns, (4) determined consumer return types and RL processes in online retailing, (5) explored and identified important RL practices for managing consumer returns in online retailing, and (6) investigated and determined important factors for the effective RLM of consumer returns in online retailing, which enabled the development of a framework for the effective RLM of consumer returns in online retailing.

In the next section, an overview of consumer return processes in the online retailing will be given.

1.5 OVERVIEW OF CONSUMER RETURN PROCESSES AND PRACTICES IN ONLINE RETAILING

As mentioned in the background and problem statement, RL can be important in online retailing due to higher return rates and the complexity of returns processes. Furthermore, effective RL for

consumer returns can be important for both customer service and the profitability of the online retailer. Unfortunately, many online retailers neglect RLM and lack effective consumer return processes to effectively manage consumer returns (sections 1.2 and 1.3). In this section a brief overview will be given of the consumer return processes and practices in online retailing.

1.5.1 Consumer return processes in online retailing

The consumer return process in online retailing is initiated by consumers that experience a gap between shopping expectations and the products received (Wei, Ma & Liu, 2021:489). Generally, consumer return processes in online retailing include a return request from customers (Kiro, 2015:71), gatekeeping, collection (Biswas & Abdul-Kader, 2018), receiving, processing, inspection, sorting, disposition (de Araújo *et al.* 2018:348) and redistribution (Hjort *et al.* 2019:781). Figure 1.3 provides a general overview of the key consumer return processes in online retailing.

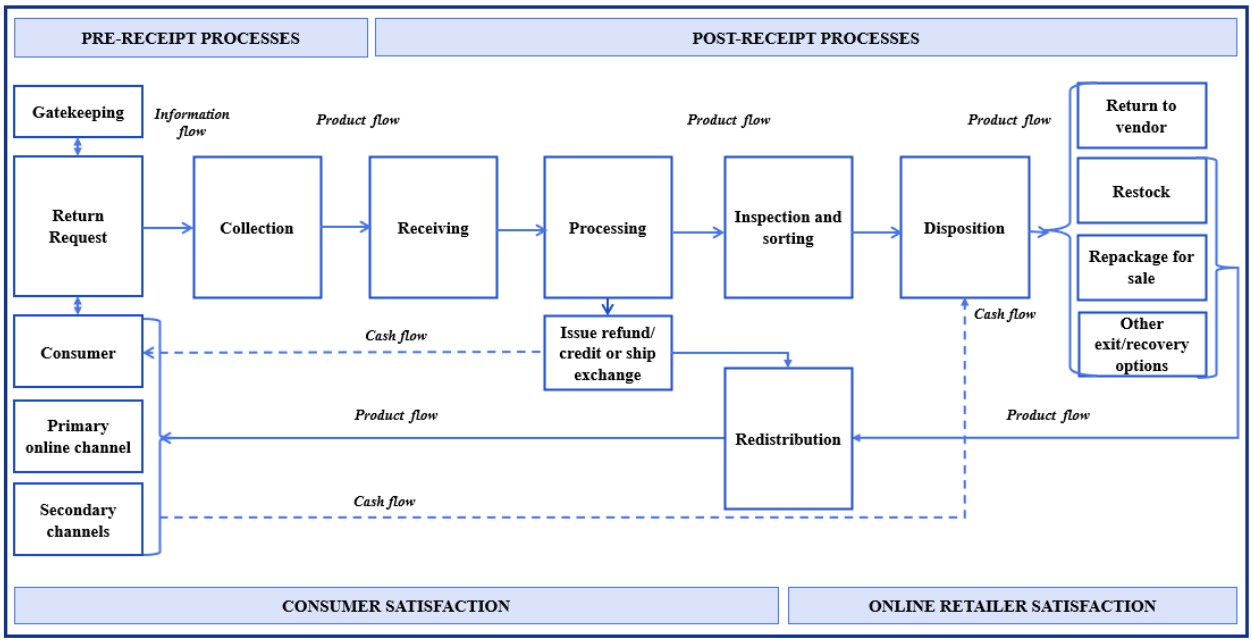


Figure 1.3 Key consumer return processes in online retailing
Source: Compiled by the researcher from Robinson (2014:4)

Figure 1.3 illustrates the key consumer return processes, which can be classified as pre-receipt and post-receipt processes. Additionally, the illustration shows the flows in the consumer return process, which can include information flow, product flow and cash flow (Harris & Martin, 2014:8). Finally, the illustration shows that consumers and the online retailer can be satisfied during various stages in the consumer return process, which must be the aim of this process. In the subsequent sections, the pre-receipt and post-receipt consumer return processes will be described, followed by a brief explanation about realising satisfaction in the consumer return processes.

1.5.1.1 Pre-receipt consumer return processes

The pre-receipt consumer return process starts with *information flow*, occurring when a consumer notifies the online retailer of their intention to return the product (Harris & Martin, 2014:8). Therefore, the first basic consumer return process in online retailing includes a *return request* from customers through the online platform (Biswas & Abdul-Kader, 2018:1019; Kiro, 2015:71). Once the online retailer becomes aware of the return intent, *gatekeeping* takes place, which can involve a return authorisation (Hjort *et al.* 2019:774) or rejection. Subsequently, the gatekeeping process involves determining if the product return can be accepted based on the return policy (Hjort *et al.* 2019:770; Harris & Martin, 2014:8). If the return request complies with the return policy requirements, return authorisation can be issued (de Araújo *et al.* 2018:348), which initiates product flow.

Consequently, *product flow* in the pre-receipt consumer return process starts when a product is *collected* from a consumer's location and returned to the facility of the online retailer (Harris & Martin, 2014:9). Alternatively, online retailers can use collection points, enabling consumers to take product returns to convenient locations, like petrol stations, post offices or convenience stores (De Leeuw, Minguela-Rata, Sabet, Boter & Sigurðardóttir, 2016:716). Additionally, online retailers can use third-party logistics (3PL) providers or couriers to collect products at consumer or drop-off locations (Nel & Badenhorst, 2020:123).

1.5.1.2 Post-receipt consumer return processes

The post-receipt consumer return process starts once the product arrives at the online retailer's facility. Evidently, the next consumer return process after return collection involves *receiving*, which entails (1) unloading of returned products from vehicles (de Araújo *et al.* 2018:348), (2) verification to determine if the returned product matches the original (purchased) product (Robinson, 2014:10), and (3) distribution of returned products to processing stations in the facility (de Araújo *et al.* 2018:348). Therefore, receiving in online retailing can be a labour-intensive process that requires skilled staff, ensuring accurate identification of returned products (Nel & Badenhorst, 2020:123).

At the processing stations in the facility, *returns processing* can be performed, which involves data entry (de Araújo *et al.* 2018:348), issuing a credit/refund or permitting a product exchange (de Araújo *et al.* 2018:348; Kiro, 2015:71; Robinson, 2014:9). Online retailers can use the options selected by consumers (e.g. product replacement or refund) during the return request as a basis for selecting processing outcomes (Hjort *et al.* 2019:770; Harris & Martin, 2014:8). Issuing a refund,

represents the *cash flow* path in the consumer return process of online retailers, while shipping an exchange involves *product flow*.

After receiving and processing, the *product flow* continues with *inspection* and *sorting* (Kiro, 2015:71; Robinson, 2014:5), which involves (1) analysing the condition of returned products (Nel & Badenhorst, 2020:123) and (2) classifying returned products based on return reasons and quality (Wei *et al.* 2021:489). The main purpose of inspection and sorting is to stream the returned items to the path of the highest selling price or recovery value (Robinson, 2014:10). Returned products can be routed to an appropriate disposition point (de Araújo *et al.* 2018:348) for restocking, repackaging, returning to vendors/suppliers and other disposition exit/recovery options (Nel & Badenhorst, 2020:123; Robinson, 2014:11).

Subsequently, the next consumer return process involves *disposition* (Kiro, 2015:71; Robinson, 2014:11), which entails *product* and *cash flows.* Disposition involves the selection and execution of disposition decisions based on inspection and sorting outcomes (Nel & Badenhorst, 2020:123). The highest recovery rate involves the *restocking* option, representing returned products in a new/unused condition (Robinson, 2014:11) that can be resold as new on the website (Biswas & Abdul-Kader, 2018:1019). The second highest recovery rate involves *repackaging*, representing returned products in "as new" condition that can be resold in clearance sales at a reduced price on the website (Robinson, 2014:11; Biswas & Abdul-Kader, 2018:1019).

Furthermore, online retailers can achieve full cost recovery through the *return to the vendor* option, which usually involves warranty claims or service level agreements (SLA) for returned products in defective conditions (Biswas & Abdul-Kader, 2018:1019; Robinson, 2014:11). If online retailers are unable to resell products on the website or return products to vendors, they can choose other disposition options (Robinson, 2014:11), like selling items as scrap (Biswas & Abdul-Kader, 2018:1019) or reselling the one the secondary market (De Leeuw *et al.* 2016:716). Additionally, other product recovery options may include repairing, refurbishing or remanufacturing (de Araújo *et al.* 2018:348). Evidently, the most value-producing disposition option with the least resource requirements involve reselling through the online platform, while the least value-producing disposition options with the most resource requirements involve product recovery options, like repair, refurbishment and remanufacturing (Hjort *et al.* 2019:771).

Finally, *product flow* ends with the final consumer return process of *redistribution,* converting the consumer return process into a forward logistics (FL) process (Wei *et al.* 2021:489). Particularly, redistribution in online retailing involves all FL activities to move returned products back to the markets, depending on the selected disposition options (De Leeuw *et al.* 2016:716). However,

redistribution can also be associated with the processing option of shipping exchanges/replacements. Subsequently, redistribution can involve the movement of new/unused or repackaged returned products to the original online channel, used/recovered products to secondary channels (De Leeuw *et al.* 2016:716), and new products (selected as exchanges/replacements in processing) to original consumers.

1.5.1.3 Realising satisfaction in the consumer return process

Figure 1.3 shows that *consumer satisfaction* can be realised through the effective management of several consumer return processes, including a return request, gatekeeping that results in return authorisation, collection, receiving, processing (issuing a refund or credit, or ship a product exchange), inspection/sorting and redistribution to consumers/markets that involves demand satisfaction. *Online retailer satisfaction* can be realised from inspection, sorting, disposition and redistribution processes. Specifically, identifying, classifying and selecting the best disposition options, including return to the vendor (manufacturer or supplier), restock, repackage for resale and other disposition exit/recovery options (e.g. resell on secondary markets), for returned products enables online retailer satisfaction.

Although online retailer satisfaction can involve cost recovery and profits through disposition, the efficiency of earlier consumer return processes (i.e. return request, gatekeeping, collection, receiving and processing) can influence consumer satisfaction, impacting the bottom line. Subsequently, effectiveness in the RL process of consumer returns can provide online retailers with opportunities to enhance their profitability, improve consumer satisfaction and recover costs.

In the next section, the value of RL in online retailing will be further explored with an overview of consumer return practices for the effective management of consumer returns in online retailing.

1.5.2 Consumer return practices in online retailing

With the growth of online shopping, online retailers must be more proactive in managing consumer returns for enhanced consumer satisfaction and cost efficiencies (Fox, 2023:24). Subsequently, within the information flow, product flow and cashflow of consumer return processes, several consumer return (or RL) practices can be implemented by online retailers to effectively manage consumer returns. Based on various literature sources, the key consumer return practices in online retailing can include (1) clear return policies and consumer communication, (2) gatekeeping and avoidance practices, (3) investment and use of appropriate IT, (4) outsourcing to third-party logistics

(3PL) or third-party RL (3PRL) providers, (5) internal management practices, and (6) collaboration. Each of these practices will be briefly described in the subsequent sections.

1.5.2.1 Clear return policies and consumer communication

Online retailers must implement sound and *clearly defined return policies* that clarify expectations (Fox, 2023:9; Nel & Badenhorst, 2020:126). A return policy can be important in online retailing and a trade-off between reducing the impact of returns and encouraging customers to buy must be considered (Robinson, 2014a:5). A clear return policy can help consumers to identify (1) returnable and non-returnable products, (2) product return timeline (Fox, 2023:9; Nel & Badenhorst, 2020:126), (3) acceptable return reasons, (4) credit/refund and exchange options (Fox, 2023:9), and (5) return procedures that must be followed (Nel & Badenhorst, 2020:127). Accordingly, online retailers can enhance consumer return effectiveness (Nel & Badenhorst, 2020:126), consumer satisfaction and communication, and reduce unnecessary returns through the implementation of a good return policy (Fox, 2023:9).

Moreover, online retailers must *clearly communicate* with consumers on both the online shop platform and throughout the return process. Particularly, the return policies and conditions must be available on obvious locations on the shop platform (Zhang *et al.* 2017:157). Additionally, online retailers must provide clear return instructions on requesting a return, shipping options and other requirements (e.g. packaging and labelling requirements) (Fox, 2023:19), which can be supplemented with a flow map of the return process (Zhang *et al.* 2017:157). Furthermore, online retailers must continue effective communication throughout the return process, which can involve prompt and professional responses about product return queries and concerns, regular return status updates, return tracking information and notifications regarding the processing of refunds or exchanges (Fox, 2023:19). Essentially, clear communication with consumers before, during, and after the return process can enhance consumer return experience (Fox, 2023:19), which can be important for the effective management of consumer returns.

1.5.2.2 Gatekeeping and return avoidance practices

Several studies identified the importance of practicing gatekeeping and return avoidance for the effective management of the consumer return process in online retailing. *Gatekeeping* can be important to protect the consumer return process from unwanted/fraudulent returns (Hjort *et al.* 2019:770). Additionally, online retailers can use gatekeeping as a practice to engage with consumers and identify the reasons for returns and potential return processing outcomes (e.g. issue a refund or an exchange) (Hjort *et al.* 2019:774).

Return avoidance involves any practices that online retailers can implement to prevent (or reduce) consumer returns (Hjort *et al.* 2019:770). While gatekeeping can be an important practice for return avoidance of unwanted consumer returns (Hjort *et al.* 2019:774), online retailers can implement various other measures to avoid unnecessary consumer returns, including pre-purchase information, consumer-related measures, logistics efficiency and SC-related measures. Online retailers can practise effective return avoidance by providing consumers with *adequate pre-purchase information* for correct purchasing decisions, which can include, (1) appropriate and detailed descriptions of products, (2) realistic and sufficient pictures of products (Hjort *et al.* 2019:777; Nel & Badenhorst, 2020:127; Zhang *et al.* 2017:156), (3) online videos (Nel & Badenhorst, 2020:127), and (4) accurate size guides (Hjort *et al.* 2019:778).

Furthermore, online retailers can implement *consumer-related measures* for return avoidance, which can include (1) targeting appropriate consumer groups to sell the right products to the right consumers (Hjort *et al.* 2019:776), (2) improving consumer service quality (Zhang *et al.* 2017:156), (3) listening to consumer feedback for product/service improvements, and (4) analysing consumer return statistics to block return abusers (Hjort *et al.* 2019:778). Additionally, *logistics efficiency* can be important for return avoidance, which can include improvements in procurement (Zhang *et al.* 2017:156), reducing picking and delivery errors and using appropriate packaging (Hjort *et al.* 2019:779).

Finally, online retailers can avoid future returns through *SC-related measures* like return information sharing and collaboration with suppliers to improve product quality issues (Hjort *et al.* 2019:778). Essentially, return avoidance practices not only decrease consumer returns but also improve purchase decisions, enhance consumer service, promote consumer satisfaction (Zhang *et al.* 2017:156) and promote SC collaboration.

1.5.2.3 Investment and use of appropriate IT

In reviewing the literature, investment and use of appropriate IT to manage consumer returns can be one of the most important practices in online retailing. Most authors mentioned specific technologies and systems that can improve and facilitate the management of consumer returns, including radio frequency identification (RFID) technology, the Internet of Things, returns management systems (RMS) and warehouse management systems (WMS).

RFID can be an important IT system for the management of consumer returns, providing online retailers with various benefits, including (1) optimising the consumer return process, (2) improving product return visibility, (3) improving product return monitoring (Biswas & Abdul-Kader,

2018:1021), (4) improving product return tracking, (5) facilitating return verification (e.g. correct product returned by the consumer), (6) reducing pilferage and increasing inventory accuracy (Frei *et al.* 2020:1616), (7) facilitating return processing (Zhang *et al.* 2017:157), and (8) facilitating product return sorting (Biswas & Abdul-Kader, 2018:1022; Zhang *et al.* 2017:157). However, RFID technology requires RFID tags that must be attached to return goods packaging (Biswas & Abdul-Kader, 2018:1022), and wireless hand-held devices (Zhang *et al.* 2017:157), which can be costly.

Like RFID technology, the *Internet of Things*, involving connections between smart devices and the internet, can be an important technology for managing consumer returns, providing online retailers with the ability to track products in real-time and in transit (Zhang *et al.* 2017:157). Furthermore, online retailers can invest in and use *RMS*, designed to automate and streamline the entire consumer return process (Fox, 2023:5). Particularly, RMS can provide online retailer with various benefits, including (1) improving product return speed, efficiency and accuracy, (2) enhancing consumer return experience through a hassle-free return process, (3) identifying return trends and areas for improvement in the consumer return process, and (4) facilitating product return avoidance (Fox, 2023:5).

Finally, online retailers can use traditional technology, like *WMS*, designed to streamline warehouse operations and manage consumer returns effectively (Fox, 2023:5). Specifically, a WMS provide several benefits for the consumer return process in online retailing, including (1) enhancing return inventory management, (2) improving return processing speed, (3) facilitating identification of returned products for quick restocking and resale, and (4) improving disposition efficiency (Fox, 2023:6).

Although these mentioned technologies can be important for the management of consumer returns, many other IT systems can be used in consumer return processes, which will be further explored in this study. Essentially, investing and using IT can be an important practice for managing consumer returns in online retailing, which can address challenges in the consumer return process (Nel & Badenhorst, 2020:126), streamline return processes, improve accuracy and speed, and save costs (Fox, 2023:17).

1.5.2.4 Outsourcing to 3PL/3PRL providers

Outsourcing to 3PL or 3PRL providers can be an important practice for online retailers to effectively manage consumer returns. While 3PL providers specialise in logistics and SCM, offering order fulfilment, inventory, warehousing and return services (Fox, 2023:6), 3PRL providers specialise in the return process, offering various return process services (Frei *et al.* 2020:1619).

However, online retailers must select a suitable partner, ensuring that 3P(R)L providers can successfully manage their consumer returns (Wang, Dang *et al.* 2021:11). Selecting the correct 3P(R)L partner can provide online retailers with several benefits, including (1) access RL expertise for efficient return processes, (2) economies of scale and effective management of return volume increases, (3) reduction of resource requirements, and (4) reduction of return costs through cost effective solutions (Fox, 2023:7). Essentially, online retailers can outsource to 3PL or 3PRL providers to improve the overall efficiency of the consumer return process for the effective management of consumer returns.

1.5.2.5 Internal management practices

Internal management practices involve top management support, performance measuring and monitoring, and staff training, which can help online retailers to manage consumer returns effectively. *Top management support* in online retailing can be important to address consumer return problems and improve consumer return processes (Ahlén & Johansson, 2023:31; Frei *et al.* 2020:1616). Additionally, top management support can enhance strategic decision making in RL, improve return policy design and enhance investment and resources for effective consumer return processes (Ahlén & Johansson, 2023:31), which can impact the online retailer's bottom line (Frei *et al.* 2020:1616).

Moreover, *RL performance measuring* and *monitoring* must be reported to the senior management of the online retailer, which can help with the identification of consumer product return problems and implementation of performance improvement practices (Frei *et al.* 2020:1618; Nel & Badenhorst, 2020:128). Subsequently, measuring and monitoring consumer return performance can be important for managing consumer returns. According to Fox (2023:13), consumer returns can be a valuable data source that provides insight into consumer return behaviour, product quality issues and consumer return process efficiencies, which can help with return avoidance practices (see section 1.5.2.2).

Online retailers can use various metrics for effective consumer return performance measurement, including (1) product return rate that involves the percentage of product returns, (2) return reasons provided by consumers in the return request process, and (3) consumer return costs that involve return processing, handling and restocking costs (Fox, 2023:13-14). These metrics can help online retailers to identify cost saving opportunities, understand the consumer return process and emphasise performance improvement opportunities (Fox, 2023:14-15). Consumer return monitoring can be equally important for the management of consumer returns. Online retailers must constantly monitor consumer return processes from the return request stage to returned product disposition, ensuring that

return processes can be improved and maintained, and consumer satisfaction and loyalty can be enhanced (Fox, 2023:15). Online retailers can monitor consumer return process efficiency by (1) tracking return metrics, (2) collecting consumer feedback and (3) performing return process audits (Fox, 2023:15).

Finally, *staff training* can be an important practice for the management of consumer returns, ensuring exceptional service during each stage of the return process (Nel & Badenhorst, 2020:125). Online retailers must train staff to (1) communicate with consumers effectively, (2) understand the return process, (3) use IT systems, (4) conduct accurate return inspections and (5) make correct disposition decisions (Fox, 2023:19-20). Essentially, staff training in RL ensures that staff involved in the consumer return process possess the right skills to reduce return cycle time (Nel & Badenhorst, 2020:125), improve return process efficiency and enhance consumer experience (Fox, 2023:20).

1.5.2.6 Collaboration in the SC

According to Hjort *et al.* (2019:770) consumer returns will always be part of online retailing and all SC parties will be involved to some extent. Consequently, collaboration and information sharing between SC parties can be important for the effective management of consumer returns. Online retailers can collaborate with consumers through effective communication and information sharing, which can improve return process efficiency and reduce unnecessary returns (Ahlén & Johansson, 2023:31). Additionally, online retailers can collaborate with SC partners, which can facilitate SC information exchange, improve operational efficiencies and reduce return costs for the entire SC (Ahlén & Johansson, 2023:31). For effective collaboration in the SC, online retailers can use integrated IT systems, linking all SC organisations throughout consumer return processes (Frei *et al.* 2020:1618). Essentially, effective collaboration in the SC can improve the management of consumer returns and improve relationships between online retailers, consumers and other SC partners.

With the various consumer return processes and practices identified in online retailing, the next section provides the scope of this study.

1.6 SCOPE OF THE STUDY

Although the scope of the study can be identified from the introduction, background, problem statement and research objectives (sections 1.1, 1.2, 1.3 and 1.4), it can be important to identify areas that will be included and excluded from a study. The scope of this study can be explained in terms of (1) concepts closely related to RL, (2) return types, parties and regions, (3) RL processes, (4) RL

practices, and (5) the research methods and aim of this study, which will be covered in the subsequent sections.

1.6.1 Scope of the study in terms of concepts closely related to RL

According to Badenhorst and Nel (2012:76) certain concepts are closely related to RL, including green logistics and green supply chain management. This study excludes green logistics and green supply chain management, which focus on the impact of logistics processes on the environment (see Badenhorst & Nel, 2021:77). While this study acknowledges and mentions the positive environmental impact of effective RLM, emphasis will mostly be on obtaining economic and market-related advantages, including profits, cost recovery, cost savings and consumer satisfaction, service and retention. This view is supported by Das *et al.* (2020:48), stating that RL drivers in online retailing centre mostly on economic gains, while in traditional retailing both environmental and economic factors can drive RL.

1.6.2 Scope of the study in terms of return types, parties and regions

Since RL can be regarded as a boundary-spanning function, it can be important to provide a scope in terms of return types, parties and regions. Regarding the *return types*, this study will focus on the management of *consumer returns* that originate from online purchases. Therefore, the scope of this study excludes the management of commercial product returns (known as distribution or business-to-business returns). Chapter 4 provides more detail on the type of product returns excluded from the study.

In terms of the *parties*, this study regards a *consumer* as any *end-user* that purchases products online for consumption, ranging from individuals to small businesses (e.g. purchasing office supplies). The main target market of the online retailer must be consumers, excluding commercial supplies and business-to-business transactions, for example wholesalers that sell products to retailers. While a distinction can be made between online-only, multichannel and omnichannel retailing, this study will only focus on the *online channel* part of consumer returns. This study regards *online retailers* as any organisations, including online-only, multichannel and omnichannel retailers, wholesalers and manufacturers, that directly sell products through an online platform to consumers. Subsequently, the scope of the study excludes brick-and-mortar retailing or any organisation without an online selling platform.

Although this study recognises that cross-border e-commerce sales are growing, the *region* of this study only included the *South African* market. The empirical research involved inputs from South

African industry experts in RL, which means that the framework developed in this study was aimed at facilitating online retailers in South Africa with the management of consumer returns. However, due to a lack of RL research in South Africa (see section 1.2 and 1.3), both international and local literature was used for the literature study and qualitative content analysis (QCA) of RL literature, which contributed to the final framework developed in the study.

1.6.3 Scope of the study in terms of RL processes

As described in section 1.5.1, this study focused on the RL processes of online retailers, starting with a consumer requesting a return and ending with redistribution of returned/recovered products for resale. RL processes can be classified as (1) *pre-receipt RL processes*, referring to all return processes before the arrival of returned products at the warehouse/facility, including a customer return request, gatekeeping, collection and transportation, and (2) *post-receipt RL processes*, referring to all return processes after the arrival of returned products at the warehouse or facility, including receiving, processing, inspection and sorting, disposition and redistribution processes.

While this study included various disposition options, like reuse, repair, refurbishment and other exit options, it excluded the disposition options of reconditioning, remanufacturing, recycling and waste management. Although all these disposition processes can be important, they mostly involve manufacturers, suppliers and third-party recovery firms (e.g. recyclers). Additionally, waste management and recycling can originate from commercial and household waste, which was beyond the scope of this research. Nevertheless, the roles of various third parties and other SC partners involved in RL processes and practices of consumer returns in online retailing were included in this study. Chapter 4 provides more detail on the RL processes and parties excluded from the scope of this study.

1.6.4 Scope of the study in terms of RL practices

This study defines a RL practice as “a measure, requirement, strategy, decision-making element or activity that can be implemented for the effective RLM of consumer returns”. As mentioned in sections 1.1 and 1.5.2, various practices can be adopted for the effective RLM of consumer returns, including IT, collaboration between SC parties, outsourcing, RL standardisation or formalisation, gatekeeping and return avoidance strategies, CRCs, RL network/facility design, cross-functional collaboration, strategic planning for RL, top management support, staff training, disposition strategies, performance measurement, commitment of resources, and cost management.

RL can include other practices that fall beyond the scope of this study, including green logistics practices, environmental management practices and any RL practices appropriate for upstream SC return processes. Nevertheless, as mentioned in section 1.6.1, this study recognised that the outcomes of RL practices can include improved environmental performance and compliance with environmental regulation. Chapter 6 provides details on the RL practices included and excluded from the scope of this study.

1.6.5 Scope of the study in terms of the research methods and aim

The RL processes, practices and factors that improve the RLM of consumer returns in online retailing were explored from a *practical industry perspective* and mirrors the RL processes and practices identified from literature (theory). However, any new RL process, practice and RLM factor identified during the interviews were included in the findings, because the interviews specifically focused on the RLM of consumer returns in online retailing in South Africa. Therefore, this study aimed at *building theory*, with limited focus on testing theory (only used for triangulation purposes.) The intent of the empirical part of the research was to develop a rich understanding of important RL processes, practices and factors that can help South African online retailers with the effective RLM of consumer returns.

While this study quantified some of the findings in the QCA of RL literature to identify the prominence of a process or practice, it excluded quantitative data, statistics, mathematical models, inferences or any other techniques appropriate for the analysis and interpretation of quantitative data. Therefore, this study focused on the collection and analysis of *qualitative data*, including literature and interview data. Chapters 3 and 7 provide details of the inclusion and exclusion criteria for the qualitative research methods of this study. Essentially, the aim of this research was to (1) facilitate online retailers with a framework for the effective RLM of consumer returns, (2) develop and produce new RL theory (literature) and (3) identify gaps that can be important for future research.

In the next section, a brief overview of the research design and methodology of this study is provided.

1.7 RESEARCH DESIGN AND METHODOLOGY OF THIS STUDY

A research design is a plan that includes choices about a research paradigm, approaches to theory development or testing, methodological choices, research methods, data collection techniques and data analysis methods (Saunders, Lewis & Thornhill, 2019:180). The overall research design adopted for this study included qualitative research, which can be described as a field of study based on

qualitative methods that encompasses subjectivity, flexibility and reflexivity, studying practical phenomena in a real-world environment (Tarab, 2019:3). Qualitative research can be characterised as follows: (1) researcher directly involved with the researched, (2) individuals taking part in the research are referred to as participants or informants, (3) mostly involves non-probability sampling techniques, (4) uses semi- or unstructured data collection methods, (5) data analysis involves conceptualisation and development of categories/themes, and (6) findings presented through words and images (Saunders *et al.* 2019:180).

According to Leedy and Ormrod (2021:258), qualitative research design can be appropriate when variables are unknown, the available information on a topic is limited and theory development is inadequate. Consequently, a qualitative research design can be appropriate for this study since limited studies focus on consumer returns, RL processes and practices in online retailing, and the RLM of consumer returns in online retailing in South Africa (see sections 1.2 and 1.3). Additionally, the nature of this study was both descriptive and exploratory. Firstly, this study was descriptive, since the objective was to gain an accurate profile of literature, concepts, processes and practices, which can be an extension of exploratory research (Saunders *et al.* 2019:187). Secondly, the study was exploratory in nature to gain an in-depth understanding of consumer returns, RL processes, practices and RLM factors in online retailing. Accordingly, qualitative exploratory designs can include literature studies, in-depth interviews with experts in the field of study (Saunders *et al.* 2019:188) and content analysis (Krippendorf, 2022:1), which were the research methods adopted in this study.

Figure 1.4 demonstrates the research onion adapted from Saunders et al. (2019:174), showing the overall research design of this study.

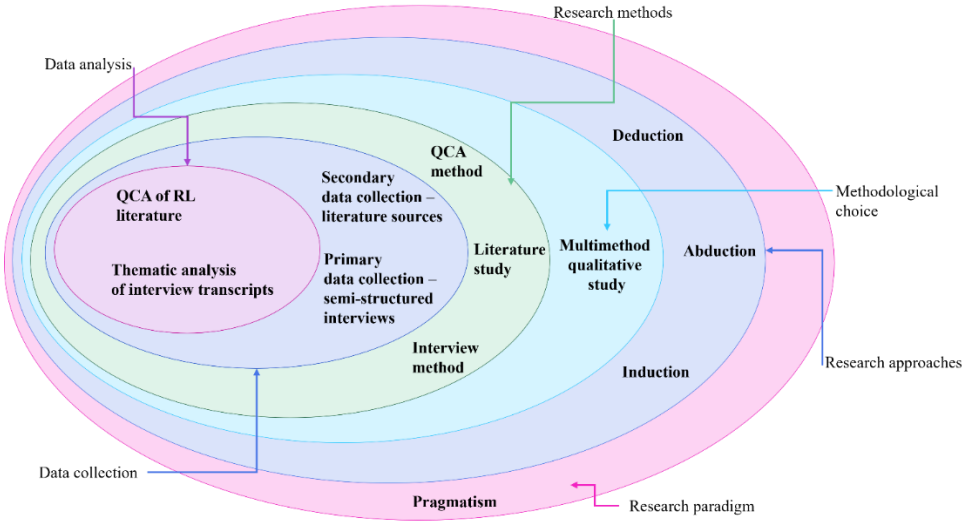


Figure 1.4 Research onion of this study
Source: Adapted from Saunders *et al.* (2019:174)

Specifically, the research onion of this study, presented in Figure 1.4, shows the adoption and selection of (1) pragmatism as a research paradigm, (2) deduction, induction and abduction as research approaches, (3) multimethod qualitative research as a methodological choice, (4) a literature study (phase 1), qualitative content analysis (QCA) (phase 2) and interviews (phase 3) as research methods, (5) secondary data collection (literature sources) and primary data collection (semi-structured interviews) as data collection techniques, and (6) QCA of RL literature and thematic analysis (TA) of interview transcripts as data analyses techniques.

In the subsequent sections, a brief overview of the research design of this study will be given, including the research paradigm and philosophical assumptions, research approaches, methodological approach and research methods, including data collection and analysis techniques. This section concludes with a brief discussion of the ethical implications of this study.

1.7.1 Research paradigm and philosophical assumptions of this study

A research paradigm can be defined as a philosophical framework that guides the way scientific research must be conducted (Collis & Hussey, 2021:39). The philosophical assumptions in research relate to a researcher's approach to ontology (nature of reality), epistemology (nature of knowledge), methodology (the research process) and axiology (role of values) (Collis & Hussey, 2021:39; Klenke, 2016a:13-14). As illustrated in Figure 1.4, this study adopted *pragmatism* as a research paradigm. Pragmatism developed in the late 19th and early 20th century with the aim of reuniting objectivism and subjectivism, accurate and rigorous knowledge, facts and value, and different experiences (Saunders *et al.* 2019:151). While most qualitative studies adopt interpretivism as a research design (Collis & Hussey, 2021:41), this qualitative study adopted pragmatism because the study involved (1) multimethod research, (2) practical organisational research (Saunders *et al.* 2019:151), (3) deductive, inductive and abductive approaches (Thornberg, 2022:245), and (4) questions designed to produce answers and address problems in practices (Klenke, 2016a:15; Salkind, 2010:1073).

Additionally, the *philosophical assumptions* of this study related to *pragmatism*, which included the (1) ontological assumption that reality can be complex, rich and practical (Saunders *et al.* 2019:145), (2) epistemological assumption that knowledge can be realised through experience (Morgan, 2017:18) and the researcher's subjective view to solve problems and inform practice, (3) methodological assumption that multimethod qualitative research can be used for practical outcomes and solutions (Saunders *et al.* 2019:145), and (4) axiological assumption that ethical and moral principles can be important aspects (Klenke, 2016a:27) in a value-driven research process (Saunders

et al. 2019:145). Chapter 3 explores the research paradigm and related philosophical assumptions in more detail.

1.7.2 Research approaches of this study

Figure 1.4 shows that the research approaches for theory development in this study included deductive, inductive and abductive approaches, which can be appropriate for a pragmatic multimethod qualitative study. Leedy and Ormrod (2021:45) describe theory development as an active and intentional thinking about a phenomenon through deduction, induction and abduction. In a qualitative study, a *deductive approach* involves the collection and analysis of theory or existing data for the development of a theoretical framework (Thornberg, 2022:246). Contrastingly, an *inductive approach* involves the collection and analysis of empirical (primary) qualitative data for the development of theories and concepts (Merriam & Grenier, 2019:6; Thornberg, 2022:248). An *abductive approach* moves between deduction and induction for the development of theories (Saunders *et al.* 2019:155). When existing theory (or literature) cannot adequately account for a phenomenon, a good researcher can abandon such theory and use abduction to formulate a more appropriate theory (Leedy & Ormrod, 2021:46). Alternatively, through abduction, the researcher can modify and elaborate upon existing knowledge by reorganising existing knowledge to produce new knowledge (Kenny & Thornberg, 2018:52).

Subsequently, in this study the (1) deductive approach involved the collection, analysis and write-up of available literature on RL, (2) inductive approach involved the collection, analysis and write-up of interview data, and (3) abductive approach involved the combination of deductive and inductive approaches for the development of the final framework for the effective RLM of consumer returns in online retailing. Chapter 3 elaborates on the description and application of the deductive, inductive and abductive approaches used for theory development in this study.

1.7.3 Methodological approach of this study

As illustrated in Figure 1.4, the methodological approach of this study included multimethod qualitative research. Multimethod research refers to the use of two or more methods drawn from the same paradigm and methodological approaches (Collis & Hussey, 2021:63). Consequently, a multimethod qualitative research study involves the use of more than one qualitative method in a single study (Wellman, Tröster, Grimes, Roberson, Rink & Gruber, 2023:1007). This study adopted multimethod qualitative research as a methodological approach to (1) improve soundness of the research findings (Cardano, 2020:101), (2) complement, develop, expand and triangulate findings (Reis *et al.* 2017:282), (3) obtain a more comprehensive understanding of a phenomenon from

differing perspectives (Hesse-Biber, Rodriguez & Frost, 2015:8; Schwandt & Lichty, 2015:592), (4) examine factors of high importance to managerial theory and practice (Wellman *et al.* 2023:1007), and (5) develop a new way of thinking about a phenomenon (Schwandt & Lichty, 2015:592). The significance of selecting multimethod qualitative research as the methodological choice of this study will be explored in chapter 3.

1.7.4 Research methods of this study

This study involved three qualitative research methods conducted in several phases, including phase 1 - literature study, phase 2 - qualitative content analysis (QCA) of RL literature, and phase 3 - interviews with industry experts. Firstly, the *literature study* (phase 1) aimed to explore the concept of RLM, the significance of RLM, barriers and problems to effective RLM and characteristics of RLM (SRO-01). Secondly, the *QCA of RL literature* (phase 2) aimed to explore and analyse RL literature for consumer return types, pre- and post-receipt RL processes of consumer returns and RL practices to manage consumer returns (SRO-02 – SRO-04). Finally, the *interviews with industry experts* (phase 3) aimed to gain inputs from RL experts in South Africa to identify and explore different types of consumer returns, RL processes and RL practices and important factors for the effective RLM of consumer returns in online retailing (SRO-05 – SRO-07). The findings of all three methods (literature study, QCA and interviews) were examined and combined to reach the primary research objective of the study, which was to *develop a framework for the effective RLM of consumer returns in online retailing*.

Figure 1.5 provides an overview of the qualitative research phases of the study, with the corresponding research objectives that were achieved.

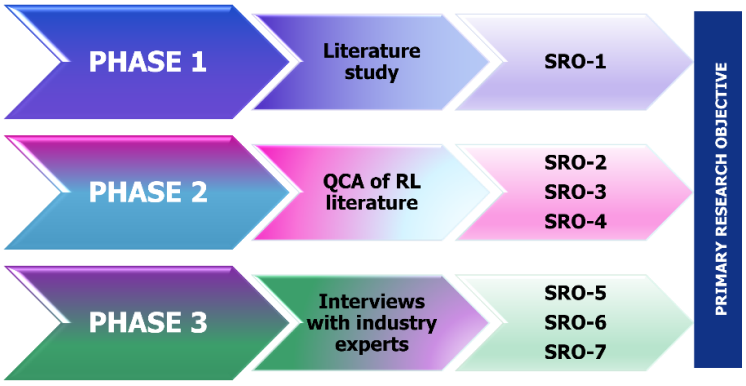


Figure 1.5 Phases of the multimethod qualitative study and related objectives
Source: Compiled by the researcher

The subsequent sections provide an overview of the qualitative research methods of this study.

1.7.4.1 Phase 1 - Literature study

According to Snyder (2019:333), building a research study on existing knowledge should be a priority for all academics, regardless of the discipline. Evidently, the first phase of the study was a literature study to *examine RLM and determine factors that influence RLM implementation and success (SRO-1).*

Figure 1.6 provides a graphical overview of phase 1 of this study, the chapter associated with the phase and the corresponding research objectives.

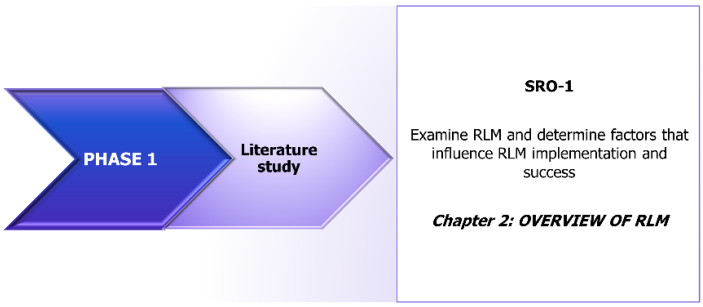


Figure 1.6 Phase 1 - Literature study
Source: Compiled by the researcher

A literature study involves a deductive approach to develop a theoretical framework of a concept (Saunders *et al.* 2019:160). According to Leedy and Ormrod (2021:82), a dissertation or thesis often includes an entire chapter (or more than one chapter) that provides a theoretical perspective from previous research findings. The sources used in the literature study included in books, journal articles, magazine articles, conference proceedings, blog post and other Internet sources (Leedy & Ormrod, 2021:82). Snyder (2019:333-334) explained that literature studies can be useful to (1) provide an overview of a research problem, (2) identify gaps in research, (3) provide an overview of disparate and interdisciplinary research, (4) discuss key concepts, (5) contribute to under-developed research fields, (6) build new conceptual frameworks, and (7) complement and/or integrate other research methods and empirical findings.

The literature study was descriptive in nature and largely focused on discussing the concept of RLM, which served as a theoretical basis for the other research methods (QCA method and interview method) and contributed to the development of the framework for the effective RLM of consumer returns in online retailing. Essentially, for this study, a literature study was conducted to (1) conceptualise RLM, (2) provide a theoretical overview of RLM, (3) explore the definitions of RL, (4) identify the barriers to effective RLM and implementation, (5) understand the significance of

RLM adoption, and (6) identify the success factors and outcomes of successful RLM. Chapter 2 provides a discussion of the findings from the literature study conducted in phase 1 of this study.

1.7.4.2 Phase 2 - Qualitative content analysis (QCA) of RL literature

Phase 2 of the study used QCA as a research method to explore and analyse RL literature for (1) *consumer return types and pre-receipt RL processes of consumer returns (SRO-2)*, (2) *post-receipt RL processes of consumer returns (SRO-3)*, and (3) *RL practices to manage consumer returns (SRO-4).*

Figure 1.7 provides a graphical overview of phase 2 of this study, the chapters associated with the phase and the corresponding research objectives.

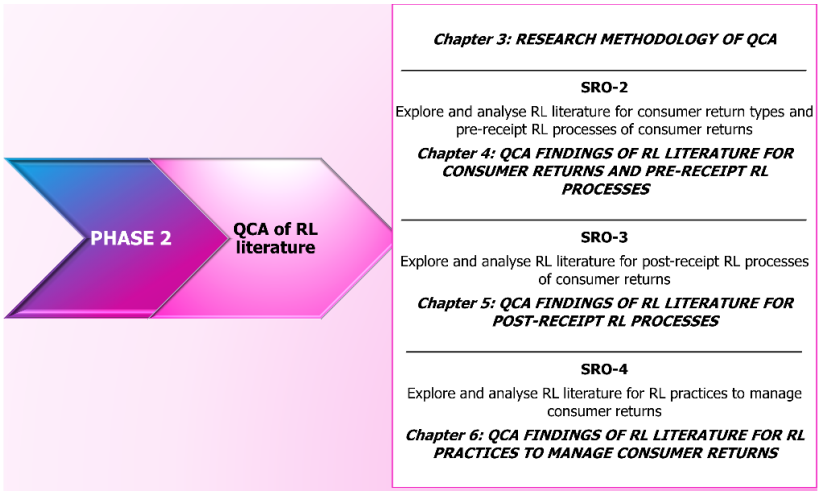


Figure 1.7 Phase 2 – QCA of RL literature
Source: Compiled by the researcher

Tarab (2019:8) described content analysis as a systematic method that is increasingly used in organisational research, which involves the selection and interpretation of material (text, verbal or visual) through coding and categories to develop a framework for an improved description of the material. Content analysis as a research method can either be qualitative or quantitative in nature. A QCA (qualitative content analysis) can be described as a highly flexible, pragmatic and systematic method to investigate various phenomena (Selvi, 2019:450), which offers new insights to increase the understanding of a phenomenon for practical application (Krippendorff, 2022:24). A quantitative content analysis (CA) as a quantitative research method usually involves larger volumes of text and the participation of a research team (Krippendorff, 2022:92) that uses the coding process as the basis for later stages of complex statistical analysis (Schreier, 2014:173; Selvi, 2019:442).

QCA was a suitable qualitative research method for the selection and analysis of RL literature because it can be appropriate for (1) pragmatism as a research paradigm, (2) wide range of materials,

including sampled texts from books, journals, websites, newspapers and magazines (Leedy & Ormrod, 2021:265), (3) multimethod qualitative studies (Leedy & Ormrod, 2021:266), (4) deductive, inductive (Selvi, 2019:450) and abductive approaches (Krippendorff, 2022:45), (5) purposive sampling techniques to select relevant material for answering the research questions (Krippendorff, 2022:122), and (6) the development of new conceptual frameworks (Snyder, 2019:334). Furthermore, Badenhorst (2018:2) suggested that QCA can be an important research method to provide greater insight into the field of RL.

QCA consists of various steps (or phases), including (1) deciding on a research question/objective, (2) selecting material, (3) building a coding frame, (4) executing the coding frame, (5) evaluating and modifying the coding frame, (6) conducting the main analysis, and (7) interpreting and presenting the findings (Schreier, 2012:17; Scheier, 2014:174). Table 1.1 provides a brief overview of the application and outcomes of the QCA of RL literature.

Table 1.1 Overview of the application and outcomes of the QCA of RL literature

QCA of RL literature phase	Application/outcomes
Deciding on a research question/objective	• Research questions in line with the secondary research objectives: ○ What are the types of consumer returns? (SRO-2) ○ What are the pre-receipt RL processes for consumer returns? (SRO-2) ○ What are the post-receipt RL processes for consumer returns? (SRO-3)
Selecting material	• Unit of analysis includes scientific peer-reviewed journal articles on RL • Non-probability purposive sampling • Final sample of 82 scientific journals, covering 289 peer-reviewed articles on RL, published between 2006 and 2016
Developing the coding frame	• Deductive development of code categories and codes • Main categories represent the research questions, including consumer returns, pre-receipt RL processes, post-receipt RL processes and RL practices • Preliminary literature review to identify subcategories (or deductive codes)
Executing and testing the coding frame	• Intra-coder agreement for two trial coding rounds 10 to 14 days apart • ATLAS.ti training in preparation for trial coding • Purposive sampling to select ten articles from the 289 sampled articles for trail coding
Evaluating the coding frame	• Quantitative and qualitative analysis of trial coding results to identify and resolve minor inconsistencies in the trial coding • Results of the trial coding deems the coding frame as appropriate
Conducting the main analysis	• Main coding of 289 articles in ATLAS.ti • Exporting code frequencies to Microsoft Excel for quantitative analysis • Exporting quotation output reports for each deductive code to Microsoft Word • Inductive coding in ATLAS.ti on quotation output reports (text assigned to each deductive code during the main analysis) • Creating new categories and subcategories from inductive coding for qualitative analysis
Interpreting and presenting findings	• Holistic interpretation of findings • Quantitative style of code frequencies and percentages, using bar charts and pie charts • Qualitative style of text matrices, discussion of text matrices to develop definitions and conceptual frameworks, data exploration to study code category relationships and a typology (summary of findings)

Source: Compiled by the researcher

The QCA of RL literature enabled the selection of appropriate RL literature to analyse, describe and provide conceptual frameworks, summaries of findings and managerial implications for the types of consumer returns, pre-receipt and post-receipt RL processes of consumer returns and RL practices to manage consumer returns, which (1) served as input for the interviews with industry experts, (2) enabled triangulation of interview findings, and (3) contributed to the final framework for the effective RLM of consumer returns in online retailing. The research methodology of the QCA of RL literature is discussed in more detail in chapter 3 (section 3.3) and the QCA findings of RL literature are presented and discussed in chapters 4 to 6.

1.7.4.3 Phase 3 - Interviews with industry experts

Phase 3 of the study used interviews with industry experts as a research method to (1) *determine consumer return types and RL processes in online retailing, based on inputs from industry experts (SRO-5),* (2) *explore and identify important RL practices for managing consumer returns in online retailing, based on inputs from industry experts (SRO-6),* and (3) *investigate and determine important factors for the effective RLM of consumer returns in online retailing (SRO-7).*

Figure 1.8 provides a graphical overview of phase 3 of this study, the chapters associated with the phase and the corresponding research objectives.

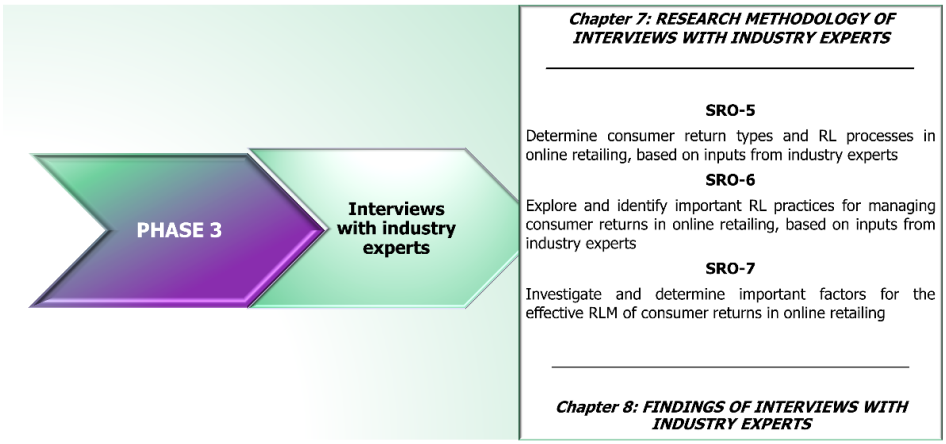


Figure 1.8 Phase 3 - Interviews with industry experts
Source: Compiled by the researcher

According to Collis and Hussey (2021:119), an interview is a research method for primary data collection in which sampled participants are asked questions related to the topic to gain inputs from their views, knowledge and experiences. Additionally, a qualitative interview can be described as a purposeful conversation between two individuals (the interviewer and the interviewee) to collect data on a specific topic (Salkind, 2010:633; Saunders *et al.* 2019:434). A qualitative interview can either be (1) unstructured with questions and themes identified from the interview conversation, or (2)

semi-structured with preestablished themes and key questions to guide the interview conversation (Saunders *et al.* 2019:437, 438). The interviews with industry experts followed a semi-structured approach based on findings from the QCA of RL literature.

Khor, Udin, Ramayah and Hazen (2016:106) indicated that qualitative research through semi-structured interviews can bring insight and in-depth information on the effective implementation of RLM. Furthermore, semi-structured interviews can be appropriate for (1) exploratory studies, (2) collection of rich and detailed data, (3) open-ended, complex and large number of questions (Saunders *et al.* 2019:444-445), (4) multimethod qualitative studies (Billups, 2022:37), (5) purposive data collection guided by formal research questions (Silverman & Patterson, 2021:68), (6) unexplored topics/subjects that require new understanding and knowledge (Akinyode & Khan, 2018:165; Billups, 2022:37), (7) professional participants who are enthusiastic about their work and field of expertise (de Villiers, Farooq & Molinari, 2021:12), and (8) development of new ideas, insights and variations of a phenomenon (Billups, 2022:37). Evidently, using interviews with industry experts as a research method was suitable for the collection and analysis of empirical data on the RLM of consumer returns in online retailing.

The interviews with industry experts involved several steps, including (1) defining the purpose and research questions, (2) considering ethical issues and practices, (3) developing an interview protocol, (4) sampling procedures and identifying participants, (5) pre-interview planning, (6) conducting interviews, (7) post-interview reflection, (8) data analysis, and (9) demonstrating trustworthiness (DeJonckheere & Vaughn, 2019:3). Table 1.2 provides a brief overview of the application and outcomes of the interviews with industry experts.

Table 1.2 Overview of the application and outcomes of the interviews with industry experts

Steps of interviews with industry experts	Application/outcomes
Defining the purpose and research questions	• The purpose and research questions in line with the secondary research objectives: o What are the reasons and types of consumer returns in online retailing? (SRO-05) o What are the RL processes of consumer returns in online retailing? (SRO-05) o What are important RL practices for managing consumer returns in online retailing? (SRO-06) o What are important factors for the effective RLM of consumer returns in online retailing? (SRO-07)
Considering ethical issues and practices	• Pre-interview ethics for research design and access to participants • Ethics during interviews • Post-interview ethics in processing and storage of data, data analysis and presentation of findings
Developing the interview protocol	• Structure of the interview protocol for interviews with industry experts: o Introduction to provide important information about the study o Opening question related to the experience of the participant in the field of RLM o Research-specific questions related to consumer returns, RL processes, RL practices and RLM factors o Closing questions to provide the participant with an opportunity to add anything new and recommend other potential participants (snowballing)

Steps of interviews with industry experts	Application/outcomes
	○ Conclusion to thank the participant
Sampling procedures and identifying participants	• Non-probability sampling procedures and recruitment • Target population of industry experts in RL with knowledge or work(ed) in the online retailing industry in South Africa • Purposive sampling and snowball sampling techniques • Inclusion criteria involve (1) access to the Internet and virtual meeting software, (2) minimum five-year experience in RL with an undergraduate degree, (3) proficient in English, (4) job description of owner, director, chair or manager of an organisation, (5) resided in South Africa • Exclusion criteria involve (1) unresponsiveness, (2) failure to respond to follow-up communication, (3) failure to attend schedule interview, (3) unable to participate in the data collection period, (4) unwillingness to provide consent, (5) withdrawn during the interview and (6) outside inclusion criteria • Recruitment through SAPICS, LinkedIn, Google and interviews with industry experts • Sample size justification through type of research, research methodology, sampling technique and principle of saturation • Final sample includes 13 industry experts in RL
Pre-interview planning	• Familiarisation through piloting • Setting the stage and scheduling the interviews • Reconfirming the interviews • Resending interview information • Preparation for online remote interviews
Conducting the interviews	• Online remote interviews via Microsoft Teams, Skype and Zoom due to lockdown during the Covid-19 pandemic • General structure of interview conversations includes (1) the introduction and building of rapport, (2) questions of the interview protocol with pre-identified and new probing questions, and (3) conclusion • Recording of interviews through built-in recording functions of Microsoft Teams, Skype and Zoom and voice recorder of cell phone
Post-interview reflection	• Reflection of sampling procedures on the impact of the Covid-19 pandemic • Reflection on using online video software for remote interviews
Data analysis	• Thematic analysis (TA) of interview data, using a codebook (deductive) approach and reflexive (inductive) approach • TA phases: ○ Familiarisation of interview data through transcription and editing of transcripts ○ Generating codes through deduction and induction ○ Performing a descriptive analysis on deductive codes ○ Generating themes by returning to interview data, exploring code relationships, summaries of potential themes and creating a thematic map ○ Developing and reviewing themes in coded extracts and entire data set through key questions, visualisations of developed themes and a thematic map ○ Refining, defining and naming themes by revisiting data and selecting quotations for theme narratives, describe the essence and uniqueness of each theme, naming candidate themes and creating a final thematic map ○ Write-up of interview data through quotation selection, selection of presentation style, selection of method to link interviews with literature and creating a presentation format
Demonstrating trustworthiness criteria	• Demonstrating credibility through triangulation • Demonstrating transferability through detailed methodological discussions and related applications of interview data • Demonstrating conformability through sufficient quotations in presentation of findings • Demonstrating dependability through multimethod data collection, rich documentation, detailed inclusion/exclusion criteria, and use of software for data collection, transcription and analysis

Source: Compiled by the researcher

Essentially, the purpose of the interviews with industry experts was to gain practical insight on the main themes of the study, namely, consumer return types, RL processes, RL practices and important

factors for the effective RLM of consumer returns in online retailing, which was also used to (1) triangulate (confirm and compare) the findings from the QCA on RL literature (consumer return types, RL processes and RL practices), (2) identify themes that can contribute to the effective RLM of consumer returns in online retailing, and (3) develop frameworks and summary of findings of themes for the effective RLM of consumer returns. Subsequently, the frameworks and summary of findings developed from the interviews with industry experts contributed to the final framework for effective RLM of consumer returns in online retailing. The research methodology of the interviews with industry experts is discussed in more detail in chapter 7, and the findings of the interviews with industry experts are presented and discussed in chapters 8.

1.7.5 Ethical principles applied to the research methods in the study

The research in this study was guided by the ethical standards of the University of South Africa (Unisa). According to the Policy on Research Ethics of Unisa (2016) students and academics require ethics clearance before data collection. Therefore, the researcher applied for and received ethical clearance from the Research Ethics Review Committee (RERC) of the College of Economic and Management Science (CEMS), Unisa, before primary data collection.

Research ethics refers to a set of standards (Saunders *et al.* 2019:252) and application of moral principles to the planning, executing and reporting of research (Myers, 2013:60). Some fundamental ethical considerations as outlined by the Policy on Research Ethics of Unisa (2016) are briefly discussed below.

- *Integrity of the researcher:* This means the researcher must act open, be truthful and promote accuracy (Saunders *et al.* 2019:257). Honesty can be an important principle in research and researchers should be honest about their data, findings and research methods (Myers, 2013:62). The researcher demonstrated integrity by complying to the following requirements of the Policy on Research Ethics (Unisa, 2016:5-6):
  - Obtained ethical clearance prior to the empirical research.
  - Demonstrated competency through the highest level of excellence and integrity in the research.
  - Refrained from undertaking research that contravenes the Policy on Research Ethics.
  - Conducted research that contributed to knowledge in the field of study.
  - Accepted responsibility and accountability for all aspects and consequences of the research activities.
  - Demonstrated honesty in all stages of the research.

- Abstained from plagiarism, falsification or the fabrication of results in any stages of the research process.
- Reported to the ethics committee on timeline changes for amended ethical clearance certificate.

- *Informed and non-coerced consent:* All information collected must comply with the Protection of Personal Information Act 4 of 2013 (Unisa, 2016:14). Without exercising any pressure or coercion, the researcher provided sufficient information and assurances to potential participants, enabling them to (1) understand the consequences of participation, and (2) reach fully informed and conscious decisions about participation (Saunders *et al.* 2019:257). Furthermore, participants must be given the assurance that they can withdraw at any stage after consent was given (Leedy & Ormrod, 2021:136). The researcher guaranteed informed and non-coerced consent by complying to the following requirements of the Policy on Research Ethics (Unisa, 2016:14):
    - Enabled participants to freely give informed consent.
    - Assured participants that they could withdraw from participation at any stage in the research process.
    - Provided participants with a participation information sheet containing details of the researcher, the aim of the research and data collection, reasons for selection, benefits and risk, confidentiality, data protection, incentives, proof of ethical clearance and contact information of the researcher and ethics representative with the attached informed consent.
    - Obtained written and signed informed consent from participants prior to data collection.

- *Right to privacy, anonymity and confidentiality:* Privacy can be a key principle that links several other principles, including avoidance of harm, voluntary and informed participation, anonymity and confidentiality, and responsible data reporting and management (Saunders *et al.* 2019:259). Confidentiality ensures that information from organisations and participants are kept confidential and anonymous (Saunders *et al.* 2019:259). To ensure privacy, anonymity and confidentiality, the researcher can assign each participant with a pseudonym (e.g. P1, manager, online retailer), referring to the pseudonym instead of the person's name in written documents (Leedy & Ormrod, 2021:138). To ensure the right to privacy, anonymity and confidentiality of participants, the researcher complied with the following requirements of the Policy on Research Ethics (Unisa, 2016:16-17):
    - Kept all information provided by the participants confidential.
    - Kept all personal information of participants confidential.

- Maintained privacy, anonymity and confidentiality by keeping all information in data collection, transfer, storage, access and disposal under the control of the researcher.
- Stored records in a manner to protect confidentiality of data and the anonymity of participants.
- Used pseudonyms for both participants and organisations to break obvious connections between data and participants/organisations.

Apart from integrity, informed consent, privacy, anonymity and confidentiality, *plagiarism* can be an important ethical principle in the reporting of findings. Plagiarism can be described as the deliberate act of copying the work of another person(s) and presenting it as one's own (Myers, 2013:50) without full acknowledgement (Leedy & Ormrod, 2021:139). Although the Internet contributed to an increase in plagiarised material, it also made it easy to identify plagiarism (Myers, 2013:50, 51). For example, Turnitin (www.turnitin.com) software compares a researcher's paper/article/thesis against more than 17 billion web pages, 200 million student papers, and various library databases and publications. Many universities use this software to prevent plagiarism (Myers, 2013:51), including Unisa.

Further details on the ethical practices for the interviews with industry experts are provided in chapter 7.

1.8 UNIQUE CONTRIBUTION OF THE STUDY

The main aim of this study was to "*develop a framework for the effective RLM of consumer returns in online retailing?".* Through an in-depth search of academic literature in leading databases, the conclusion was that no other research study was conducted with the aim of developing a framework for the effective RLM of consumer returns in online retailing. This study contributed to both research (theory/literature) and practice, which will be discussed in the subsequent sections.

1.8.1 Contribution to research

The contribution of this study to research included the development of RL literature and the collection and analysis of empirical research. This study contributed to the *development of RL literature* in terms of consumer returns, RL processes, RL practices and RLM in online retailing through the dissemination and synthesis of a wide selection of literature, scientific journal articles on RL, and inputs from industry experts in the South African market, which provided new insight and knowledge about RLM in online retailing. Furthermore, this study contributed to research by addressing perceived gaps in empirical research, including gaps in (1) research on consumer returns,

RLM and RL in online retailing, (2) research on RL in online retailing for a developing country, like South Africa, and (3) qualitative research in RL and the field of business management, which will be elaborated upon in the subsequent paragraphs.

According to de Araújo *et al.* (2018:346), the management of consumer return in online retailing is a relatively unexplored subject, with Ashan and Rahman (2022:138) adding that more research is needed on the key areas of RL in online retailing. Chen *et al.* (2017:253) indicated that more empirical research is needed on RLM because the management of FL has dominated the research scene for many decades. Moreover, Ratchford *et al.* (2022:156) indicated that more research is needed on practices that can help retailers manage online product returns effectively. Wang *et al.* (2017:667) contended that the development of an emerging research subject, like RLM in online retailing, requires a variety of researchers engaged in the field, focusing on different operational, strategic and geographic areas under study. Likewise, Eriksson and Käck (2023:27) suggested that analysing RL in specific countries can provide new insight into economic, cultural and environmental practices that shape the RL process and impact consumer satisfaction. Bozzi *et al.* (2022:31) conducted research on the product return processes of fashion online retailers in Brazil, suggesting that future studies on RL processes and consumer returns in online retailing must broaden the sample and include other geographies. Subsequently, this study *contributed to research* in the unexplored and relatively new subject field of the *RL* and *RLM of consumer returns in online retailing* and provided further development in the field through empirical inputs in the geographic area of South Africa.

Bouzon, Govindan, Rodriguez and Campos (2016:192), Eriksson and Käck (2023:27) and Le (2023:1) noted that most studies on RL focus on first world developed countries, with focus on RL still in a state of infancy in emerging economies. Furthermore, Davidavičienė and Majzoub (2021:2) mentioned that in developing countries, few research studies focus on RL in online retailing, and that more research in this context was needed. Additionally, Makaleng and Hove-Sibanda (2022:24) and Mostert *et al.* (2017:2) mentioned that more RL literature is needed in South Africa, especially in the retailing sector. Evidently, this study *contributed* to empirical *research on RL in online retailing in a developing country*, like *South Africa*.

Bernon *et al.* (2011:485) identified that RL research mostly includes quantitative research, which was reconfirmed by Prajapati *et al.* (2019:517), stating that quantitative research, including mathematical modelling and surveys, remain dominant in RL research. Furthermore, Le (2023:16) suggested that more qualitive research in RL across various industries and organisations are needed. In South Africa, this view is no different with Badenhorst (2016:10) suggesting that more qualitative

research in RL was needed, which was supported by Badenhorst (2017:619), Makaleng and Hove-Sibanda (2022:24) and Meyer, Niemann, Mackenzie and Lombaard (2017:16). Subsequently, this study *contributed* to *qualitative research in RL* by employing multimethod qualitative research on RL.

Apart from the need for more qualitative research in RL both locally and internationally, Lanka, Lanka, Rostron and Singh (2021:4) indicated that qualitative research in organisational research and management studies remain largely under-represented. Despite this under-representation, qualitative research can be essential in providing alternative perspectives and new knowledge for effective management in organisations (Lanka *et al.* 2021:4). Therefore, this multimethod qualitative study *contributed* to the *under-representation* of *qualitative research* in the field of *management studies*, providing online retailers with new knowledge about the effective management of consumer returns.

1.8.2 Contribution to practice

The background and problem statement of this study demonstrated the importance of managing consumer returns in online retailing (sections 1.2 and 1.3). Matching the gaps in empirical research, Lamba *et al.* (2020:381, 388) suggested that most online retailers pay attention to FL, instead of focussing on the significant impact of consumer returns and the management of RL. Additionally, Bozzi *et al.* (2022:18) highlighted that RL forms a key aspect of online retailing, and considered far more complex than FL. In fact, Dobroselskyia *et al.* (2021:318) mentioned that one of the most significant problems for online retailers relates to the effective management of RL to deal with consumer returns. Furthermore, Wang, Dang *et al.* (2021:2) indicated that many online retailers are unable to manage their RL effectively due to the complexity of RL and a lack of resources. Additionally, Lamba *et al.* (2020:398) founded that next to a lack of investment in RL, a lack of understanding about best practices in RL can be one of the most significant barriers to effective RLM in online retailing.

Mahadevan (2019:482) indicated that organisational practice can benefit from the development of frameworks that connect individual areas of management, including planning, techniques, systems, strategies, information sharing and SC integration (SCI). Similarly, Frei *et al.* (2020:1613) contended that many retailers underestimate the scale of consumer returns, and more research support must be provided in terms of frameworks and guidelines for the management of consumer returns. Furthermore, Lamba *et al.* (2020:388) suggested that an effective RL framework can bring considerable cost savings and other benefits for online retailers. A study conducted by Heyns and Kilbourn (2022:11) on online retailing in South Africa, found that, apart from delivery in selected

time slots, the ease of returning products was one of the most important factors for consumers. Therefore, online retailers in South Africa can benefit from the development of RL processes, RL practices and important factors to effectively manage consumer returns.

Essentially, this study contributed to practise through the development of framework for the RLM of consumer returns in online retailing. The framework provides guidance to existing and prospective online retailers in South Africa to (1) understand the concept of RL, (2) gain insight into consumer returns, RL processes and RL practices, (3) recognise the importance of effective RLM, (4) consider factors that can be important for management of consumer returns, and (5) identify and implement the most appropriate RL processes and practices for the effective RLM of consumer returns, which can assist them to effectively deal with consumer returns, reduce costs, remain competitive, improve consumer satisfaction, increase market share and improve profitability. The framework offers a benchmark for online retailers in their design and management of effective consumer return processes. The framework for the effective RLM of consumer returns in online retailing is provided in chapter 9.

The next section provides an outline of the chapters of this study.

1.9 OUTLINE OF CHAPTERS

In this section, an overview of the chapters of this study is given. Figure 1.9 illustrates the outline of the chapters of this study.

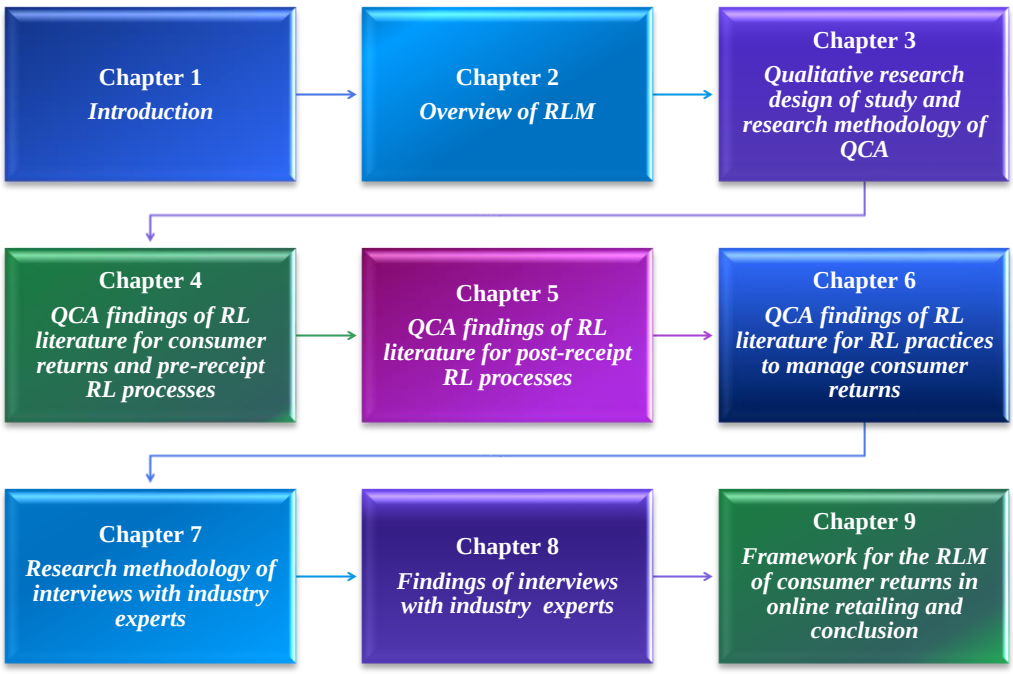


Figure 1.9 Chapter outline of the study
Source: Compiled by researcher

Based on Figure 1.9, a brief description of the chapters in this study is as follows:

- ***Chapter 1: Introduction.*** This chapter introduces the study with a background, problem statement and research objectives, overview of consumer return processes and practices in online retailing, scope, and research design and methodology. Further, this chapter emphasises the unique contribution of the study and concludes with an overview of the chapters and methodological map.
- ***Chapter 2: Overview of RLM.*** This chapter provides an overview of RLM, including a discussion based on literature on the definitions of RL, the barriers in RLM, significance of RLM and success factors for effective RLM. This chapter concludes with an overview of current knowledge and gaps in RL literature.
- ***Chapter 3: Qualitative research design of the study and research methodology of QCA.*** This chapter consists of two parts. The first part focuses on the overall qualitative research design of this study, including an overview of the justification of qualitative research designs, challenges in qualitative research, research paradigm and assumptions, research approaches to theory development and multimethod qualitative research. The second part focuses on the methodology and application of the QCA of RL literature, including an overview, phases and trustworthiness of the QCA of RL literature.
- ***Chapter 4: QCA findings of RL literature for consumer return types and pre-receipt RL processes of consumer returns.*** This chapter presents the findings of the QCA on RL literature for consumer returns and pre-receipt RL processes, including quantitative overviews (frequencies, percentages, bar charts and pie charts), qualitative data tables (text matrices), discussion of findings and further explorations on the relationship of categories with conceptual frameworks and summaries (typology) of findings and managerial implications.
- ***Chapter 5: QCA findings of RL literature for post-receipt RL processes of consumer returns.*** This chapter presents the findings of the QCA on RL literature for post-receipt RL processes, including quantitative overviews (frequencies, percentages, bar charts and pie charts), qualitative data tables (text matrices), discussion of findings and further explorations on the relationship of categories with conceptual frameworks and summaries (typology) of findings and managerial implications.
- ***Chapter 6: QCA findings of RL literature for RL practices to manage consumer returns.*** This chapter presents the findings of the QCA on RL literature for RL practices to manage consumer returns, including quantitative overviews (frequencies, percentages, bar charts and pie charts), qualitative data tables (text matrices), discussion of findings and further explorations on the

relationship of categories with conceptual frameworks and summaries (typology) of findings and managerial implications.

- ***Chapter 7: Research methodology of interviews with industry experts.*** This chapter provides the research methodology of the interview with industry experts. This chapter starts with an overview of interviews as a research method, including description of in-depth interviews in qualitative research, interview styles in qualitative research, roles of the researcher and participants in interviews, potential problems of interviews and motivating factors and advantage of interviews. Further, this chapter provides a discussion of the methodology and application of the interviews with industry experts in several steps, including purpose and research questions, ethical considerations, development of the interview protocol, sampling and recruitment, pre-interview planning, conducting interviews, post-interview planning, data analysis and trustworthiness.
- ***Chapter 8: Findings of the interviews with industry experts.*** This chapter provides the findings of the interviews with industry experts. This chapter consists of two parts, namely the presentation of findings for the descriptive analysis and findings for the reflexive TA. The first part compares the QCA of RL literature with the interview findings through qualitative data tables (text matrices) and a related discussion of findings. The second part presents the themes through a discussion of the findings with embedded quotations in the text. Further, the second part provides three frameworks based on the main themes of the study. Finally, this chapter provides summaries of the findings and managerial implications.
- ***Chapter 9: Framework for the effective RLM of consumer returns in online retailing and conclusion.*** This chapter provides an overview of the study, followed by the presentation of the final framework for the effective RLM of consumer returns in online retailing. Furthermore, this chapter provides a summary of main findings, recommendations and objectives realised, contributions, limitations and future research recommendations, and ending with the conclusion of this study.

In the next section, the methodology map of the study will be given, combining the elements discussed in chapter 1

1.10 METHODOLOGICAL MAP OF THE STUDY

Based on the purpose of the study, research objectives, research design and methodology and chapter outline, discussed in this chapter, a methodological map was created, as illustrated in Figure 1.10.

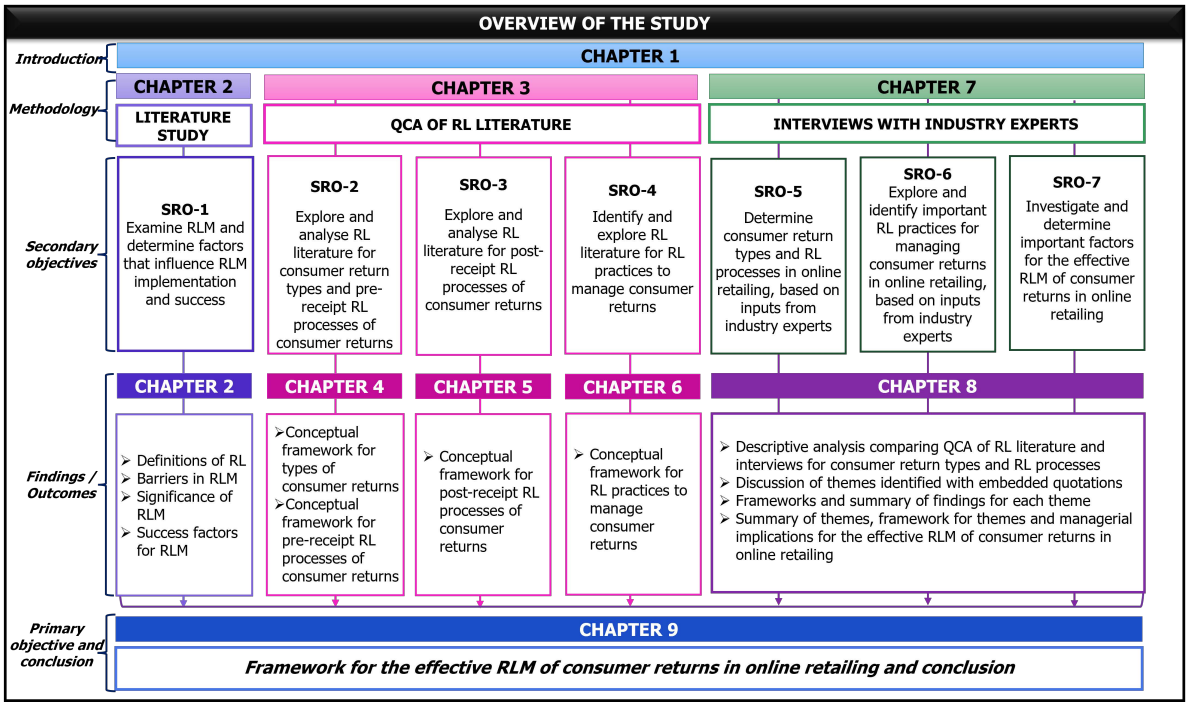


Figure 1.10 Methodological map of the study
Source: Compiled by the researcher

Specifically, the map shows the process of the study, starting with chapter 1, followed by the research methods with associated chapters, secondary objectives with associated chapters and findings/outcomes of research methods, primary research objective of developing a framework for effective RLM of consumer returns in online retailing in chapter 9, and concluding with chapter 10.

1.11 CONCLUSION

In this chapter the study was introduced with a background that focused on issues surrounding the importance of RL in online retailing and consumer returns, followed by a problem statement. It was evident that effective RLM can be essential in online retailing and that more scientific scholarly research must be conducted on the effective RLM of consumer returns in online retailing, especially in South Africa. The problem statement of this study included the following research question: "*What are the RL processes, RL practices and important factors for the effective RLM of consumer returns in online retailing?"*. Following the problem statement, the research objectives were identified, which included the primary objective of developing a framework for the effective RLM of consumer returns in online retailing, and seven related secondary research objectives.

Thereafter, an overview of consumer return processes and practices was given, which included the identification of (1) different flows, distinct processes and realisation of consumer and online retailer satisfaction in the consumer return process, and (2) distinct practices, including clear return policies and consumer communication, gatekeeping and avoidance practices, investment and use of

appropriate IT, outsourcing to 3PL and 3PRLproviders, internal management practices, and collaboration.

Next, a discussion of the scope of this study was given in terms of concepts related to RL, return types, parties, regions, RL processes, RL practices, research methods and aims. Following the scope, an overview of the research design and methodology of this study was given, which included the research paradigm and philosophical assumptions, research approach, methodological approach and research methods. Particularly, it was stated that this study selected (1) pragmatism as a research paradigm, (2) deductive, inductive and abductive approaches, (3) multimethod qualitative research as the methodological approach, and (4) a literature study, QCA of RL literature and interviews with industry experts as research methods.

Furthermore, the unique contribution of the study was identified as contributions to research and practice. The contributions to research included (1) the development of RL literature, (2) empirical research on consumer returns, RLM and RL in online retailing, (3) empirical research on RL in online retailing for a developing country, like South Africa, and (4) qualitative research in RL and the field of business management. The practical contribution entailed the framework that was developed for the effective RLM of consumer returns in online retailing, providing online retailers a guide to understand RL, gain insight into consumer returns, RL processes and practices, recognise the importance of effective RLM, consider important factors for the management of consumer returns and identify the most appropriate RL processes and practices to effectively manage consumer returns. Finally, this chapter concluded with an outline of the chapters and a methodological map of the study.

In the next chapter, the findings of the literature study (phase 1) will be given, providing an overview of RLM, which will include the definitions of RL, the drivers and benefits of effective RLM, the barriers and problems, and characteristics of effective RLM.

Chapter 2 Overview of reverse logistics management (RLM)

2.1 INTRODUCTION

As indicated in chapter 1, reverse logistics (RL) can be an important function due to its impact on the organisations, consumers and the natural environment. Since consumer returns are unavoidable for online retailers, the management of consumer returns can be an important part of RL in online retailing. The effective RLM of consumer returns can result in numerous benefits for online retailers, including cost savings, operational efficiencies, consumer satisfaction and loyalty (Eliav, 2022:1) and competitive advantage (Phuong, 2019:12). Despite the significance and benefits of the RLM of consumer returns, many online retailers neglect the effective management of consumer returns. Ignoring RLM can result in operational difficulties (Franklin, 2022:1), consumer dissatisfaction and higher RL expenses (Foo & A-Jalil, 2021:45), which can harm an online retailer's profitability, market share, and reputation (Davidavičienė & Majzoub, 2021:2). Consequently, various barriers and problems can prevent online retailers from realising the benefits of the effective RLM of consumer returns (Nel & Badenhorst, 2020:119; Wang, Dang *et al.* 2021:2). Fortunately, several authors/scholars proposed RL practices and strategies (as solutions) that can be implemented for the RLM of consumer returns.

In the research methodology section of chapter one (section 1.7, Figure 1.5), the research phases of the study were discussed. Chapter 2 forms part of the first research phase of this study, which can be viewed in Figure 2.1.

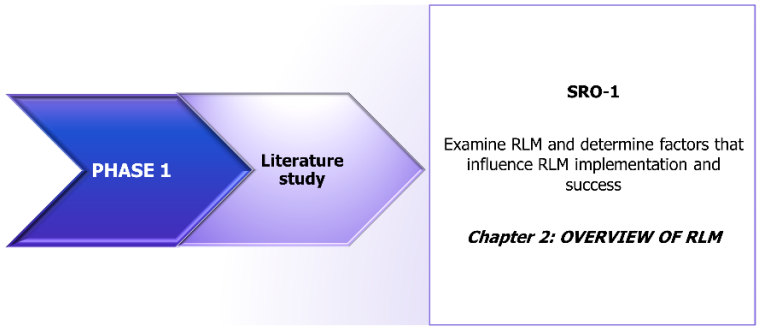


Figure 2.1 Literature study - Aim of chapter 2
Source: Compiled by the researcher

Figure 2.1. indicates that the aim of this chapter and phase one of the study is to achieve the *first* secondary research objective, which is ***to examine RLM and determine the factors that influence RLM implementation and success (SRO-1).*** Specifically, phase one involves a literature study to (1)

conceptualise RLM, (2) provide a theoretical overview of RLM, (3) explore the definitions of RL, (4) identify the barriers to effective RLM and implementation, (5) understand the significance of RLM adoption, and (6) identify the success factors and outcomes of successful RLM. Additionally, the findings and frameworks presented in this chapter contribute to the primary objective of the study, which is to *develop a framework for the effective RLM of consumer returns in online retailing.*

Figure 2.2 provides an overview of this chapter.

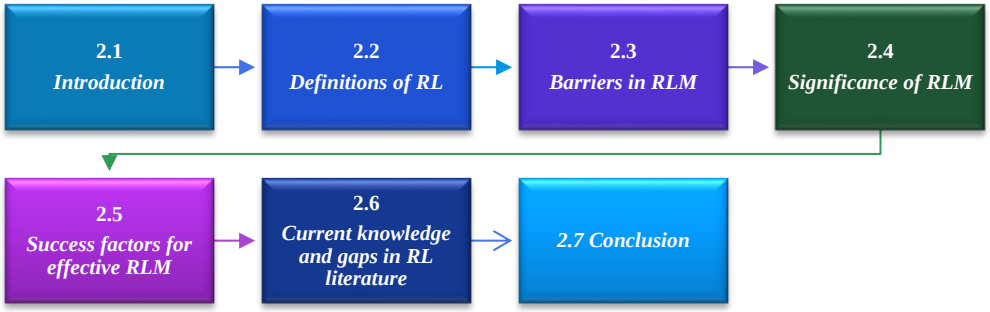


Figure 2.2 Overview of chapter 2
Source: Compiled by the researcher

Figure 2.2 provides an overview of chapter 2, starting with the introduction (this section), followed by the definitions of RL (section 2.2), RLM barriers (section 2.3), significance of RLM (section 2.4), success factors for effective RLM (section 2.5), and ending with an overview of current knowledge and gaps in RL literature (section 2.6) and the conclusion (section 2.7). The next section provides an overview of the various definitions of RL.

2.2 DEFINITIONS OF RL

Various authors/scholars over the decades defined RL in various ways. According to Badenhorst (2022:227) the scope of RL definitions constantly changes because RL represents one of the fastest developing fields in logistics. The scope of RL throughout the 1980s was limited to the movement of material against its primary flow (Bernon *et al.* 2011:486). In later literature various definitions for RL appeared, ranging from a general (broad) to more specific (narrow) scope. Table 2.**1** provides an overview of the various definitions of RL provided by various authors/scholars over the last three decades, ranging from general to specific.

Table 2.1 Definitions of RL

Scholar/Author	Definition
Bensalem and Kin (2019:16)	*RL is a backward flow of products, unlike classical forward processes that originate from the producer's end and end with the delivery of products to customers.*
Mishra and Napier (2014:33)	*RL refers to the flow of products or materials back into the supply chain.*
Harris and Martin (2014:1)	*RL is a practice that moves material physically from consumers for several reasons.*
Ayvaz *et al.* (2015:391)	*RL is a business strategy that drives the effective implementation of recovery activities to enhance sustainability.*
Ye *et al.* (2013:134)	*RL is a set of activities needed to collect products from the point of consumption, either for disposal or for economic and environmental value recovery.*
Sharma *et al.* (2011:101)	*RL is a process for moving end products from final destination to capture value and ensure appropriate disposal.*
Ravi and Shankar (2015:4)	*RL focuses on managing the flow of materials, information and relationships to add value and to properly dispose of products.*
CSCMP (2013:168)	*RL is a specialised function of logistics that focus on the management and movement of products and resources after the sale and after delivery to the consumer. RL includes product returns for repairs and/or refunds/credits.*
Dowlatshahi (2012:1265)	*RL is the process of gaining value or planning for proper disposal of products, including end of life products, returned by consumers or customer service centres.*
Gattorna and Ellis (2009:149)	*RL refers to the return of goods and packaging from intermediaries and end-users to upstream suppliers, restoring value and enabling disposal.*
Kannan *et al.* (2009:28)	*RL focuses on the backward flow of materials from customer to supplier (or alternate disposition) with the goals of maximising value from the returned item or minimising the total RL cost.*
Prakash and Barua, (2016ba:66)	*RL refers to the process of disseminating and movement of products/goods and related information from the consumption/distribution or use point back to the origin.*
Abraham (2011:211)	*RL is the process of collecting the raw materials and used products from first customers, and reusing, recycling or remanufacturing them into other products.*
Rajagopal *et al.* (2015:39)	*RL is a systematic approach to managing the flow of products, components and information from consumption to origin by expanding the traditional product life cycle.*
Govindan, Soleimani and Kannan (2015:603)	*In general, RL starts from consumers where used products are collected from consumers and then aims to manage returned products through various decisions related to repairing, remanufacturing, recycling and disposal.*
Badenhorst (2013:8)	*The process of RL involves managing the flow of goods and information from consumption to recovery, with the goals of waste reduction, value recapture, and proper disposal.*
Mahapatra *et al.* (2013:51)	*RL refers to the process of moving goods from their usual end destination to recapture value (through reuse, repairs, refurbishment, recycling and remanufacturing) or suitable disposal.*
Misni and Lee (2017:87)	*RL is the process of collecting and handling of returned end-of-life equipment, materials, components or products from the consumers back to the point of origin. It applies to all operations associated with the recovery of any used products and materials.*
Shi *et al.* (2012:219)	*RL encompasses the planning, implementation, and control of material and information flow from consumption to supply, with a focus on efficiency and cost-effectiveness.*
Srivastava and Srivastava (2006:530)	*RL is a process of planning, implementing and controlling the effective and efficient inbound flow, inspection and disposition of returned products and subsequent information for the goal of recovering value.*
Agarwal *et al.* (2016:1)	*RL can be defined as the processes of collection, inspection, sorting, repairing, refurbishing, remanufacturing, recycling and disposal to regain control products from the source of consumption back to the original source.*
Kussing and Pienaar (2012:447)	*RL is that part of returns management that plans, implements and controls the efficient and effective flow of goods and information from the point of consumption to the point of recovery to recover value or for appropriate disposal.*
Lamba *et al.* (2020:382)	*RL is about planning, controlling, and efficiently managing the flow of materials, inventory, finished goods, and information from consumption to origin to recapture RL process costs, secure profits or for thorough disposal.*
Lin and Hsu (2017:217)	*RL includes planning, implementation and control of the efficient and cost-effective flow of raw materials, processing inventory, finished goods and related information from the point of consumption to the point of origin to recapture value or correct disposal.*
Rogers and Tibben-Lembke (1998:268)[4]	*RL is the process of planning, implementing and controlling the efficient and cost-effective flow of raw materials, process inventories and finished goods and related information from consumption point to origin point for capturing value or appropriate disposal.*
Alamri (2011:236)	*The concept of RL involves managing the flow of products in reverse, incorporating recycling, remanufacturing, repairing, and more. RL expands the traditional forward process by addressing the return of used and reusable parts and products from customers with the aim of extending their usability, minimise waste, and conserve natural resources.*
Badenhorst (2022:227)	*RL involves managing the reverse flow of goods, demand information, and money, contrary to primary logistics. RL aims at reducing waste generation and managing collection, transportation, disposal and recycling of hazardous and non-hazardous waste to optimise long-term profitability.*
Bouzon *et al.* (2016:183, 182)	*RL is the process of moving goods from their typical final destination to capture value or to dispose of appropriately. RL encompasses the joint responsibility of producers and consumers to minimise waste generation through reuse, remanufacturing, recycling and safe disposal of unwanted products to improve the planet's absorption and regeneration capacity, contributing to sustainability and circular economy concerns.*

Source: Compiled by the researcher

From Table 2.**1** it is evident that RL involves a wide range of definitions with narrow to more broad contexts. To identify the most common elements of the definitions, Table 2.2 provides a data matrix for the elements that occur in two or more definitions per author/scholar.

- [4] Rogers and Tibben-Lembke are considered as the "originators" of research in RL.

Table 2.2 RL definition elements

Element category	Element	Bensalem and Kin (2019:16)	Harris and Martin (2014:1)	Mishra and Napier (2014:33)	Ayvaz et al. (2015:391)	Ye et al. 2013:134)	CSCMP (2013:168)	Dowlatshahi (2012:1265)	Ravi and Shankar (2015:4)	Sharma et al. (2011:101)	Gattorna and Ellis (2009:149)	Kannan et al. (2009:28)	Prakash and Barua, (2016ba:66)	Abraham (2011:211)	Rajagopal et al. (2015:39)	Govindan et al. (2015:603)	Badenhorst (2013:8)	Mahapatra et al. (2013:51)	Misni and Lee (2017:87)	Shi et al. (2012:219)	Srivastava and Srivastava (2006:530)	Agarwal et al. (2016:1)	Kussing and Pienaar (2012:447)	Alamri (2011:236)	Badenhorst (2022:227)	Bouzon et al. (2016:183, 182)	Lamba et al. (2020:382)	Lin and Hsu (2017:217)	Rogers and Tibben-Lembke (1998:268)	TOTALS
Trait	*Process*									X				X			X		X			X				X	X		X	8
	Efficient																			X			X				X	X	X	5
	Effective				X															X			X					X	X	5
	Opposite of FL	X																							X					2
Manage activity	*Manage*						X		X						X	X	X							X	X		X			8
	Planning							X												X	X		X				X	X	X	7
	Implement				X															X	X		X					X	X	6
	Control																			X	X	X	X				X	X	X	7
Task	*Activities*				X	X																			X					3
	Product return						X				X					X					X			X		X				6
	Credit						X									X														2
General flow	*Movement*		X				X			X			X					X							X	X				7
	Backward	X		X							X	X	X						X						X					7
	Flows	X		X					X			X			X		X			X	X		X	X	X		X	X	X	14
Flows of	*Materials*		X	X					X			X		X					X	X								X	X	9
	Inventory																										X	X	X	3
	Parts/components														X				X					X						3
	Products/goods						X	X		X	X		X		X		X	X			X	X	X	X	X		X	X	X	16
	Used product													X		X			X					X						4
	End-of-life							X											X											2
	Information								X				X		X		X			X	X		X		X		X	X	X	11
RL process	*Collection*					X								X					X			X			X					5
	Transport/distribute												X												X					2
	Inspection/sorting																				X	X								2
	Recovery/disposition				X														X		X									3
Recovery activity	*Reuse*													X				X								X				3
	Repair						X									X		X				X		X						5
	Refurbish																	X				X								2
	Remanufacture													X		X		X				X		X		X				6
	Recycle													X		X		X				X		X	X	X				7
Point	*Point of consumption*					X							X				X			X		X	X				X	X	X	9
	Point of recovery																X						X							2
	Point of origin												X		X				X	X		X					X	X	X	8
	Destination									X								X								X				3
Party	*Consumer /end user*		X					X			X	X		X	X	X			X					X		X				10
	Supplier/producer										X	X														X				3
Goal	*Recapture/reduce costs*											X															X			2
	Recapture/maximise value							X	X	X	X	X					X	X			X		X			X		X	X	12
	Secure/maximise profits					X																			X		X			3
	Extend product life														X									X						2
	Sustainability				X																					X				2
	Conserve natural resources																							X		X				2
	Reduce waste																X							X	X	X				4
	Proper disposal					X		X	X	X	X					X	X	X				X	X		X	X	X	X	X	15
	TOTAL	**3**	**3**	**3**	**5**	**5**	**6**	**6**	**6**	**6**	**7**	**7**	**7**	**8**	**8**	**9**	**10**	**10**	**10**	**10**	**10**	**12**	**12**	**13**	**14**	**14**	**14**	**14**	**15**	**247**

Source: Compiled by the researcher

Table 2.2 shows that RL definitions (28) cover various elements, including the element categories of (1) traits (characteristics), (2) management activities, (3) tasks, (4) general flows, (5) flows of, (6) RL processes, (7) recovery activities, (8) points, (9) parties, and (10) goals, and related elements, which occur in two or more definitions by various authors/scholars. The number of elements per definition includes three (broadest definition), five, six, seven eight, nine, ten, twelve, thirteen, fourteen and fifteen (most narrow definition). Most definitions contain ten elements, closely followed by fourteen and six elements. Contrastingly, only one definition contains five elements, nine elements and fifteen elements.

Per element category, the most mentioned elements included (1) process (trait), (2) manage and control (management activities), (3) product return (task), (4) flows (general flow), (5) products/goods (flow of), (6) collection (RL process), (7) recycling (recovery activity), (8) point of consumption (point), (9) consumer (party), and (10) proper disposal (goal). Overall, the *most mentioned (top eight) elements* of RL definitions included the flows of products/goods (16 definitions), goal of proper disposal (15 definitions), flows (14 definitions), goal of recapture or maximise value (12 definitions), flows of information (11 definitions), consumers/end users as parties (10 definitions), point of consumption (nine definitions) and flows of material (nine definitions). Oppositely, several *elements* occur *in less than three definitions*, including opposite of forward logistics (FL) as a trait, credit as a task, flows of end-of-life products/equipment, transport/distribution and inspection/sorting as RL processes, refurbishment as a recovery activity, point of recovery, and goals of recapture/reduce costs, extending the product's life, sustainability and conserve natural resources.

Based on Table 2.2, a general and an extensive definition of RL can be identified as follow:

> "Generally, RL can be defined as a process that involves the flows of materials, products and information from consumers, the point of consumption, to the point of origin for the purpose of recapturing value or for proper disposal."
>
> "Extensively, RL can be defined as a process that manages (plans, implements and controls) the efficient and effective movement and backward flows of materials, inventory, parts, returned products/goods and information from consumers, the point of consumption, to suppliers, the point of origin, or the point of recovery, with the aims of maximising economic value recovery, securing profits, minimising RL costs, reducing waste, extending the product's life, conserving natural resources and enhancing environmental sustainability or proper disposal through return collection, transportation, inspection, sorting and disposition processes and the recovery activities of reuse, repair, refurbishment, remanufacturing and recycling."

Although consumers can be important parties in the definition of RL, the importance of servicing and satisfying consumers through RL processes and activities are mostly missing from RL definitions. According to Agrawal and Choudhary (2014:20), the voice of the consumer is one of the most important aspects of RLM. Consumers respond to the behaviours of organisations, and the goodwill developed through RL processes and activities can create significant consumer loyalty. Therefore, the

definition of RL must include strategies to satisfy the consumer. According to Karlsson *et al.* (2023:1), consumer returns can be viewed as a service offering, which requires effective management. As a service offering, consumer returns can be an integral part of the consumer's overall online shopping experience. Similarly, Lin and Hsu (2017:218) argued that satisfactory consumer service through RL can be critical for online consumer retention. In fact, studies indicated that up to 80% of online shoppers are less likely to repurchase from an online retailer because of a poor return experience (Dobson, 2023:4).

Since this study focuses on the *effective RLM of consumer returns in online retailing* the following definition can be derived from the above discussion and definitions:

> The reverse logistics (RL) of online consumer returns is the process of managing (planning, implementing and controlling) the efficient and effective flows of returned products and information from the consumer (point of consumption) to an online retailer (point of recovery) or upstream supplier (point of origin) to recapture value, save costs, increase profits, satisfy, serve and retain online consumers, and improve economic and environmental sustainability through RL processes and practices.

Consequently, this study focused on that part of RL that involves the management of products, information and cash flows from the consumer to the online retailer to improve economic performance and satisfy, service and retain online consumers through RL processes and RL practices, which will be identified and explored throughout this study.

In the next section, the barriers in RLM that prevents online retailers from implementing and managing consumer returns effectively will be explored.

2.3 BARRIERS IN RLM

According to Badenhorst (2022:228), organisations often regard RL as an unavoidable evil and a non-value adding and costly process, failing to recognise the importance of RLM. Especially, in online retailing RLM and RL processes can be costly and complex, impacting consumer satisfaction (Eriksson & Käck, 2023:1) and the financial performance of online retailers (Pramono, Ulkhaq & Aulia, 2021:1). Subsequently, several challenging factors can impede the effective management and implementation of RL, affecting the overall performance of organisations (Pramono *et al.* 2021:1).

The barriers in RLM involve internal and external problems and risks that not only prevent organisations to adopt RLM but also hamper effective implementation and management of RL (Badenhorst, 2022:229). Internal barriers and related problems represent RLM obstacles that exist within the organisation, whereas external barriers and problems involve hindrances from outside the organisations that disturb RLM and its implementation (Govindan & Bouzon, 2018:320). Additionally, internal and external risks associated with the barriers in RLM can cause additional

challenges to the implementation and management of RL (Panjehfouladgaran & Lim, 2020:1451; Senthil, Murugananthan & Ramesh, 2018:719). According to Wang, Wang and Chan (2021:61), RL risk can be described as a type of business risk that cannot be measured or predicted because of uncertainties about the future and possibility of unexpected occurrences, causing disruptions and negative outcomes.

The barriers in RLM can overlap and influence each another (Pramono *et al.* 2021:2), meaning that online retailers must collectively identify and address the barriers and related problems and risks to RLM and implementation. Based on the literature study, RLM implementation involves four main barriers, namely economic barriers, operational barriers, organisational barriers and external barriers (Badenhorst, 2022:229; Badenhorst, 2017:618), which will be discussed in the subsequent sections. The section concludes with a framework and summary of the barriers in RLM.

2.3.1 Economic barriers in RLM

According to De Borba, De Magalhães, Filgueiras and Bouzon (2020:137), economic barriers to RLM and implementation carry a significant weight because of financial constraints and high costs. Equally, Lamba, Yadav, Barve and Panda (2020:397) found that economic barriers, especially a lack of investment, can be the most significant barriers to the implementation and management of RLM in online retailing. The economic barriers to RLM can be categorised as (1) investment barriers, (2) financial constraint barriers and (3) financial risks, which will be discussed in the subsequent sections.

2.3.1.1 Investment barriers in RLM

A lack of investment in RLM can be a significant economic barrier (Lamba *et al.* 2020:397) since effective RLM *requires heavy economic investment* (Lamba *et al.* 2020:399; Huang, Wu & Rahman, 2012:854; Ravi & Shankar, 2015:15; Waqas, Dong, Ahmad, Zhu & Nadeem, 2018:4202). Due to the high levels of investment and slow rate of return in RL, managers tend to prioritise other types of investments with more visible return on investment (Ravi & Shankar, 2015:15). Therefore, *a lack of investment in resources* can be a significant barrier for online retailers to implement and manage RL effectively (Lamba *et al.* 2020:397; Zailani, Govindan, Shaharudin & Kuan, 2017:37).

Like traditional logistics management, RLM need investment in infrastructure, information technology (IT) and human resources (Badenhorst, 2022:229; Pramono *et al.* 2021:3; Zailani *et al.* 2017:35). Specifically, effective RLM and implementation require investment and funds for (1) supporting infrastructure, (2) supporting and trained workforce, (3) efficient IT and systems

(Pramono *et al.* 2021:3; Ravi & Shankar, 2015:15; Sirisawat & Kiatcharoenpol, 2018:304), and (4) product recovery activities (disposition options), like repair and refurbishment, recycling and proper disposal (Badenhorst, 2022:229; Ravi & Shankar, 2015:15; Sirisawat & Kiatcharoenpol, 2018:304). Unfortunately, organisations are more inclined to invest in forward logistics (FL) and SC resources and hesitant to invest in RLM resources because of *unclear economic benefits* (Mahadevan, 2019:483).

Consequently, a lack of financial investment can prevent organisations from reaping the economic benefits associated with the effective RLM and implementation (Badenhorst, 2022:229). Additionally, if organisations lack the desire to implement and manage RL successfully, they might be less inclined to allocate the needed funds for RLM investments (Pramono *et al.* 2021:3). A *lack of necessary funding* can hamper the implementation of appropriate product tracking and tracing systems (Jović, Schlierf, Heinen & Tijan, 2020:160; Frei, Jack & Brown, 2020:1619; Mai, Chen & Anselmi, 2012:49; Ravi & Shankar, 2015:20) needed for managing product return uncertainties in terms of volume, frequency and source (Mathu & Khunou, 2021:443). Moreover, a lack of funds can hamper effective education and training of staff necessary for the management of product returns (Andresen & Istad, 2019:17). Evidently, a lack of funds necessary for RLM resources and capabilities contributes to the lack of adoption and implementation of RLM (Zailani *et al.* 2017:37).

Essentially, investment barriers not only prevent the effective implementation of RLM but also contribute to operational support barriers (section 2.3.2.2) and management and functional (organisational) barriers (sections 2.3.3.1 and 2.3.3.3).

2.3.1.2 Financial constraint barriers in RLM

Financial constraints can be one of the most important barriers to effective RLM and implementation (Badenhorst, 2022:229; Pramono *et al.* 2021:3; Ravi & Shankar, 2015:17), involving *high RL costs* that further adds to organisations' reluctance to invest in effective RLM (Badenhorst, 2017:618). Specifically, financial constraints in RLM associate with (1) *RLM investment expenses* (Ahlén & Johansson, 2023:32), (2) *standard costs of online product returns* (Davidavičienė & Al Majzoub, 2021:2; Karlsson *et al*. 2023:1; Lin & Hsu, 2017:218; Wang *et al.* 2017:681), (3) *product return uncertainties and a lack of economies of scale* (Ahlén & Johansson, 2023:32; Lamba *et al.* 2020:397; Nel & Badenhorst, 2020:119), and (4) *indirect expenses* of product return mismanagement and service failures (Ahsan & Rahman, 2021:21; Bozzi *et al.* 2022:12).

Linking with the investment barriers (section 2.3.1.1), *RLM investment* involves various *expenses*, including IT development and implementation costs, recruitment costs of qualified staff, and staff

training and development costs (Zailani *et al.* 2017:35). Moreover, in online retailing the *cost of online product returns* can be double to the product's original value (Lin & Hsu, 2017:218), representing more than 35% of the total cost of the online retailer (Davidavičienė & Al Majzoub, 2021:2). Online consumer returns can be more costly than traditional retailing because of product return uncertainties and transportation, gatekeeping, inspection, disposition and redistribution costs (Ahsan & Rahman, 2021:16; Wang *et al.* 2017:681). However, the highest costs of online product returns involve the handling and transportation of returned products from the consumer's location to the online retailer's facility (Das, Kumar & Rajak, 2020:59). In fact, Gustafsson, Jonsson and Holmström (2021:877) found that returned product handling and transportation costs could amount to 72% of total RL costs. These costs could be even higher for failed pick-up attempts due to consumer unavailability (Bozzi *et al.* 2022:18).

Consequently, product returns involve duplication of operational expenses, adding to total costs and additional losses of returned product value (e.g. lower resale price) (Bozzi *et al.* 2022:22). Moreover, product return handling can be more costly due to *uncertainties* in volume, frequency, source, quality and condition of the returned products (Mathu & Khunou, 2021:443). Additionally, unlike the scale benefits of FL, erratic volume and smaller quantities of product returns cause a *lack of economies of scale,* contributing to high RL costs in online retailing (Ahlén & Johansson, 2023:15; Nel & Badenhorst, 2020:119).

Finally, ineffective RLM add to the *indirect RL expenses* of online retailers (Bozzi et al. 2022:12). Specifically, *mismanagement of product returns* and subsequent *service failures* can cause consumer dissatisfaction, resulting in a loss of brand value, reputational damage and a loss of market share (Ahsan & Rahman, 2021:21; Bozzi *et al.* 2022:12). Consequently, the financial constraints of costly investments, high RL costs and unwanted expenses can hamper the effective implementation and management of consumer returns in online retailing.

2.3.1.3 Financial risks in RLM

Based on the RL risk definition provided by Wang, Wang *et al.* (2021:61)[5], financial risks in RLM involve financial uncertainties about unexpected and unwanted financial outcomes that can hamper effective RL implementation and management. Several financial risks might cause disruptions in RLM, including (1) *financial instability, capacity and investment risks* (Khor *et al.* 2016:117; Panjehfouladgaran & Lim, 2020:1465), (2) *a loss of money* and *high RL cost risks* (Ermes &

[5]See footnote 3.

Niemann, 2023:7; Shaharudin, Zailani & Tan, 2015:221), and (3) *profit loss risk* (Ermes & Niemann, 2023:7; Hsueh & Lin, 2015:165).

Financial instability, capacity and investment risks associate with the unavailability of the financial resources needed for effective RLM (Panjehfouladgaran & Lim, 2020:1461). Effective RLM and implementation can cause the financial risks of losing investors, attracting investors and raising additional capital (Khor *et al.* 2016:117). Furthermore, organisations *risk* the *loss of money* due to *high RL costs* contributing to high operating expenses (Shaharudin *et al.* 2015:221). Additionally, online retailers can experience a *high RL cost risk* from lenient returns (Ashan & Raham, 2021:158; Robertson *et al.* 2020:174). Because of the fierce competition in online retailing (Nel & Badenhorst, 2020:120), some online retailers implemented lenient returns, for example, allowing consumers to buy multiple products online, and after delivery return the unwanted products (Biswas & Abdul-Kader, 2018:1016). Consequently, lenient return policies can increase product returns, contributing to the financial risk of higher product return costs (Ashan & Raham, 2021:158; Robertson *et al.* 2020:174).

Finally, organisations risk a *loss of profits* due to the loss of product resale value (Bozzi *et al.* 2022:22) and hidden RL expenses (Ermes & Niemann, 2023:7). Unexpected RL expenses might cause organisations to allocate additional funds not in the budget, resulting in diminishing profit margins (Ermes & Niemann, 2023:7). Alternatively, financial risk and profit loss might be caused by organisations that fail to recognise the added value and profits associated with RL processes and product recovery activities (Hsueh & Lin, 2015:165). Evidently, a lack of awareness of the economic significance of RLM implementation can contribute to financial risk, hampering the implementation of RLM.

Clearly, online retailers can face various economic barriers, problems and risks that may complicate the implementation and management of consumer returns. Therefore, online retailers must identify RLM success factors and practices to address investment barriers, financial constraints and financial risks for the effective RLM of consumer returns. In the next section, the operational barriers in RLM will be identified and discussed.

2.3.2 Operational barriers in RLM

The RL process in online retailing can involve various operational challenges in terms of unpredictability of demand, complexity of managing returns, dependability of appropriate IT and infrastructure (Bozzi *et al.* 2022:31; Chen *et al.* 2017:252). Consequently, operational barriers in RLM relate to the processes and characteristics of product returns, the requirements of IT and

infrastructure and related operational risks. The operational barriers to the management and implementation of RL can be classified as product return barriers, operational support barriers, and operational risks, which will be discussed in the subsequent sections.

2.3.2.1 Product return barriers in RLM

The complexity of product returns can impact the implementation and management of consumer returns (Chen *et al.* 2017:253). While traditional FL is predictable and planned (Bozzi *et al.* 2022:31), by nature, returned products are less efficient to handle (Robertson *et al.* 2020:174) due to unpredictable return demand and uncertainties (Bozzi *et al.* 2022:31). Therefore, many online retailers are overwhelmed with the complexity of RL and unable to implement and manage consumer returns effectively (Frei *et al*. 2020:1619). The product return barriers to effective RLM and implementation relate to product return uncertainties, limited product return visibility, forecasting and planning, and quality and condition of returned products (Badenhorst, 2022:330; Badenhorst, 2017:619; Misni & Lee, 2017:92-93).

Every aspect of the RL process involves *uncertainties* (Senthil *et al.* 2018:719), including uncertainties in product return quality, condition, frequency and volume (Mathu & Khunou, 2021:443). *Limited visibility* of returns can be problematic for many organisations (Badenhorst, 2022:330; Srivastava, 2013:65). RL is a reactive process due to less visibility, which adds to the complexity of planning and decision-making for RLM (Rajagopal *et al.* 2015:41). In online retailing, limited visibility can be attributed to unpredictable fluctuations because individual consumers ultimately hold the decision to initiate returns (Espinosa, Stock, Ortinau & Monahan, 2021:790: Rajagopal *et al.* 2015:41). Consequently, limited visibility causes a lack of knowledge about return volume and quality of returned products as well as an unpredictable demand on recovered materials (Lai *et al.* 2022:4; Starostka-Patryk *et al.* 2013:507).

Relating to the unpredictability of product return volume, *limited forecasting* and *planning* can also be significant operational barriers (Badenhorst, 2022:330). Bouzon *et al*. (2018:328) found that limited forecasting and planning can be the most important impediments to RLM implementation. The stream of returned products can only be forecasted based on previous consumer return behaviours (Frei *et al*. 2020:1620). Therefore, online retailers find it challenging to predict product return volumes, hampering effective forecasting and planning of inventory (Ahlén & Johansson, 2023:31; Badenhorst, 2022:330). Moreover, a lack of forecasting and planning for effective RLM impacts operational efficiency, effective resource allocation, economies of scale and realisation of financial benefits (Ahlén & Johansson, 2023:31).

Finally, product return barriers associate with problems with the *quality* and *condition* of *returned products* (Badenhorst, 2022:330; Badenhorst, 2017:619). According to Sirisawat and Kiatcharoenpol (2018:310), one of the most neglected aspects in RL is the quality and condition of returned products. While the quality and condition of products are uniform in FL, in RL products are returned in various conditions and quality, including new, used, defective or damaged conditions (Badenhorst, 2022:330; Pranomo *et al.* 2021:3). These uncertainties in the quality and condition of returned products add to the complexity of estimating the value of returned products (Lee & Lam, 2012:596) and effective planning and control of the RL process (Badenhorst, 2022:330). Additionally, the quality and quantity of returned products add to the complexity of managing the financial aspects of RLM (Lee & Lam, 2012:596) and hamper effective performance measurement (PM) in RLM (Ravi & Shankar, 2015:13).

Essentially, product return barriers can cause various challenges to effective RLM and implementation, contributing to other RLM barriers, including financial constraints and risks (sections 2.3.1.2 and 2.3.1.3), operational risks (section 2.3.2.3) and strategy, policy and control barriers (i.e. lack of PM) (section 2.3.3.2).

2.3.2.2 Operational support barriers in RLM

The effective implementation and management of RL requires strong information and infrastructure support (Jović *et al.* 2020:160; Mai *et al.* 2012:49). Accordingly, the operational support barriers in RLM involve inadequate information and technology systems, and a lack of infrastructure and development (Badenhorst, 2017:619; Badenhorst, 2022:330; Misni & Lee, 2017:92-93).

Inadequate IT and information systems as operation resources can be significant barriers to the successful implementation and effective management of RL (Badenhorst, 2022:330; Karlsson *et al*. 2023:7). While most organisations use effective information and technology systems to support FL, IT support for RLM still need further improvement (Lee & Lam, 2012:596). In fact, Karlsson *et al.* (2023:8) found that new IT is rarely implemented and used in the RL process. The information infrastructure of many online retailers involves fragmented IT systems, poor data management and poorly connected legacy systems, which hampers RL process efficiency (Frei *et al.* 2020:1619). Consequently, inadequate integration of IT systems for RLM can significantly impact the operational performance of online retailers (Soltany, Rostamzadeh & Skrickij, 2018:780; Dapiran & Kam, 2017:831). Additionally, online retailers that lack real-time IT systems to record purchases, product returns and refund data hampers the ability to track fraudulent returns (Zhang, Frei, Senyo, Bayer, Gerding, Wills & Beck, 2023:2, 10), adding to financial risks (section 2.3.1.3) and consumer buying behaviour barriers (section 2.3.4.2). Moreover, a lack of robust information systems to manage RL

processes contributes to lack of SC visibility and information sharing (Mahadevan, 2019:483), which further hampers RLM (see section 2.3.4.1).

Although facets of IT, like Big Data and Cloud, can help online retailers to effectively analyse product returns, the capabilities needed to support RLM are still lagging, creating severe challenges in RLM (Lai *et al.* 2022:4). Online retailers with poor consumer return portals not only reduces product return visibility, but also enable fraudulent consumer return behaviour (Zhang *et al.* 2023:7). Without proper information software and support, online retailers perform the RL process manually (Bozzi *et al.* 2022:15), which impedes return authorisation, tracking, visibility and handling (Badenhorst, 2022:330; Mai *et al.* 2012:49). Additionally, online retailers often fail to capture, analyse and use product return data for RLM decision-making, which impacts the management of consumer returns (Karlsson *et al* 2023:7). Therefore, limited access to information about product returns can hamper effective RL decision-making by RL staff (Espinosa *et al*. 2021:791). Evidently, failure to analyse return reasons can hamper improvements in the RL process and effective avoidance of future product returns (Bozzi *et al.* 2022:11).

Closely related to inadequate information systems and technology, *a lack of infrastructure* and *development* can be significant barriers to the implementation and management of RL (Lamba *et al.* 2020:398; Meyer *et al.* 2017:12). Inadequate infrastructure and a lack of development causes uncertainties and operational inefficiencies, hampering effective planning and management of RL processes (Badenhorst, 2022:330; Bai & Sarkis, 2013:307; Meyer *et al*. 2017:12, 13). Internal infrastructure for RL includes warehouse IT, facility space, vehicles used for return transportation and updated equipment (Davidavičienė & Al Majzoub, 2021:8). Consequently, a lack of infrastructure contributes to information systems and technology deficiencies (Srivastava, 2013:65), adding to inadequate IT as a barrier to effective RLM. Externally, online retailers face problems with collecting one product at a time, from various consumer home addresses, offering no infrastructure to support return processes (Bozzi *et al.* 2022:18). Moreover, most organisations lack the capability to manage RL networks because of the complexity of the RL process and resource constraints (Wang, Dang *et al.* 2021:2). Essentially, operational support barriers can be significant barriers to the successful implementation and management of RL, causing various operational challenges and inefficiencies in the RL process.

2.3.2.3 Operational risks in RLM

While financial risks mostly contribute to economic barriers (section 2.3.1.3), operational risks can be the results of operational barriers. Therefore, in line with the barriers discussed in the preceding sections, operational risks in RLM can involve consumer demand and forecast risks, product quality

risks, technological and data management risks, and inventory risks (Panjehfouladgaran & Lim, 2020:1461-1462; Senthil *et al.* 2018:718). Specifically, *demand* and *forecast risks* associate with the uncertainty of product returns, lack of visibility and limited forecasting (Panjehfouladgaran & Lim, 2020:1462). Consequently, online retailers face uncertainties in terms of the time, volume and product mix of returned products (De Borba *et al.* 2021:125), which complicate RLM.

Similarly, *product quality* risks relate to uncertainties in terms of the quality and condition of returned products (De Borba *et al.* 2021:125; Panjehfouladgaran & Lim, 2020:1462). Therefore, online retailers face the risk of receiving defective, damaged, incomplete (e.g. missing accessories) (Panjehfouladgaran & Lim, 2020:1462), and poor-quality products (Ermes & Niemann, 2023:7). Moreover, product quality risks occur when inadequate quality inspections are performed before reselling returned products (Ermes & Niemann, 2023:7). Therefore, online retailers' risk additional returns from poor quality inspections. Associating with the operational support barriers of inadequate IT, the *technology risks* in RLM relate to continuous changes in IT and reduction in existing IT capabilities for RLM (Panjehfouladgaran & Lim, 2020:1461). Moreover, poor information systems contribute to *data management risks,* relating to poor return information accuracy, security and disruptions (Senthil *et al.* 2018:718).

Finally, *inventory risks* in RLM are associated with a lack of infrastructure and operational inefficiencies. For instance, inadequate storage of returned products can cause damage, which further increases future damaged product returns (Senthil *et al.* 2018:718). Moreover, inventory risk involves pilferage of returned products, which can occur during any stage of the RL process (Ermes & Niemann, 2023:7). Consequently, if organisations fail in handling returned products efficiently, effectively and thoroughly, they risk considerable value loss (Prajapati, Kant & Shankar, 2021:15). Evidently, operational risks can add to the financial risk of high RL costs because of increases in product returns and profit loss due to the inability of recovering value from returned products (see section 2.3.1.3).

In essence, online retailers can face various operational barriers, problems and risks that may complicate the implementation and management of consumer returns. Therefore, online retailers must identify RLM success factors and practices to address product return barriers, operational support barriers and operational risks for the effective RLM of consumer returns. In the next section, the organisational barriers in RLM will be identified and discussed.

2.3.3 Organisational barriers in RLM

Organisational barriers relate to specific management issues and problems in implementing and managing RL effectively (Badenhorst, 2022:229; Bai & Sarkis, 2013:306; Chan, Chan & Jain, 2012:1318; Starostka-Patryk *et al.* 2013:506). Bouzon *et al.* (2018:328) found that the most important barriers in RLM are internal to the organisation, suggesting that organisations must start by addressing internal organisational barriers for effective RLM implementation. The organisational barriers can be classified as management barriers, strategy and policy barriers, functional barriers and organisational risk, which will be discussed in the subsequent sections.

2.3.3.1 Management barriers

According to Biswas and Abdul-Kader (2018:1016), RL is an increasingly important yet undermanaged organisational function. The absence of RLM interest, knowledge, awareness and commitment by managers can be significant barriers to the effective implementation and management of online consumer returns (Davidavičienė & Al Majzoub, 2021:6). Evidently, the management barriers in RLM involve a lack of awareness and knowledge about the importance of RLM, a lack of top management commitment to RLM, management inattention (Badenhorst, 2017:618; Badenhorst, 2022:229) and a resistance to change (Badenhorst, 2017:618; Pranomo *et al.* 2021:3)

A lack of awareness and knowledge about the *importance of RLM* can be a major barrier for successful RLM implementation (Aytekin, Çopuroğlu & Sariçiçek, 2016:505; Davidavičienė & Al Majzoub, 2021:6; Ravi & Shankar, 2015:15; Srivastava, 2013:66). Although RLM can be a differentiating advantage for online retailers, managers often fail to understand and realise the value of RLM (Chen *et al.* 2017:253; Lin & Hsu, 2017:218) and the significant impact of consumer returns on the organisation and the environment (Bozzi *et al.* 2022:27), which hampers effective RLM (Chen *et al.* 2017:253). Consequently, a lack of awareness about the importance of RLM is normally a result of a lack of recognition that effective RLM can create a competitive advantage (Phuong, 2019:12) and add value in terms of finances, brand image and the environment (Jra *et al.* 2017:29).

For online retailers to implement and manage RL effectively, commitment from top management is essential (Ahlén & Johansson, 2023:17). Accordingly, a *lack of top management commitment* is an important barrier in RLM (Bouzon *et al.* 2018:326; Ravi & Shankar, 2015:15; Starostka-Patryk *et al.* 2013:508) since effective RLM is impossible without management support (Panjehfouladgaran & Lim, 2020:1466). In fact, top management, plays a central role in enabling efficient RLM (Mostert *et al*. 2017:9). A lack of top management commitment to RLM hampers strategic planning, awareness about the importance of RLM and financial support for RLM (Andresen & Istad, 2019:17).

Consequently, top management is prone to neglecting and losing interest in resources and capabilities for RLM, resulting in a lack of effectiveness in managing consumer returns (Zailani *et al.* 2017:29). Such a negative attitude from management towards RLM can hinder operational practices and lead to suboptimal RL performance (Chen *et al.* 2017:252).

Subsequently, both a lack of knowledge about RLM importance and top management commitment can complicate effective RLM. For instance, a lack of awareness about RLM and top management support can reduce the likelihood of allocating sufficient resources for effective RLM (Chen *et al.* 2017:261). Moreover, the economic barriers (such as a lack of investment) in RLM may stem from *management inattention* to RLM (Badenhorst, 2022:229). The unimportance of RLM contribute to RLM implementation failures, a lack of IT and inadequate infrastructure for effective RLM (Solati, Shojaei, Alimohammadlou & Hesamabadi, 2023:14). Furthermore, a lack of knowledge, commitment and support from management can result in poor decision making for the implementation of appropriate RLM practices (e.g. poor return policies), causing RL inefficiencies, higher RL costs and reduced profits (Ahlén & Johansson, 2023:31). Without the understanding and support from managers, even the best RLM strategies, technologies and tools cannot achieve effective RLM outcomes (Chen *et al.* 2017:252).

Finally, a *resistance to change* can be a significant barrier in RL (Badenhorst, 2017:604; Kaynak *et al.* 2014:441; Srivastava, 2013:66; Starostka-Patryk *et al.* 2013:508). RLM implementation involves adaption in procedures, human resources and leadership priorities, which can cause a resistance to change (Govindan & Bouzon, 2018:321). Specifically, management might fear the unknown regarding RLM implementation (Zailani *et al.* 2017:27), causing resistance to successful RLM implementation (Pranomo *et al.* 2021:3). Additionally, RLM implementation signifies organisational change, which can generate scepticism and a resistance in the entire organisation and impact RL improvements (Pranomo *et al.* 2021:3). Therefore, this management barrier is generally reflected in the social aspect of RLM implementation because it is first created by managers and then staff (Starostka-Patryk *et al*. 2013:509). Furthermore, a resistance to change from management associates with organisational culture problems (Govindan & Bouzon, 2018:331). Weak management can contribute to poor organisational culture, resulting in suboptimal RL performance (Davidavičienė & Al Majzoub, 2021:9). Consequently, implementing RLM successfully demands a fundamental change in the mindset and practices of the entire organisation (Pranomo *et al.* 2021:3).

Essentially, many organisations, either unintentionally or intentionally, fail to give adequate management attention to RLM (Chen *et al.* 2017:253), not only hampering effective implementation

and management of RL but also contributing to various RLM barriers, including economic barriers, operational barriers and other organisational barriers.

2.3.3.2 Strategy, policy and control barriers

Strategy, policy and control barriers involve a lack of strategic planning for RLM (Badenhorst, 2017:618; Badenhorst, 2022:229), problems with organisational policies and problems in performance measurement (Badenhorst, 2022:229-230), which hamper effective RL implementation and management.

Karlsson *et al.* (2023:9) found that online retailers often lack proper RLM strategies with policies and procedures designed on an ad hoc basis over time. Therefore, *a lack of strategic planning* can be an important RLM barrier (Bouzon *et al.* 2018:326; Starostka-Patryk *et al.* 2013:506) since strategic planning and the identification and development of RLM goals can be crucial for effective RLM (Karlsson *et al.* 2023:3). Strategic planning in RLM involves the identification of goals and determining the most appropriate course to achieve those goals (Starostka-Patryk *et al.* 2013:509). Failure to make RLM part of an organisation's goals and strategic planning results in internal inefficiency, poor control and increasing RL costs (Karlsson *et al.* 2023:8). Furthermore, failure to create appropriate goals for RLM can foster a silo mentality and prevent internal coordination and integration (Karlsson *et al.* 2023:9). Consequently, without strategic planning and direction, organisations will find it difficult to manage and control product returns (Badenhorst, 2022:229; Chen *et al.* 2017:261), invest in RL improvement initiatives and commit sufficient resources (Chen *et al.* 2017:261). Furthermore, a lack of strategic planning can hamper the development of a RLM strategy, which can impact organisational performance and reputation (Karlsson *et al.* 2023:9) as well as the development of strategic resources (e.g. infrastructure) to support RL operations (Panjehfouladgaran & Lim, 2020:1461).

Problems with organisational policies relates to a lack of RL policies (Badenhorst, 2022:230), restrictive organisational policies (Bouzon *et al.* 2018:326) and poor return policies (Lamba *et al.* 2020:398), which can hamper RL implementation and management. In terms of a *lack of RL policies*, organisations might fail to implement policies in compliance with environmental standards and consumer pressures (Badenhorst, 2022:230). *Restrictive organisational policies* against RL implementation can be the most important barrier to the effective management of product returns (Bouzon *et al.* 2018:328). Therefore, restrictive organisational policies can create a significant barrier to RLM, for example, policy rules with too strict requirements might block the return flows or recovery (disposition) activities (Starostka-Patryk *et al.* 2013:509) and restrict future sales opportunities. Specifically, the fear of sales cannibalisation (i.e. new products competing with

recovered products in the market) can cause organisations to create policies against product recovery operations and RL activities (Bouzon *et al.* 2018:328).

The return policy of the online retailer can be one of the most significant factors for effective RLM (Andresen & Istad, 2019:46). Consequently, *poor return policies* (i.e. unclear, too lenient or too strict) can be a main barrier to RLM adoption in online retailing (Lamba *et al.* 2020:398). A return policy represents the degree and difficulty of the RL process (Nel & Badenhorst, 2020:122) and determines the risk sharing between retailers and consumers (Andresen & Istad, 2019:16). Return policies can impact consumer buying and return behaviours, making poor return policies a critical factor in the management of consumer returns (Karlsson *et al.* 2023:3). While lenient return policies lead to higher returns and higher RL costs (Andresen & Istad, 2019:57), adding to the financial risks (section 2.3.1.3), restrictive return policies can result in a loss of sales (Biswas & Abdul-Kader, 2018:1016; Zhang *et al.* 2023:10), increase product return complexity for consumers (Zhang *et al.* 2023:10), and ultimately impact consumer satisfaction (Badenhorst, 2022:230). Accordingly, in online retailing, poorly designed return policies can cause a loss of future sales and result in poor RLM performance (Davidavičienė & Al Majzoub, 2021:19).

Finally, *problems with RL performance measurement* can hamper RL control and management (Badenhorst, 2022:229). Performance measurement is a key element in enabling the RLM process of performance management, performance improvement and performance documentation (Ravi & Shankar, 2015:18). However, due to uncertainties in the return process, creating, implementing and managing true RL performance can be challenging (Badenhorst, 2022:229; Davidavičienė & Al Majzoub, 2021:2). Moreover, RL lacks specific performance metrics (Kaynak *et al.* 2014:441; Ravi & Shankar, 2015:15), which form a basis of an integrated performance management system (Kaynak *et al.* 2014:441). Consequently, many organisations lack sufficient performance measurement and performance management systems, hampering RL implementation and management (Lamba *et al.* 2020:385; Solati *et al.* 2023:14). Ultimately, effective RL implementation, control and management requires the development of RL performance measures and continuous RL performance monitoring (Karlsson *et al.* 2023:8; Lamba *et al.* 2020:385).

2.3.3.3 Functional barriers

The functional barriers that can impact RL implementation and management include a lack of staff training and education, a lack of internal coordination (Badenhorst, 2017:618) and poor internal information sharing (Zailani *et al.* 2017:29). Since staff training and education can be one of the main factors for organisational success, *a lack of trained and educated staff* can be a significant barrier to RLM implementation (Kaynak *et al.* 2014:441; Pranomo *et al.* 2021:3; Starostka-Patryk *et al.*

2013:508). Additionally, unskilled and untrained staff can hamper the management of RL processes (Ermes & Niemann, 2023:7), which means organisations must allocate sufficient staff resources for effective RLM (Sharma & Singh, 2013:34). Therefore, inadequate training and education can be the consequence of investment barriers and a lack of financial resource commitment to RLM (Andresen & Istad, 2019:17; Pramono *et al.* 2021:3; Zailani *et al.* 2017:35).

A lack of internal coordination can cause various RLM problems since RL is a cross-functional process, involving customer service, marketing, legal, logistics, operations, purchasing and finance (Badenhorst, 2022:229). Poor strategic planning for RLM can contribute to a lack of internal coordination and integration with inconsistent goals, fostering a silo mentality (Hjort *et al.* 2019:784; Karlsson *et al.* 2023:9). Therefore, each function focuses on optimising its performance at the expense of other functions, hampering cross-functional RLM implementation (Hjort *et al.* 2019:784). Additionally, poor internal coordination between marketing, procurement and logistics can result in poor RL practices, higher returns (Mai *et al.* 2012:49) as well as prevent organisations from achieving strategic objectives (Karlsson *et al.* 2023:3). Consequently, poor internal integration can be significant cost drivers in the RL processes of consumer returns (Hjort *et al.* 2019:770), contributing to the financial constraint barriers (section 2.3.1.2). Moreover, a lack of internal integration in many organisations contributes to poorly coordinated SC and RL processes (Karlsson *et al.* 2023:8). Therefore, effective RLM practice and implementation needs synchronisation from all functional levels of the organisation (Badenhorst, 2022:229; Bouzon, Spricigo, Rodriguez, de Queiroz & Cauchick, 2015:1369).

Closely related to a lack of coordination, *poor internal information sharing* between functions can hamper the effective management of product returns (Zailani *et al.* 2017:29). Relating to inadequate IT systems for RLM (section 2.3.2.2), poor information sharing can stem from poorly integrated IT systems, which significantly impacts the RL performance of online retailers (Soltany *et al.* 2018:780; Dapiran & Kam, 2017:831). Additionally, a lack of communication between functions prevents real-time information sharing, hampering commitment to RL practices across the organisation (Zailani *et al.* 2017:27). Finally, poor internal information sharing means that different departments capture different sets of return information data that cannot be reconciled (Frei *et al*. 2020:1619), which impacts the effective RLM of consumer returns (Karlsson *et al* 2023:7).

2.3.3.4 Organisational risks

The organisational risks include management risk, culture risk and labour risks (Panjehfouladgaran & Lim, 2020:1461; Senthil *et al.* 2018:718), which relate to management and functional barriers in RLM. *Management risk* can be the result of a lack of expertise and experience in RLM (Senthil *et al.*

2018:718), associating with a lack of knowledge and management inattention barriers. Additionally, management risk associates with different management styles that causes inconsistent decision making in RL (Panjehfouladgaran & Lim, 2020:1461), which may hamper effective RLM.

Culture risk relates to inadequate knowledge about the culture of different people in the organisation (Panjehfouladgaran & Lim, 2020:1462), which can stem from a resistance to change for RLM adoption (Senthil *et al*. 2018:718). Consequently, the culture risk created from a resistance to change can lead to poor RL performance (Davidavičienė & Al Majzoub, 2021:9), impacting RLM improvements (Pranomo *et al.* 2021:3). Finally, *labour risks* relate to a lack of skilled and trained staff, which can hamper effective RLM (Ermes & Niemann, 2023:7; Panjehfouladgaran & Lim, 2020:1461). Furthermore, unskilled and untrained staff tend to care less about RL processes and effective handling of product returns, causing damages and a subsequent increase in returns because of negligence (Ermes & Niemann, 2023:7).

Essentially, online retailers can face various organisational barriers, problems and risks that may complicate the implementation and management of consumer returns. Therefore, online retailers must identify RLM success factors and practices to address management barriers, strategy, policy and control barriers, functional barriers and organisational risks for the effective RLM of consumer returns. In the next section, the final barrier category focussing on external barriers in RLM will be identified and discussed.

2.3.4 External barriers in RLM

External barriers in RLM involve various challenges that impedes the adoption, implementation and management of RL practices (Ahlén & Johansson, 2023:17), including supply chain (SC) problems (Badenhorst, 2022:330), consumer behaviour barriers (Ahlén & Johansson, 2023:17), external support barriers and external risk (Senthil *et al.* 2018:718). These external barriers will be discussed in the subsequent sections.

2.3.4.1 Supply chain (SC) barriers

SC barriers involve various SC problems, including a lack of support from SC members, a lack of SC collaboration and a lack of SC information sharing, which can hamper the efficient and effective implementation and management of RL (Badenhorst, 2022:330). A *lack of support from SC members* can be detrimental to RLM implementation (Badenhorst, 2022:330; Bouzon *et al*. 2018:326) since support from SC members can be important for return visibility and cost savings (Badenhorst, 2022:330). Evidently, a lack of support from SC members can contribute to the product returns

barriers (section 2.3.2.1) and financial constraint barriers (section 2.3.1.2). Accordingly, the support of all stakeholders in the SC can be important for the effective management of RL (Andresen & Istad, 2019:16; Badenhorst, 2022:330).

Similarly, *a lack of SC collaboration* can be a barrier to effective RLM (Badenhorst, 2017:606; Badenhorst, 2022:330), especially if online retailers partially or entirely outsource RLM to third-party RL (3PRL) providers (Wang, Dang *et al.* 2021:11). Cooperation and collaboration between the organisation and 3PRL providers can be important to gain value from outsourcing RL to 3PRL providers. Consequently, a lack of collaboration between organisations and 3PRL providers can lead to poor consumer return service (Pathak, Joshi & Kumar, 2020:41), affecting the confidence of consumers and eventually the profits of the online retailer (Lamba *et al.* 2020:388). Additionally, fraudulent returns can increase if online retailers fail to collaborate with 3PRL providers (Zhang *et al.* 2023:7), contributing to consumer return behaviour barriers. Equally, a lack of collaboration from suppliers can be problematic for effective RLM. For example, Meyer *et al.* (2017:12) found that in the South African grocery industry, suppliers' non-compliance to packing specification can be a major external barrier to RLM practices since poorly packaged products can increase product damages, which in turn can increase product returns. Therefore, SC collaboration can be important for product return cost savings and management (Badenhorst, 2022:330).

Like a lack of SC support and collaboration, *a lack of SC information sharing* can be a barrier to effective RLM (Badenhorst, 2022:330). A lack of SC information sharing associates with a lack of SC collaboration. For instance, a shortage of data exchange and information unpredictability increase the failure to effectively collaborate in the SC, impacting the RL performance of the entire SC (Starostka-Patryk *et al.* 2013:509). Oppositely, inadequate SC coordination and collaboration causes a lack of systems integration between SC partners, which can reduce overall RL process efficiency (Bozzi *et al.* 2022:19). Therefore, a lack of shared information platforms hampers information sharing between SC partners, compromising data integrity, consistency and organisational efficiency (Meyer *et al.* 2017:12). Moreover, a lack of information sharing in the SC can hamper product return visibility and ultimately the effective management of product returns (Badenhorst, 2022:330). Consequently, the inability to integrate IT and ineffective management of SC information flows can hamper the overall effectiveness and efficiency of product returns (Bozzi *et al.* 2022:19; Zailani *et al.* 2017:29).

Essentially, the effective RLM of consumer returns requires support from SC parties, SC collaboration and cooperation and information sharing between SC parties (Badenhorst, 2022:330).

2.3.4.2 Consumer behaviour barriers

Consumer behaviour can be an external barrier that hampers the implementation and management of RL practices (Ahlén & Johansson, 2023:17). With the rise of online retailing, many consumers engage in impulsive and compulsive buying due to hassle-free return processes (Frei *et al.* 2020:1615). Specifically, *opportunistic buying behaviour* of consumers causes several problems for online retailers, particularly those with lenient return policies (Nel & Badenhorst, 2020:121). Due to intense competition, many online retailers introduced lenient and zero-return change policies, giving consumers the freedom to return products without any cost implications (Biswas & Abdul-Kader, 2018:1016). No-questions-asked return policies can encourage dishonest consumers to undertake wardrobing (i.e. buying a product with the intention of returning it later) with little regard for the costs and losses to the online retailer (Zhang *et al.* 2023:10). Likewise, some online retailers implemented the practice of affording consumers with the opportunity to reduce product uncertainties through trial periods, which opportunistic consumers exploit through wardrobing (Shang, Ghosh & Galbreth, 2017:1316). While illegitimate "borrowing" is becoming socially acceptable among consumers, online retailers face difficulties to stop these trends without impacting consumer service (Frei *et al.* 2020:1615).

Unethical consumers often exploit consumer-centric return policies, enabling them to learn new methods to generate profits or obtain products for free through fraudulent returns (Zhang *et al.* 2023:6). Therefore, another consumer behaviour barrier to effective RLM includes *fraudulent return behaviour,* which causes various problems for online retailers (Nel & Badenhorst, 2020:121). According to Zang *et al.* (2023:1), fraudulent returns can be viewed as an inevitable yet regrettable part of online retailing due to large financial losses and consumption of a large portion of resources (Zhang *et al.* 2023:1). While opportunistic buying behaviour can be a form of fraud, online retailers can face more extensive forms of fraudulent return behaviours. For example, some consumers can engage in the "exchange fraud behaviour", in which they exchange counterfeit or stolen goods for new items (Shi *et al.* 2021:2172; Nel & Badenhorst, 2020:119). Similarly, "price arbitrage" behaviour entails the purchase of a high-quality product and returning stolen, damaged, lower quality or counterfeit product for a full refund (Zhang *et al.* 2023:2).

Other fraudulent return behaviours include sending empty parcels back for a full refund, hoping online retailers fail to notice. In this case, online retailers not only lose the product but also incur financial losses by paying for the full refund and RL costs (Zhang *et al.* 2023:2), emphasising the importance of product return inspections. Additionally, "unpacking return fraud behaviour" involves removal of valuable parts and then returning the product for any reason, causing significant financial

losses for online retailers (Shi *et al.* 2021:2172). Consequently, fraudulent return behaviour by consumers can greatly impact RLM, causing monetary loss and a waste of RL resources related to manpower and time (Shi *et al.* 2021:2175).

Essentially, opportunistic buying and fraudulent return behaviours can contribute to various other barriers, including the economic barriers of investment, financial constraint, financial risk (section 2.3.1) and product return barriers (e.g. uncertainties with product returns) (section 2.3.2.1). Subsequently, studying consumer buying and return behaviours can be essential for the effective RLM of consumer returns (Ashan & Raham, 2021:151).

2.3.4.3 External support barriers

The external support barriers that can hamper effective RL implementation and management include external infrastructure and a lack of supportive laws and legislation. *External infrastructure*, including road structures and conditions, internet connection speed and areas available for warehouse space can create significant barriers to RL implementation and management (Ahlén & Johansson, 2023:17; Bouzon *et al.* 2015:1368; Davidavičienė & Al Majzoub, 2021:8). However, external infrastructure barriers mostly depend on the country or region where online retailers operate (Davidavičienė & Al Majzoub, 2021:8; Bouzon *et al.* 2015:1368). For instance, most developing countries suffer from poor infrastructure in terms of roads, internet connectivity, electricity and water, resulting in high operating costs and the eventual demise of organisations (Bouzon *et al.* 2015:1368). Consequently, the absence of strong and updated infrastructure causes significant obstacles for online retailers, resulting in poor RLM and performance (Davidavičienė & Al Majzoub, 2021:8).

A *lack of supportive laws and legislation* can be another significant external barrier to RLM implementation (Ahlén & Johansson, 2023:32; Bouzon *et al.* 2018:326; Srivastava, 2013:66). Some countries or regions lack enforceable laws, regulations or directives to motivate various stakeholders to engage in RL (Srivastava, 2013:66). While strict laws and regulations motivate RL implementation and management in developed countries, the opposite is true for developing countries (e.g. India and South Africa) where governmental laws and regulations that drive the adoption and implementation of RLM are still nascent (Lamba *et al.* 2020:383-384). Consequently, the reluctance of governments to adopt and implement policies that drive RL can be major barriers to successful RL implementation (Ahlén & Johansson, 2023:32; Pranomo *et al.* 2021:3). Additionally, a lack of inter-ministerial communication can generate conflicting laws, complicating the implementation of RLM (Govindan & Bouzon, 2018:328). Therefore, the development and implementation legislation that drive RLM implementation cannot be done without political involvement and commitment (Waqas *et al.* 2018:4202).

2.3.4.4 External risk

In contrast to other barrier categories in RLM, the most significant external challenge to RLM involves various external risks. While some external risks can be the result of internal and external barriers, other external risks can contribute to various internal and external barriers, hampering RL implementation and management. External risks relate to the external environment (Senthil *et al.* 2018:718), and include SC risks, outsourcing risks, market risks and political and external environment risks (Panjehfouladgaran & Lim, 2020:1461).

Relating to the SC barriers, the *SC risks* include a lack of shared goals, SC uncertainties and poor communication. Particularly, a *lack of shared goals* between SC parties relates to contrasting organisational culture and goals, which can impede successful SC relationships (Panjehfouladgaran & Lim, 2020:1461) needed for effective RLM. Likewise, *SC uncertainty risks,* like vague payment requirements and poor information sharing between SC partners in RL, can hamper SC relationships and ultimately RLM (Wang, Wang *et al.* 2021:66). Lastly, *poor communication risks* that can hamper RLM refer to any obstacles that prevent real-time and meaningful information exchange between SC parties (Panjehfouladgaran & Lim, 2020:1461). Consequently, the SC barriers of a lack of SC support, collaboration and information sharing can increase SC risks, adding additional challenges to successful RL implementation and management (see section 2.3.4.1)

Closely related to SC risks, *outsourcing risks* can be the most significant external risks to the management of RL processes for organisations that outsource RL (Ermes & Niemann, 2023:8). Outsourcing risks refer to any risks related to the outsourcing of RLM to 3PL or 3PRL providers (Panjehfouladgaran & Lim, 2020:1462), which can include hidden outsourcing costs (Senthil *et al.* 2018:718; Tavana *et al.* 2016:554), dependence risks, a loss of control, information risks and poor strategic development (Panjehfouladgaran & Lim, 2020:1461). The risk of *hidden outsourcing costs* refers to any RL costs that exceed the agreed upon costs in the outsourcing contract (Tavana *et al.* 2016:554), which can contribute to the financial constraint and risk barriers in RLM (see sections 2.3.1.2 and 2.3.1.3). Furthermore, *dependence risk* involves outsourcer (e.g. online retailer) penalties when switching 3PRL providers (Panjehfouladgaran & Lim, 2020:1461), which can further add to the financial difficulties in RLM. Therefore, online retailers that made poor outsourcing decisions might pay financial penalties for finding new 3PRL providers to manage returns effectively.

A significant outsourcing risk that organisations can face is a *loss of organisational control* (Panjehfouladgaran & Lim, 2020:1462; Tavana *et al.* 2016:554), which refers to the risk of losing information resources, data and materials (Panjehfouladgaran & Lim, 2020:1462; Tavana *et al.* 2016:555). Closely related to a loss of control, *information risk* in RLM outsourcing involves

incomplete, inconsistent, inaccurate, unavailable and unsecure information (Panjehfouladgaran & Lim, 2020:1461), which can be the result of a lack of SC collaboration and information sharing barriers in RLM (section 2.3.4.1). Finally, the risk of *poor strategic development* refers to the failure of 3P(R)L providers to develop strategic resources for the flexibility and innovation needed to manage RL effectively (Panjehfouladgaran & Lim, 2020:1461). A loss of flexibility in RL can cause significant operational problems and impact consumer service (Tavana *et al.* 2016:555). Moreover, a lack of skills and expertise from 3PRL providers can cause inaccurate analysis and product return forecasts, resulting in an increase in inventory and subsequent RL costs (Tavana *et al.* 2016:554). Therefore, poor strategic development from 3PRL providers not only add to financial constraint barriers (section 2.3.1.2) but also product return barriers and operational risks (sections 2.3.2.1 and 2.3.2.3), hampering effective RL implementation and management.

Market risks involve consumer and reputation risks related to the behaviour of consumers in the market. Specifically, *consumer risk* associates with consumer loyalty to specific products when various online retailers offer the same products (Panjehfouladgaran & Lim, 2020:1461). Consequently, online retailers risk a loss of consumers to competitors, which can impact the economic sustainability of the online retailers. Additionally, *reputational risks* can occur when consumers are dissatisfied with an online retailer's RL processes, which can ultimately result in a loss of sales and a loss of consumers (Frei *et al*. 2020:1619; Ahsan & Rahman, 2022:148, 158). Evidently, market risks can add to financial constraint barriers (i.e. indirect RL costs) (see section 2.3.1.2) but can be enhanced by strategy, policy and control barriers (i.e. a lack of strategic planning and poor return policies) (see section 2.3.3.2), SC barriers (section 2.3.4.1) and outsourcing risk (i.e. strategic development risk).

Finally, *political and external environment risks* involve political instability, changing regulations and macroeconomic uncertainty (Panjehfouladgaran & Lim, 2020:1461). Specifically, *political instability risk* that can hamper RLM adoption and implementation refer to major changes in political regimes. Moreover, organisations can be exposed to the risk of *changes to regulations,* like new environmental regulations, which can affect the RLM practices of organisations (Panjehfouladgaran & Lim, 2020:1462), Additionally, *macroeconomic uncertainty* can impact fluctuations economic activity and prices (Panjehfouladgaran & Lim, 2020:1461). Therefore, macroeconomic uncertainty involves changes to the financial markets (e.g. risk of tax changes), which can significantly impact organisations (Tavana *et al.* 2016:555) and contribute to investment, financial constraint and financial risk barriers to the effective RLM of consumer returns (see section 2.3.1).

Essentially, online retailers can face various external barriers, problems and risks that may complicate the implementation and management of RL. Therefore, online retailers must identify RLM success factors and practices to address SC barriers, consumer behaviour barriers, external support barriers and external risks for the effective RLM of consumer returns. In the next section, a framework and summary of RLM barriers will be given based on the literature study findings.

2.3.5 A summary of RLM barriers

Clearly, online retailers can face various economic, operational, organisational and external barriers that can hamper RL implementation and management. Therefore, online retailers must identify these barriers and related challenges and risks to identify and implement countermeasures for effective RLM (Badenhorst, 2022:330; Zailani *et al.* 2017:22). Based on the literature study findings presented in section 2.3, Table 2.3, provides a summary of the barriers in RLM, including specific barriers, challenges and risks, impact of barriers on other barriers and literature sources.

Table 2.3 RLM barriers, challenges and risks

ECONOMIC BARRIERS IN RLM			
Barriers	**Specific barriers, challenges and risks**	**Impact on other barriers**	**Sources**
Investment barriers	• ***Heavy financial investment*** • Prioritise investment into other functions due to higher return on investment visibility • ***Lack of investment in resources*** including infrastructure, IT and human resources • Lack of awareness of the ***economic benefits*** of RLM implementation • Impact the ability to reap economic benefits • ***Lack of necessary funding for RLM***	• Contributes a lack of IT • Cause a lack of skilled or trained staff • Contribute to inadequate infrastructure	Andresen and Istad (2019), Badenhorst (2022), Frei *et al.* (2020), Huang *et al.* (2012), Jović *et al*. (2020), Lamba *et al.* (2020), Mahadevan (2019), Mai *et al*. (2012), Pramono *et al.* (2021), Ravi & Shankar (2015), Sirisawat and Kiatcharoenpol (2018), Waqas *et al*. (2018), and Zailani *et al.* (2017)
Financial constraint barriers	• High RL costs • ***RLM investment expenses*** • ***High online product return costs*** • Additional product return transportation and handling costs • Unwanted costs of failed pickup attempts • Duplicate operational expenses • Higher costs due to *product return uncertainties* and a lack of *economies of scale* • ***Indirect expenses*** of product return mismanagement and service failures	• Hamper RLM investment • Contribute to financial risk	Ahlén and Johansson (2023), Ahsan and Rahman (2021), Badenhorst (2022), Biswas and Abdul-Kader (2018), Bozzi *et al.* (2022), Das *et al.* (2020), Davidavičienė and Al Majzoub (2021), Gustafsson *et al.* (2021), Karlsson *et al*. (2023), Lamba *et al.* (2020), Lin and Hsu (2017), Mathu and Khunou (2021), Nel and Badenhorst (2020), Pramono *et al.* (2021), Ravi and Shankar (2015), Wang *et al.* (2017), and Zailani *et al.* (2017)
Financial risk barriers	• ***Financial instability, capacity and investment risks*** • Unavailability of financial resources • Losing and attracting new investors • Raising additional capital • ***Loss of money and high RL cost risks*** • Lenient returns increase product returns and RL costs • ***Loss of profit risk*** • Profit margin loss due to loss of resale value of returned products and hidden RL expenses • Failure to recognise the added value and profits through RL processes and recovery activities	• Contribute to a lack of investment in RLM resources • Contribute to financial constraints	Ashan and Raham (2021), Bozzi *et al.* (2022), Ermes and Niemann (2023), Hsueh and Lin (2015), Khor *et al.* (2016), Panjehfouladgaran and Lim (2020), and Robertson *et al.* (2020)
OPERATIONAL BARRIERS IN RLM			
Barriers	**Specific barriers, challenges and risks**	**Impact on other barriers**	**Sources**
Product return	• Complexity of product returns impact RLM and implementation	• Add to financial constraints and	Ahlén and Johansson (2023), Badenhorst (2017), Badenhorst (2022), Bouzon *et al.*

barriers	• ***Product return uncertainties*** in quality, condition, volume and frequency • ***Limited product return visibility*** due to unpredictable consumer return demand • Limited visibility adds to the complexity of planning and decision-making in RLM • Results in a lack of knowledge about product return volume and quality • ***Limited forecasting and planning*** due to unpredictable return volume impact operational efficiency, economies of scale, resource allocation and financial benefits • Forecasting based on past consumer return behaviours • ***Quality and condition of returned products*** can be unpredictable • Complicates product return value estimation and planning and control of the RL process	risks • Contribute to operational risks • Contribute to problems with performance measures	(2018), Bozzi *et al.* (2022), Espinosa *et al*. (2021), Frei *et al*. (2020), Lai *et al.* (2022), Lee and Lam (2012), Mathu and Khunou (2021), Misni and Lee (2017), Rajagopal *et al*. (2015), Ravi and Shankar (2015), Senthil *et al*. (2018), Sirisawat and Kiatcharoenpol (2018), Srivastava (2013), and Starostka-Patryk *et al*. (2013)
Operational support barriers	• ***Inadequate information systems and technology*** • Limited implementation of new IT for RLM • Information infrastructure involve fragmented IT, poor data management and unintegrated legacy systems hampers RL efficiency • Lack of real-time IT to record transactions, returns and refunds can increase fraudulent returns, costs and consumer behaviour • Lack of robust IT system hampers SC visibility and information sharing • Manual RL processes • Poor return product visibility and inability to authorise, track and handle product returns, • Failure to analyse product return data for RLM decision-making, RL process improvements and return avoidance • ***Lack of infrastructure and development*** • Inadequate infrastructure cause uncertainties, operational inefficiencies and IT deficiencies • No infrastructure support to collect products from different consumer addresses • Lack of capability to manage RL networks	• Add to financial risks • Contribute to operational risks • Contribute to poor internal information sharing • Contribute to a lack of SC information sharing • Enable fraudulent return behaviours	Badenhorst (2017), Badenhorst (2022), Bai and Sarkis (2013), Bozzi *et al.* (2022), Dapiran and Kam (2017), Davidavičienė and Al Majzoub (2021), Espinosa *et al*. (2021), Frei *et al*. (2020), Jović *et al.* (2020), Karlsson *et al*. (2023), Lai *et al.* (2022), Lamba *et al.* (2020), Lee and Lam (2012), Mahadevan (2019), Mai *et al.* (2012), Meyer *et al.* (2017), Misni and Lee (2017), Soltany *et al.* (2018), Srivastava, (2013), Wang, Dang *et al.* (2021), and Zhang *et al.* (2023)
Operational risks	• ***Demand and forecast risks*** due to uncertainties in product return time, volume and product mix, poor visibility and limited forecasting • ***Product quality risks*** due to uncertainties in quality and condition of return products • Risk of receiving damaged, defective, incomplete and poor-quality products • Inadequate product return quality checks increase future returns • ***Technology risks*** due to continuous changes in IT and reduction of IT capabilities • ***Data management risks*** of return information accuracy, security and disruptions • ***Inventory risks*** due to inadequate storage, leading to damages and future damaged product returns • Pilferage of returned products in RL process • Loss of product value	• Increase financial risks of high RL costs and profit loss	De Borba *et al.* (2021), Ermes and Niemann (2023), Panjehfouladgaran and Lim (2020), Prajapati *et al.* (2021) and Senthil *et al.* (2018)

ORGANISATIONAL BARRIERS IN RLM

Barriers	Specific barriers, challenges and risks	Impact on other barriers	Sources
Management barriers	• ***Lack of awareness of the importance of RLM*** • Failure to recognise the value of RLM in terms of competitive advantage, finances, brand image and the environment • ***Lack of top management commitment*** impact financial support and resource allocation for RLM • Top management neglect and disinterest cause inefficiencies and suboptimal RL performance • ***Management inattention*** • Lack of knowledge, commitment and support result in poor RLM decision making and planning, higher costs and	• Contribute to a lack of investment for RLM • Enhance product return barriers • Contribute to a lack of IT and infrastructure for RLM • Hamper strategic	Ahlén and Johansson (2023), Andresen and Istad (2019), Aytekin *et al*. (2016), Badenhorst (2017), Badenhorst (2022), Bouzon *et al*. (2018), Bozzi *et al.* (2022), Chen *et al.* (2017), Davidavičienė and Al Majzoub (2021), Govindan and Bouzon (2018), Jra *et al*. (2017), Kaynak *et al.* (2014), Lin and Hsu (2017), Mostert *et al.* (2017), Panjehfouladgaran and Lim (2020), Phuong (2019), Pranomo *et al.* (2021), Ravi and Shankar (2015), Solati *et al.* (2023),

	reduce profits • Reduce ability to realise RLM benefits • ***Resistance to change*** hampers RLM implementation • Fear of the unknown causes a resistance to successful RLM implementation • RLM implementation involves organisational change, causing scepticism from the entire organisation • Poor management lead to poor organisational culture, causing suboptimal RLM performance	planning • Contribute to poor return policies • Contribute to the management risks • Add to culture risks	Srivastava (2013), Starostka-Patryk *et al*. (2013), and Zailani *et al.* (2017)
Strategy, policy and control barriers	• ***Lack of strategic planning*** hampers effective RLM, investment in RLM improvement and implementation, management and control of RL processes • Failure to include RLM in the organisation's goal and strategic planning lead to RL inefficiencies, poor control and increase in costs • Failure to create RLM goals increase silo mentalities and internal coordination problems • A lack of strategic plan can hamper the development of a RLM strategy, which impacts organisational performance, reputation and development of resources for RLM • ***Problems with organisational policies*** • A *lack of RL policies* counteracts RLM implementation in compliance with environmental and consumer pressures • *Restrictive organisational* policies hamper effective RLM of product returns • Restrictive policies can block product return flows and recovery and restrict future sale opportunities • Fear of sales cannibalisation results in the implementation of organisational policies against RL and product recovery activities • *Lenient return policies* increase returns and costs • *Strict return policies* cause a loss of future sales, increase product return complexity, and impact consumer satisfaction and RLM performance • ***Problems with RL performance measurement*** • Uncertainties of product returns cause difficulties in creating, implementing and managing true RL performance • RL lacks clear performance metrics • Organisations lack performance measurement and performance management systems needed for RL implementation, management and control	• Hamper economic investment • Add to financial constraints • Increases financial risk • Hamper infrastructure support • Impede internal coordination and integration • Contribute to opportunistic and fraudulent consumer behaviours • Contribute to market risks	Andresen and Istad (2019), Badenhorst (2017), Badenhorst (2022), Biswas and Abdul-Kader (2018), Bouzon *et al*. (2018), Chen *et al.* (2017), Davidavičienė and Al Majzoub (2021), Kaynak *et al.* (2014), Karlsson, *et al* (2023), Lamba *et al.* (2020), Panjehfouladgaran and Lim (2020), Ravi and Shankar (2015), Solati *et al.* (2023), Starostka-Patryk *et al*. (2013), and Zhang *et al.* (2023).
Functional barriers	• ***Lack of staff training and education*** • Lack of staff training and education can impact organisational success • Unskilled and untrained staff hampers RLM • ***Lack of internal coordination*** cause various RLM problems • Silo mentality with different functions focussing on separate goals • Poor coordination impacts strategic objectives, lead to poor SC and RL process coordination and result in poor RL practices, higher returns and higher RL costs • ***Poor internal information sharing*** • Poor internal information sharing relates to unintegrated systems that hamper RL performance • Lack of communication prevents real-time information sharing and impact organisational commitment to RL practices • Different departments capture different return information can impact effective RLM	• Contribute to financial constraints • Add to a lack of SC collaboration • Contribute to labour risk	Andresen and Istad (2019), Badenhorst (2017:618), Badenhorst (2022:229), Bouzon *et al.* (2015), Dapiran and Kam (2017), Ermes and Niemann (2023), Frei *et al.* (2020) Hjort *et al*. (2019), Karlsson *et al.* (2023), Kaynak *et al*. (2014), Mai *et al*. (2012), Pranomo *et al.* (2021), Sharma and Singh (2013), Soltany *et al.* (2018:780), Starostka-Patryk *et al*. (2013), and Zailani *et al.* (2017)
Organisation risks	• ***Management risk*** involves to a lack of expertise and experience in RL • Different management styles cause inconsistent decisions that hampers RLM • ***Culture risk*** involves inadequate knowledge about people's culture • Culture risk stems from a resistance to change and leads to	• None	Ermes and Niemann (2023), Davidavičienė and Al Majzoub (2021), Panjehfouladgaran and Lim (2020), Prajapati *et al.* (2021), Pranomo *et al.* (2021) and Senthil *et al.* (2018)

	poor RL performance that impacts RL improvements • ***Labour risk*** involves a lack of skilled and trained staff that hampers effective RLM • Unskilled and untrained staff are more careless with product return handling, causing damages due to negligence		
EXTERNAL BARRIERS IN RLM			
Barriers	**Specific barriers, challenges and risks**	**Impact on other barriers**	**Sources**
SC barriers	• ***Lack of support from SC parties*** can be detrimental RLM implementation • A lack of support can reduce product return visibility and increase RL costs • ***Lack of SC collaboration*** • A lack of collaboration with 3PRL provider impacts RL service, consumer confidence, profitability and increase fraudulent returns • A lack of collaboration from suppliers can be problematic for effective RLM • ***Lack of SC information sharing*** • Shortage of data exchange and information hampers SC collaboration • Poor SC coordination and collaboration causes a lack of systems integration between SC partners, which hampers SC information sharing • A lack of integrated systems and information sharing platforms reduce RL process efficiency and compromise data integrity and consistency • Poor information sharing between SC partners hampers product return visibility and the effective management of consumer returns	• Add to financial constraints • Contribute to product return barriers • Enable consumer fraudulent return behaviours • Increase SC risks • Increase outsourcing risks • Contribute to market risks	Andresen and Istad (2019), Badenhorst (2022), Bouzon *et al*. (2018), Bozzi *et al.* (2022), Lamba *et al.* (2020), Meyer *et al*. (2017), Pathak *et al.* (2020), Starostka-Patryk *et al*. (2013), Wang, Dang *et al*. (2021), Zailani *et al.* (2017), and Zhang *et al.* (2023)
Consumer behaviour barriers	• Consumers engages in impulsive and compulsive buying due to easy returns • ***Opportunistic buying behaviour*** causes various problems • Lenient return practices cause opportunistic consumers to engage in wardrobing practices • Illegitimate borrowing is difficult to counteract due to impact on consumer service • Opportunistic buying behaviour result in significant losses • ***Fraudulent return behaviour*** • Consumers use lenient returns to learn methods to engage in fraudulent return behaviour • Various forms of fraudulent return behaviours cause product and financial losses and waste resources	• Contribute to investment barriers • Add to financial constraints • Increase financial risks • Increase product return barriers	Ahlén and Johansson (2023), Biswas and Abdul-Kader (2018), Frei *et al.* (2020), Nel and Badenhorst (2020), Shang *et al*. (2017), Shi *et al.* (2021) and Zhang *et al.* (2023)
External support barriers	• ***External infrastructure*** hampers RLM • Poor roads, internet, water and electricity in developing countries result in high operating costs and eventual demise of organisations • Absence and support of external infrastructure result in poor RLM and RL performance • ***Lack of supportive laws and legislation*** • Developing countries lack enforceable laws, regulations or directives by governments that drive RLM and implementation • Reluctance of governments to adopt and implement policies that drive RL hampers successful RLM implementation • Lack of inter-ministerial communication generate conflicting laws that complications RLM implementation	• Add to financial constraints	Ahlén and Johansson (2023), Bouzon *et al*. (2015), Bouzon *et al.* (2018), Davidavičienė and Al Majzoub (2021), Govindan and Bouzon (2018), Lamba *et al.* (2020), Pranomo *et al.* (2021), Srivastava (2013), and Waqas *et al*. (2018)
External risks	• External risks relate to external environment, which can hamper RL implementation and management • ***SC risks*** include a lack of shared goals, SC uncertainty and poor communication that can hamper effective RLM • ***Outsourcing risks*** include hidden outsourcing costs, dependence risks, a loss of control, information risks and poor strategic development • Outsourcing risk can increase costs, hampers product return visibility, increase inventory and increase market	• Contribute to investment barriers • Increase financial constraints • Add to financial risks • Contribute to product return	Ashan and Rahman (2022), Ermes and Niemann (2023), Frei *et al*. (2020), Panjehfouladgaran and Lim (2020), Senthil *et al.* (2018), Tavana *et al.* (2016), and Wang, Wang *et al.* (2021)

	risks • ***Market risks*** include consumer and reputation risks of losing sales and consumers causing indirect financial losses • ***Political and external environment risks*** include political instability, changes in regulations and macroeconomic uncertainty add to economic barriers	barriers • Increase operational risks	

Source: Compiled by the researcher

Table 2.3 shows that many barriers and problems can hamper the effective RLM of consumer returns. Since the barriers in RLM often stems from a failure to recognise the importance of RLM, it is important that organisations understand the significance of RLM (Badenhorst, 2022:228). Consequently, a starting point to address the RLM barriers is to identify significance of RLM, which will be identified and discussed in the next section.

2.4 SIGNIFICANCE OF RLM

Many organisations worldwide adopt RL to cope with competition and strict environmental regulations, maximise profits and improve corporate opportunities (Solati et al. 2023:2). Therefore, RLM can be significant due to direct economic motives, competitive and marketing motives and concerns with the environment (Phuong, 2019:12; Aytekin *et al.*, 2016:505; Jalil, 2019). While the significance of RLM emphasise the benefits associated with RLM adoption, important success factors (practices and requirements) to successfully implement and manage RL can result in greater benefits (outcomes). These success factors RLM and related outcomes will be identified and explored in section 2.5. Consequently, the focus of this section is to provide a broad overview of the importance of RLM, and the expected benefits associated with RLM adoption, which can serve as a starting point to address RLM barriers.

Literature commonly identifies the drivers of RL as economic drivers, legal and regulatory drivers, consumer pressures, corporate citizenship, corporate social responsibility, environmental drivers and competitive drivers (Agrawal, Singh & Murtaza, 2015:81; Badenhorst, 2022:228-229; Solati *et al.* 2023:1). Like the barriers, these drivers of RLM are closely related and often influence each other, demonstrating that the significance of RLM covers multiple drivers and benefits. Based on the common drivers of RL, the significance of RLM was classified as (1) economic significance, (2) competitive significance, (3) social significance, (4) legal significance, and (5) environmental significance, which will be discussed in the subsequent sections. The section concludes with a framework and summary of the significance of RLM.

2.4.1 Economic significance of RLM

Regardless of the industry, the adoption of RLM involves various economic incentives (Jenkins, 2021:3). Especially in online retailing, the motivation for RLM mostly centres around financial gains (Das *et al.* 2020:48). According to Ahsan and Rahman (2021:21), online retailers might adopt RLM to take advantage of the opportunities to capture economic value from consumer returns. Additionally, online retailers in developing nations can benefits from adopting RLM as an opportunity to reduce costs (Le, 2023:15). Therefore, the economic significance of RLM can be demonstrated by direct financial gains in the form of profits, cost savings (Badenhorst, 2022:228) and economic power (Ahlén & Johansson, 2023:1).

Profits can be generated from the disposition process and related value adding recovery activities (Andresen & Istad, 2019:11-12; Badenhorst, 2022:228). Evidently, organisations can generate extra profit by reclaiming revenue through direct reuse and resale, repair, refurbishment or recycling of valuable products (Ahsan & Rahman, 2021:21; Chan *et al.* 2012:1320; Phuong, 2019:12;). Similarly, *cost savings* can be realised through reusing returned products and materials (Le, 2023:15; Meyer *et al.* 2017:12), which result in a reduction of raw material costs and disposal costs (Badenhorst, 2022:228).

Furthermore, the adoption of RLM is often associated with the circular economy, which can be described as continuous use of the same resources, for example, reusing products in an attempt to reduce waste (Fox, 2023:17). By adopting RLM, organisations adopt circular economy principles, which can enhance their *economic power* (Ahlén & Johansson, 2023:1). Consequently, organisations can gain a competitive advantage through the adoption of RLM (Le, 2023:15). Essentially, RLM adoption can enable higher recovery from product returns, enabling organisations to maximise profits and minimise costs (Phuong, 2019:12), which ultimately improve to the bottom line.

2.4.2 Competitive significance of RLM

The competitive significance of RLM associates with competitiveness, consumer satisfaction (Phuong, 2019:14), service, loyalty and trust (Govindan & Bouzon, 2018:326), According to Shaharudin *et al.* (2015:13), increasing consumer service and satisfaction can be significant competitive drivers to RLM adoption. Therefore in online retailing, competition can be a main reason for RLM adoption due to the importance of consumer satisfaction (Andresen & Istad, 2019:5). The aim is to offer a *better return service* to consumers than competitors and *discourage future entrants* to the market (Karlsson *et al*. 2023:3; Şükrü, Akdoğan & Coşkun *et al.* 2012:1643). In fact, satisfactory consumer service through RLM is critical for online *consumer retention* (Jalil, 2019:1; Lin & Hsu,

2017:218). Therefore, RLM can positively impact online consumer buying decisions (Triani, Anastaqiya, Setiawan & Octora, 2019:465) and *improve overall market share* and the subsequent profitability of organisations (Phuong, 2019:12).

Additionally, many retailers use lenient returns due to *competitive pressures* and *consumer satisfaction* (Andresen & Istad, 2019:5; Jalil, 2019:1). Adopting RLM can be an opportunity for online retailers to implement consumer-centric return processes and invest in systems, which can improve *competitiveness* (Eriksson & Käck, 2023:25), increase consumer *buying confidence* and enhance *consumer satisfaction* (Jalil, 2019:1). Moreover, the adoption of RLM is often associated with sustainable practices, which can enhance *consumer satisfaction* (Eriksson & Käck, 2023:24). Especially under severe *competitive pressures* and environmental problems, adopting RLM can be an important source of achieving *competitive advantage* and *serving consumers* (Phuong, 2019:10). Therefore, RLM adoption can help online retailers to distinguish themselves from their competitors while contributing to a sustainable future (Eriksson & Käck, 2023:26).

Additionally, focussing on disposition processes and product recovery initiatives (i.e. disposition options) through RLM adoption can *prevent competitors* from entering the market and gaining access to product technologies (Andresen & Istad, 2019:12; Le, 2023:4). For example, Apple uses device trade-ins as a RLM initiative, preventing competitors from accessing device technologies and simultaneously reduce damages to the environment (Fox, 2023:22; Franklin, 2022:11). Consequently, adopting RLM in the form of product recovery initiatives can improve consumer relationships, enhance green image and prevent non-compliance with potential future legislation, which furthers strengthens *competitiveness* (Andresen & Istad, 2019:12).

2.4.3 Social significance of RLM

The social significance of RLM involves consumer pressures, corporate social responsibility and corporate citizenship (Agrawal *et al.* 2015:81; Badenhorst, 2022:228-229; Govindan & Bouzon, 2018:320; Mahadevan, 2019:483; Solati *et al.* 2023:1). *Consumer requirements* can be viewed as a significant driver of RLM adoption (Huang & Yang, 2014:621). The South African Consumer Protection Act 68 of 2008 (CPA) enhanced *consumer awareness of their rights* to return products (Mathu & Khunou, 2021:443), which drive organisations to adopt RLM. Additionally, *consumers expect* organisations to engage in s*ocially responsible practices* and implement consumer-centric return policies and practices (Badenhorst, 2022:229). Therefore, *corporate social responsibility (CSR)* can be an important reason for organisations to adopt RLM due to consumer expectations (Badenhorst, 2022:229; Lee & Lam, 2012:591). For instance, organisations can use RLM to

demonstrate CSR with lenient return policies affording consumers to return products with fewer return restrictions (Badenhorst, 2022:229).

Since RLM is often associated with environmentally friendly practices, *consumers' awareness* of the environment can be important driver for organisations to adopt RLM (Bouzon *et al*. 2016:182; Govindan & Bouzon, 2018:332; Pramono *et al.* 2021:1). *Consumers' expectations* about environmentally conscious organisations are driving the increased focus on *corporate citizenship* and the implementation of RLM (Andresen & Istad, 2019:13; Lee & Lam, 2012:591). Corporate citizenship refers to the set of values that an organisation holds to be responsible with RL (Şükrü *et al.* 2012:1643; Badenhorst, 2022:229) and the extent to which organisations are *socially responsible* for meeting legal, ethical and economic responsibilities placed on them by stakeholders (Abdullah & Yaakub, 2014:157; Andresen & Istad, 2019:13; Govindan & Bouzon, 2018:327).

Organisations can adopt RLM to illustrate respect for the environment and society. For example, in South Africa, Woolworths' implemented recycling initiatives and developed partnerships aimed at reducing waste and increasing recycling rates in South Africa (Badenhorst, 2022:229). Essentially, online retailers can adopt sustainable RLM practices to show their commitment to environmental responsibility and align themselves with the ethical values of environmentally conscious consumers (Eriksson & Käck, 2023:25).

2.4.4 Legal significance of RLM

Regulation is one of the biggest enablers of RLM adoption (Govindan & Bouzon, 2018:325; Prajapati, Kant & Shankar, 2021:14; Ravi & Shankar, 2015:17), making the legal significance of RLM important. However, Lin and Hsu (2017:220) claim that regulations are commonly viewed as the primary external factor affecting an organisation's RL practices, but not always the most desired incentive for adopting RLM. Legislation in RL involves *government regulations* that motivates organisations to adopt RLM (Prajapati *et al.* 2021:14), take products back (Badenhorst, 2022:228; Le, 2023:5; Pramono *et al.* 2021:1; Şükrü *et al.* 2012:1643) and recover value from returned products or material (Govindan & Bouzon, 2018:326; Le, 2023:5; Srivastava, 2013:64). Therefore, legislation can be defined as a regulation or any law or directive imposed by a governing body that influences RLM adoption (Agrawal *et al.* 2016d:17; Hazen, Hall & Hanna, 2012:255), and comprises any juridical regulation that addresses product returns or take-back obligations of organisations (Le, 2023:5).

Legislation that drives RLM adoption mostly relates to the environment and consumer rights (Andresen & Istad, 2019:5; Badenhorst, 2022:228). According to Le (2023:5), strict *environmental*

legislation relates to extended producer responsibility that makes organisations responsible for accepting product returns and engaging in recovery activities. Especially in Europe, organisations must adopt RLM due to environmental legislation related to recycling quotas, packaging laws and manufacturing take-back concerns (Andresen & Istad, 2019:12). An example of a specific environmental legislation is the Waste Electrical and Electronic Equipment (WEEE) directive, which enforces European organisations to collect, recover and recycle all types of electronic products (Badenhorst, 2022:228). While regulations are mostly aimed at manufacturers to take-back and recover products, laws and regulations can also be important RLM drivers in online retailing (Andresen & Istad, 2019:5, 12). In terms of the environment, online retailers might be regulated by engaging in activities like recycle and recovery to protect the environment (Andresen & Istad, 2019:5).

Furthermore, online retailers are compelled by *consumer rights* and legislations to implement RLM (Andresen & Istad, 2019:13; Badenhorst, 2022:228). Badenhorst (2022:228) mentioned that in South Africa online retailers must adhere to the CPA that applies to every transaction, promotion, supply of any goods and services in the country. More specifically, the CPA compels retailers to accept product returns within seven days of purchase (Badenhorst, 2022:228). Similarly, Norwegian online retailers must adopt RLM due to their Cancellation Act, which forces online retailers to accept cancellations of returned products within 14 days (Andresen & Istad, 2019:13). Likewise, the Brazilian Consumer Defence Code (CDC) mandates that online purchases can be returned within seven days if the consumer is dissatisfied or if the product does not meet the advertised specifications (De Araújo *et al.* 2018:353). Evidently, legislation drivers can be important motivators for online retailers to adopt RLM.

Adhering to legislation through RLM adoption, organisations can experience other benefits, including improved brand image, elimination of legal costs for penalties (Phuong, 2019:14), and enhanced competitiveness (Makaleng & Hove-Sibanda, 2022:22). Essentially, organisations must be aware of legislation to not only adopt RLM but also guide the implementation of RLM (Rogers, Lembke & Benardino, 2013:44), ensuring compliance with regulation and laws (Badenhorst, 2022:228).

2.4.5 Environmental significance of RLM

The environmental significance of RLM relate to the economic significance (e.g. reducing disposal costs) (Badenhorst, 2022:228; Le, 2023:14), social significance (Govindan & Bouzon, 2018:332), and legal significance (environmental regulations) of RLM adoption. Particularly, the environmental significance of RLM involves concerns with the environment and sustainable development (Badenhorst, 2022:228; Ravi & Shankar, 2015:11) *Environmental concerns* encouraged many

organisations to explore different options for the recovery of returned products, thereby focusing on RLM in a sustainable way of managing waste (Badenhorst, 2022:228; Kinobe, Gebresenbet & Vinnerås, 2015:1). Furthermore, organisations implement RLM to *reduce impact on the environment*, counteracting air pollution and global warming (Le, 2023:6). Therefore, RLM can be viewed as a manifestation of *green innovation* (Badenhorst, 2022:22; Huang *et al.* 2012:854). For example, waste prevention and product reuse can be prioritised before recycling or disposal (Lai, Kuah, Kim & Wong, 2022:7).

Additionally, RLM can be important to the *circular economy* by reducing demand of natural resource harvesting and damages to the environment caused by raw material extraction and processing (Le, 2023:6). In online retailing, environmental concerns continuously pressure online retailers to adopt RLM to facilitate consumer product returns (Lin & Hsu 2017:217). Furthermore, RL is an important part of *sustainable practices* and a significant driver of sustainability (Prajapati *et al*. 2021:2), providing several benefits for online retailers. Specifically, online retailers can develop *environmentally sustainable practices* through RLM adoption, which can reduce waste, conserve resources (Eriksson & Käck, 2023:26), improve productivity, improve green image, avoid environmental sanctions (Badenhorst, 2022:228), realise competitive advantage and achieve high performance of CSR (Phuong, 2019:10).

In the next section, the significance of RLM will be summarised based on the literature findings.

2.4.6 A framework and summary of the significance of RLM

Clearly, economic benefits, sustainable competitiveness, consumer pressures, corporate social responsibility (CSR), corporate image, implementation of legislation, and environmental concerns are all important factors that motivate organisations to adopt RLM (Agrawal *et al.* 2015:89; Solati *et al.* 2023:2). Therefore, RLM can be significant as it enables organisations to reduce costs, maximise profits, (Phuong, 2019:12) increase competitiveness, comply with legislation and reduce waste (Prajapati *et al.* 2021:4-5).

Table 2.4 provides a summary of the significance of RLM, direct reasons and benefits, indirect benefits and related literature sources.

Table 2.4 Significance of RLM

SIGNIFICANCE	DIRECT REASONS AND BENEFITS	INDIRECT BENEFITS	SOURCES
Economic significance	• Capture economic value • Financial gains • Increase profits • Cost savings	• Reduce waste • Reuse of resources • Competitive advantage	Ahlén and Johansson (2023), Andresen and Istad (2019), Ahsan and Rahman (2021), Badenhorst (2022), Chan *et al.* (2012), Das *et*

	• Increase economic power • Improve the overall bottom line		*al.* (2020:48), Fox (2023), Le (2023), Meyer *et al.* (2017), and Phuong (2019:12)
Competitive significance	• Competitiveness • Consumer satisfaction • Increase consumer service • Increase consumer trust and loyalty • Discourage future entrants to the market • Increase market share • Competitive pressure • Consumer retention and confidence • Competitive advantage • Prevent competitor access	• Increase profits • Improve consumer relationships • Avoid non-compliance of future legislation • Enhance sustainability • Reduce environmental damage • Enhance green image	Andresen and Istad (2019), Eriksson and Käck (2023), Fox (2023), Franklin (2022), Govindan and Bouzon (2018), Jalil (2019), Karlsson *et al.* (2023), Le (2023), Lin and Hsu (2017), Phuong (2019), Shaharudin *et al.* (2015), Şükrü *et al.* (2012), and Triani *et al.* (2019)
Social significance	• Consumer pressures • Corporate social responsibility (CSR) • Corporate citizenship • Consumer requirements and awareness rights • Consumer expectations and awareness of the environment • Demonstrate commitment and respect for environment and society • Align ethical values with environmentally conscious consumers	• Satisfy consumer demand • Comply with laws • Reduce waste	Abdullah and Yaakub (2014), Agrawal *et al.* (2015), Andresen and Istad (2019), Badenhorst (2022), Bouzon *et al.* (2016), Eriksson and Käck (2023), Govindan and Bouzon (2018), Huang and Yang (2014), Lee and Lam (2012), Mahadevan (2019), Mathu and Khunou (2021), Pramono *et al.* (2021), Solati *et al.* (2023), and Şükrü *et al.* (2012)
Legal significance	• Regulation to implement RL • Government and juridical regulations for product take-back, recovery and recycling • Strict environmental laws • Extended producer responsibility mandates to accept products and engage in recover • Recycling quotas and packaging laws • Consumer protection laws to accept product returns • Compliance and respect for regulations and laws	• Improve brand image • Avoid legal costs for penalties • Enhance competitiveness • Protect the environment	Agrawal *et al.* (2016d), Andresen and Istad (2019), Badenhorst (2022), De Araújo *et al.* (2018), Govindan and Bouzon (2018), Hazen *et al.* (2012), Le (2023), Lin and Hsu (2017), Makaleng and Hove-Sibanda (2022), Phuong (2019), Prajapati *et al.* (2021), Pramono *et al.* (2021), Ravi and Shankar (2015), Rogers *et al.* (2013), Shaik and Abdul-Kader (2014), Srivastava (2013), and Şükrü *et al.* (2012)
Environmental significance	• Concerns with the environment • Sustainable development • Reduce impact on the environment • Green innovation • Reduce waste • Reduce environmental damage • Conserve natural resources • Improve green image • Environmentally sustainability • Avoid environmental penalties	• Reduce costs • Comply with legislation • CSR performance • Competitive advantage	Badenhorst (2022), Eriksson and Käck (2023), Govindan and Bouzon (2018), Huang *et al.* (2012), Kinobe *et al.* (2015), Lai *et al.* (2022), Le (2023), Lin and Hsu (2017), Phuong (2019), Prajapati *et al.* (2021), and Ravi and Shankar (2015)

Source: Compiled by the researcher

Table 2.4 shows the various economic, competitive, social, legislative and environmental reasons and benefits of RLM adoption. From the framework it is evident that all the reasons and benefits overlap, showing that adopting RLM for (1) economic reasons also provide environmental and competitive benefits, (2) competitive reasons also provide economic, social, legal and environmental benefits, (3) social reasons also provide competitive, legal and environmental benefits, (4) legal reasons also

provide economic, competitive, social and environmental benefits, and (5) environmental reasons also provide economic, competitive, social and legal benefits. However, based on the literature, the most significant benefit of RLM adoption (listed per bullet in the second column) include environmental benefits, followed by competitive benefits. Therefore, by adopting RLM online retailers automatically enhance environmental and competitive performance, while achieving various economic, social and legal benefits.

Essentially, providing clarity on the benefits of RL can help organisations to capitalise and understand the importance of an RLM (Meyer *et al.* 2017:2). Therefore, it is important that organisations recognise the significance of RLM, which can motivate them to implement RL successfully (Badenhorst, 2022:228; Meyer *et al.* 2017:2; Rogers *et al.* 2013:42). Additionally, identifying the significance of RLM can help online retailers to reduce the impact of RLM barriers and motivate them to explore success factors for effective RLM. In the next section, these success factors for effective RLM will be explored and discussed.

2.5 SUCCESS FACTORS FOR EFFECTIVE RLM

A major concern in RL is the efficient management of product return flows (Panjehfouladgaran & Lin, 2020:1450). Due to the nature of online retailing, online retailers experience higher return volumes than brick-and-mortar retailers and must, therefore, be prepared to manage consumer returns properly (Ashan & Rahman, 2021:154). RLM is regarded as a critical success factor to manage consumer product returns efficiently and effectively (Andresen & Istad, 2019:8). Accordingly, proper RLM practices can be important to improve the overall effectiveness of the return process (Pramono *et al.* 2021:2). In line with the significance of RLM, the implementation of effective RLM can offer online retailers several advantages, including cost savings and reductions (De Araújo, 2018:345; Ramana, Nikhitha & Reddy, 2023:2), increased profitability (Phuong, 2019:12; Ramana *et al.* 2023:2), improved market share and competitive advantage (De Araújo, 2018:345; Phuong, 2019:12), consumer satisfaction (Ramana *et al.* 2023:2), reduced resource requirements and an improved environmental image (Phuong, 2019:12).

A comprehensive understanding of key factors in RLM can help online retailers in their quest to develop and implement proper RLM strategies (Karlsson *et al.* 2023:9). In other words, online retailers must identify key success factors in RLM to help them understand and implement requirements and practices for the effective RLM of consumer returns. From the literature study, several key success factors were identified, which online retailers must consider for successful RLM. The success factors involve various practices or “countermeasures” that online retailers can

implement to address the barriers, problems and risks in RLM, confirm the significance and benefits of RLM adoption, and realise various outcomes associated with effective RLM.

While literature classified the barriers and drivers in RL, no clear classification of the success factors is evident in the literature. Consequently, based on the various success factors identified from the literature study, the key success factors for effective RLM were classified by the researcher as (1) strategic success factors, (2) design success factors, (3) resource success factors, (4) operational success factors, and (5) relation success factors. Additionally, since the success factors involve practices and requirements, can help address RLM barriers and result in favourable outcomes, the discussions of all the success factors will include an overview of the practices/requirements, barriers addressed and outcomes realised. Additionally, the significance of RLM will be confirmed where relevant to emphasise the value of RLM adoption.

In the rest of this section the various success factors for RLM will be discussed and concluded with a framework and summary of the key success factors for effective RLM.

2.5.1 Strategic success factors for effective RLM

According to Hjort *et al.* (2019:770), many online retailers increasingly regarded consumer returns as a strategic part of their business because of high RL costs and high return volumes. Therefore, it can be important to identify strategic success factors for effective RLM. Based on the literature study, the key *strategic success factors* that online retailers must focus on for successful RLM include (1) strategic importance and commitment, (2) strategic implementation of RLM, and (3) strategies and systems for RL, which will be discussed in the subsequent sections.

2.5.1.1 Strategic importance and commitment for successful RLM

According to Agarwal *et al.* (2016:480) few organisations consider the strategic importance of RLM, including the economic, competitive, social and environmental benefits. Therefore, recognising the importance of RLM can be an essential step towards successful RLM (Karlsson *et al*. 2023:8). Since competition is strong in the retail industry, with various traditional, multi/omnichannel and online retailers servicing consumers, effective RLM must be a key strategic focus for retailers (Ratchford, Soysal, Zentner & Gauri 2022:170). Evidently, online retailers must rethink RLM as a key part of their business strategy to manage high volumes of consumer returns effectively (Sackos, 2022:1).

To recognise the strategic importance of RLM and demonstrate commitment to RLM, online retailers can (1) adopt a RLM orientation, (2) adopt a holistic view of RLM, (3) recognise the advantages of effective RLM, (4) view RLM as a strategic asset, and (5) involve senior management. By *adopting a*

RLM orientation organisations can increase management attention and commitment to RLM and encourage resource commitment to develop RLM capabilities, which will subsequently enable successful RLM (Chen *et al.* 2017:261). Additionally, organisations can *adopt a holistic view of RLM*, which can facilitate the development of beneficial RLM strategies for successful RLM (Karlsson *et al.* 2023:8). Since a lack of awareness about RLM performance and management support can be the result of a lack of knowledge about the benefits of RLM (see section 2.3.3.1), *recognising the advantages of effective RLM* can be important. For instance, by recognising the economic advantages of RLM, online retailers can enhance top management awareness and support for RLM practices (Ahlén & Johansson, 2023:4).

Similarly, *viewing RLM as strategic asset* can be important to address barriers and problems in RLM (Frei *et al.* 2020:1619). Effective RLM must be regarded as a critical part of the online retailer's consumer acquisition and retention strategy (Schooling, 2023:1). To develop an understanding of consumer behaviours and intentions, organisations must focus on managing return processes strategically (De Borba *et al.* 2020:137). Consequently, to be successful, online retailers must recognise that effective RLM will positively impact their triple bottom line (Makaleng & Hove-Sibanda, 2022:22). Lastly, *senior management involvement* in product returns can be important for commitment to RLM (Frei *et al.* 2020:1616). Senior management must provide a clear vision for RLM implementation, develop appropriate strategic plans for RLM, and develop tactical plans for successful RLM execution (Pramono *et al.* 2021:3). Additionally, senior executives must oversee the RL function and report on consumer returns to the board of directors (Frei *et al*. 2020:1619), which can integrate aspects of product returns into corporate decision making (Makaleng & Hove-Sibanda, 2022:22).

Subsequently, organisations can *address various barriers* to RLM implementation and management by recognising the strategic importance of RLM and developing a commitment to RLM. Specifically, the strategic importance of and commitment to RLM can directly address the (1) *economic barriers* of investment, high costs and a lack of economies of scale (financial constraints and risks) (Ahlén & Johansson, 2023:32), (2) *operational barriers* of problems limited visibility and forecasting, problems with product quality (product return barrier and operational risks), lack of IT systems and a lack of infrastructure (operational support barriers) (Badenhorst, 2017:605, 618), (3) *organisational barriers* of a lack of attention, commitment and support to RLM, resistance to change (management barriers), a lack of strategic planning (strategy, policy and control barrier) and a lack of staff training and education (functional barrier) (Badenhorst, 2017:612), and (4) *SC barriers* of a lack of collaboration and support from SC partners (Badenhorst, 2017:611).

Moreover, various beneficial *outcomes* can be realised through the strategic importance of and commitment to RLM, including the (1) *economic outcomes* of higher profits (Andresen & Istad, 2019:11; Le, 2023:15), RL cost savings (Andresen & Istad, 2019:12; De Borba *et al.* 2020:137; Chen *et al.* 2017:262; Elive, 2022:1) and an improved bottom line (Frei *et al.* 2020:1616), (2) *operational outcomes* of enhanced RL process efficiency and forecasting (De Borba *et al.* 2020:137), (3) *organisational outcomes* of effective performance monitoring and evaluation (Frei *et al*. 2020:1619) and improved RL performance (Chileshe, Rameezdeen, Hosseini, Martek, Li & Panjehbashi-Aghdam, 2018:48), (4) *social outcomes* of enhanced social responsibility and corporate image (Chileshe *et al.* 2018:48), (5) *market-related outcomes* of increased consumer satisfaction (Elive, 2022:1; Le, 2023:15; Pathak, Joshi & Kumar, 2020:42) and consumer loyalty (Le, 2023:15), improved relationships with consumers (Chen *et al.* 2017:262) and a competitive advantage (Makaleng & Hove-Sibanda, 2022:22), and (6) the *SC outcome* of enhanced SC competitiveness (Pathak *et al.* 2020:42).

Essentially, online retailers must adopt a RLM orientation, view RLM holistically, recognise the advantage of RLM, view RLM as a strategic asset and involve senior management as practices to recognise the strategic importance of RLM and commit to RLM. In doing so, online retailers can successfully manage consumer returns, address various barriers and problems in RLM and achieve several outcomes. In the next section, strategic implementation of RLM as a strategic success factor for effective RLM will be discussed.

2.5.1.2 Strategic implementation of RLM

According to Prajapati *et al.* (2021:1), the selection of an appropriate RLM implementation strategy can be vital for effective RLM. Consequently, choosing to perform RLM in-house or outsource RLM to a third-party reverse logistics (3PRL) provider is a critical strategic concern for organisations (Anderson, 2020:7). The strategic implementation of RLM includes (1) selecting in-house RLM implementation or selecting outsourcing for RLM implementation, (2) performing a cost-benefit analysis, (3) considering the strategic implications and requirements of outsourcing, and (4) strategic selection of 3PRL providers.

Organisations can choose to strategically implement in-house RLM or find and contract a 3P(R)L provider partner to strategically implement RLM. Selecting to *implement RLM in-house* means that the main responsibility for the RL processes and RLM lies with the online retailer, including the economic and physical responsibility, which enables full control over RL operations (Prajapati *et al.* 2021:5). According to Lamba *et al.* (2020:338), online retailers must focus on their core competencies and RLM, only assigning basic logistics activities (e.g. collection and transport) to third

parties. Especially in South Africa, organisations view RLM outsourcing as the least favourable practice for addressing barriers in RLM (Badenhorst, 2017:616). In fact, online retailers prefer in-house implementation of RLM because it can be a more cost-effective option (Tavana *et al.* 2016:555) and driven by economic interests (Xu, 2019:32).

Nevertheless, many online retailers are unable to manage RL successfully due to the complexity of RL processes and resource constraints, choosing to outsource RLM (Wang, Dang *et al.* 2021:2). Selecting *outsourcing* to strategically *implement RLM* means that the online retailer contracts a 3PRL provider to perform RLM practices on their behalf, which means that the responsibility of the RL process lies with the outsourced service provider party (Prajapati *et al.* 2021:6). 3PRL providers are organisations that specialise in managing returns effectively and efficiently (Wang, Dang *et al.* 2021:2), mainly focussing on product return collection, transportation, inspection, disposition and redistribution (Tombido, Louw & Van Eeden, 2018:236). Some 3PRL providers may also manage consumer refunds (return processing) and perform SCM and inventory management (Sackos, 2022:1). Subsequently, outsourcing of RLM facilitates proper implementation of RLM and resource utilisation, including qualified human resources and appropriate IT solutions (Prajapati *et al.* 2021:6).

Before choosing the best form of RLM implementation, online retailers must first conduct a *cost-benefit analysis* based on (1) cost criteria, including RL expertise, initial investment requirements (e.g. facility and equipment), RL operations costs (e.g. transportation and inventory management costs) and RLM risks (i.e. design, technical, legal and environmental risks), and (2) benefit criteria, including economic benefits (e.g. reduced operations cost), competitive benefits (e.g. consumer loyalty), social benefits (e.g. improved corporate image and transparent and ethical practices), staff benefits (e.g. employee satisfaction), legal benefits (e.g. compliance with government policies), and environmental benefits (e.g. reduced emissions and energy savings) (Prajapati *et al*. 2021:14).

Moreover, online retailers must *consider the strategic implications* and *requirements of outsourcing* since the entry of 3PRL providers will impact the control structure of the SC and affect strategic decisions, including network design, transport planning and operations planning (Tombido *et al.* 2018:237). Additionally, outsourcing requires strategic alignment with the mission, strategic objectives and projective growth of the organisation (Tavana *et al.* 2016:555). Lastly, if the online retailer selected outsourcing, they must *strategically select a 3PRL provider*. Specifically, the online retailer must identify 3PRL provider selection criteria to choose the best partner (Tavana *et al.* 2016:545) as well as evaluate available 3PRL providers, ensuring that the selected 3PRL provider can add significant value for the online retailer (Davidavičienė & Al Majzoub, 2021:7).

Since in-house strategic implementation of RLM requires the implementation of other success factors, only the *barriers* that can be addressed through outsourcing will be described. According to Badenhorst (2017:611-613), outsourcing RLM can help address (1) *economic barriers*, including a lack of investment and financial constraints, (2), *operational barriers*, including problems limited visibility and forecasting, problems with product quality, lack of IT systems and a lack of infrastructure, (3) *organisational barriers*, including management inattention, lack of top management commitment, resistance to change, lack of strategic planning, lack of staff training and education and poor internal integration , and (4) *SC barriers*, including a lack of collaboration and support from SC partners. Furthermore, selecting outsourcing for RLM implementation can address risk barriers (Tavana *et al.* 2016:554), which can include financial risks, operational risks, organisational risks and external risks (see section 2.3).

Like the barriers, the *outcomes* of strategic implementation of RLM mostly involve outsourcing. The only direct benefits of strategically implementing RLM *in-house*, include the *economic outcomes* of cost savings, cost-effectiveness (Tavana *et al.* 2016:555) and profits and the *market-related outcome* of consumer confidence (Lamba *et al.* 2020:388). Consequently, online retailers must implement other RLM success factors to realise various benefits. Contrastingly, strategically implementing RLM through outsourcing can provide the (1) *economic outcomes* of enhanced profits (Tavana *et al.* 2016:554), lower investment costs (e.g. infrastructure and human resource development), reduction of assets (Le, 2023:15), cost efficiencies (Wang, Dang *et al.* 2021:2) and economies of scale (Gu, Wei, Zhang & Yan, 2019:160), (2) *operational outcome* of streamlined RL processes (Wang, Dang *et al.* 2021:2), (3) *organisational outcomes* of focussing on core competencies (Tavana *et al.* 2016:554), effective management of product returns (Wang, Dang *et al.* 2021:2) and reduction in resources and risks (Gu *et al.* 2019:160), (4) *environmental outcome* of environmental protection, (4) *social outcomes* of a green image (Tavana *et al.* 2016:554) and stakeholder satisfaction (Le, 2023:16), and (5) *market-related outcomes* of increased sales, market share, competitive advantage (Tavana *et al.* 2016:554) and consumer satisfaction (Le, 2023:16). Subsequently, the outcomes of the strategic implementation of RLM align with the economic, competitive, social and environmental significance of RLM (see section 2.4).

Essentially, through a cost-benefit analysis, strategic consideration of the impact of outsourcing, strategic alignment with organisational mission, goals and growth, the identification of 3PRL provider selection criteria and an evaluation of available 3PRL providers, online retailers can strategically implement RLM either in-house or through outsourcing. In doing so, online retailers can successfully manage consumer returns, address various barriers and problems in RLM and achieve

several outcomes. In the next section, strategies and systems for RLM as strategic success factors for effective RLM will be discussed.

2.5.1.3 Strategies and systems for RLM

Well-developed managerial strategies, skills, and knowledge increase the likelihood of success in the RL processes and activities of online retailers (Davidavičienė & Al Majzoub, 2021:6). Developing a RLM strategy can significantly impact the online retailer's performance and reputation (Karlsson *et al.* 2023:9). Consequently, online retailers must develop strategic plans, create a well-developed RL strategy and establish a well-developed RL system for the successful RLM of consumer returns. Specifically, during the design and implementation of RLM, it can be important to *develop a strategic plan* for RLM by determining the strategic goals, envisaged strategy for returns, and the potential impact of returns on all stakeholders (Hjort *et al.* 2019:769). Additionally, online retailers can benefit from including RLM in their overall strategic planning (Xu, 2019:33), incorporating the strategic plan for RLM within the overall strategic plan of the online retailer.

Moreover, online retailers must *develop a well-planned RL strategy* for RLM (Anderson, 2020:6; Andresen & Istad, 2019:41; Phuong, 2019:12). When developing a RL strategy, organisations must pay specific attention to the RL and marketing interfaces for successful RLM (Sajjanit & Rompho, 2019:790). Additionally, online retailers must focus on disposition (recovery) strategies and the return policy for a well-developed RL strategy since it can be essential for the recovery of value from consumer returns (Andresen & Istad, 2019:23). Therefore, online retailers must consider the strategic use of tactical recovery activities, including reuse, repair, refurbishment and reselling (Chen *et al.* 2017:255) for successful RLM. Lastly, a *well-developed RL system* can be important for successful return processes (Ahsan & Rahman, 2022:138). Online retailers must focus on establishing both an efficient and cost-effective RL system since it forms a basis for effective RLM (Xu, 2019:32), impacting cost-effectiveness, RL efficiency, competitiveness and consumer satisfaction of the online retailer (Prajapati *et al.* 2021:14).

Developing a *strategic plan for RLM* can *overcome various barriers* in RLM, including the (1) *operational barriers* of a lack of IT systems and a lack of an infrastructure, (2) *organisational barriers* of lack of knowledge about RLM importance, management inattention, lack of top management commitment and a lack of strategic planning, and (3) *SC barriers* of a lack of SC collaboration and information sharing (Badenhorst, 2017:611). Consequently, online retailers can indirectly address operational risks (e.g. technology and data management risks), organisational risks (i.e. management risks) and external risks (i.e. SC risks) (see sections 2.3.2.3, 2.3.3.4 and 2.3.4.4). Furthermore, including the strategic plan for RLM within the overall strategic planning of the

organisation, can result in various *outcomes*, including the *economic outcomes* of cost savings and higher profits as well as the *market-related outcome* of an increase in market share (Xu, 2019:33).

While literature lacks an indication of the impact of a RL strategy and RL system on the barriers in RLM, literature discussed the benefits of a well-developed RL strategy and system. Specifically, the *outcomes of a well-developed RL strategy* include the (1) *economic outcomes* of improved profitability (Chen *et al.* 2017:255; Ravi & Shankar, 2015:17), cost savings (Anderson, 2020:6; Ravi & Shankar, 2015:17), value and asset recovery (Andresen & Istad, 2019:23; Chen *et al.* 2017:255) and improved bottom line (Ahsan & Rahman, 2022:138), (2) *environmental outcomes* of reduction of raw materials usage (Ravi & Shankar, 2015:17), enhanced sustainability and compliance with environmental laws (Anderson, 2020:6), (3) *social outcomes* of an improved corporate image and reputation (Anderson, 2020:6), and (4) *market-related outcomes* of market opportunities (Ravi & Shankar, 2015:17), increased market share, competitive advantage (Phuong, 2019:12), and consumer satisfaction (Anderson, 2020:6). Consequently, creating a well-developed RL strategy can address the economic barriers of investment, financial constraints and financial risks, and external barriers of external risks (i.e. market risks and political and environmental risks) as well as confirm the economic, competitive, social, legal and environmental significance of RLM.

Finally, establishing *a well-developed RL system* can help online retailers realise the (1) *economic outcomes* of cost savings (Le, 2023:15) and cost effectiveness (Prajapati *et al.* 2021:14; Xu, 2019:32), (2) *operational outcome* of enhanced RL process efficiency (Davidavičienė & Al Majzoub, 2021:21; Prajapati *et al.* 2021:14; Xu, 2019:32) and speed (Xu, 2019:32), (3) *organisational outcome* of improved organisational performance (Davidavičienė & Al Majzoub, 2021:21) and (4) *market-related outcome* of a competitive advantage (Foo & A-Jalil, 2021:56; Le, 2023:15; Prajapati *et al.* 2021:14), enhanced consumer service (Le, 2023:15) and consumer satisfaction (Le, 2023:15; Prajapati *et al.* 2021:14). Evidently, a well-developed RL system can address the economic barriers of financial constraints and risks, the operational barrier of product return barriers, and the external risk of market risks (section 2.3), while confirming the economic and competitive significance of RLM (section 2.4).

Essentially, online retailers with well-developed strategic plans, RL strategies and RL systems can successfully manage consumer returns as well as address various barriers and realise various outcomes, making strategies and systems for RLM important strategic success factors for effective RLM. In the next section, design success factors for RLM will be identified and discussed.

2.5.2 Design success factors for RLM

Exploring the elements of RL design can be important for value creation (Pal, 2017:864), making the design elements of RL a significant component of RLM (Xu, 2019:30). While RL design factors can form part of the strategic success factors, it can also involve operational and tactical elements. The important design success factors for RLM include (1) return policy design for RLM, (2) return process design for RLM and (3) RL network design for RLM, which will be discussed in the subsequent sections.

2.5.2.1 Return policy design for RLM

One of the critical success factors of online retailers is the development of a return policy, which forms part of the overall marketing strategy of the online retailer (Das *et al.* 2020:48). Subsequently, the return policy can be one of the most significant factors for successful RLM in online retailing (Andresen & Istad, 2019:46). A well-designed return policy for RLM must be (1) aligned with RL strategies, (2) clear and (3) well-considered in terms of leniency and strictness.

The *alignment* of the *return policy* with *RL strategies* can be important for a well-designed return policy and optimal RLM performance (Karlsson *et al.* 2023:1, 9). Online retailers must develop a formal return policy in line with strategic objectives and RL strategies, which forms the foundation of a well-designed return policy needed to achieve RLM goals (Andresen & Istad, 2019:7; Makaleng & Hove-Sibanda, 2022:23). Additionally, a *well-designed policy must be clear* (Ahlén & Johansson, 2023:32; Jalil, 2019:3). According to Davidavičienė and Al Majzoub (2021:7), an unclear return policy can be the same as no return policy. In fact, Heyns and Kilbourn (2022:11) found that young online shoppers in South African consider an easy returns policy as one of the most important factors to migrate from traditional (brick-and-mortar) shopping to online shopping.

To design a clear return policy, online retailers must consider consumer behaviour and price sensitivity (Ahlén & Johansson, 2023:32) and identify the impact of the return policy on their RLM performance (Davidavičienė & Al Majzoub, 2021:4). A clear return policy represents an easy, hassle-free and flexible return policy (Dobson, 2023:10) that provides consumers with clear information about return processes and procedures and terms and conditions related to the products they buy (Nel & Badenhorst, 2020:127). Subsequently, an easy return policy can help consumers to overcome the perceived risk of buying products online (Lin & Hsu, 2017:21) and understand their roles and responsibilities during the return process (Nel & Badenhorst, 2020:127).

A *well-designed return policy* involves careful *consideration between* the *level of leniency and strictness* (Andresen & Istad, 2019:7), which requires cross-functional collaboration and input (Karlsson *et al.* 2023:9). A lenient return policy means that the online retailer carries the cost of returns, while a strict return policy means that consumers are responsible for the return costs and restricted in term of return time (Andresen & Istad, 2019:7). Online retailers can perform a cost-benefit analysis to determine the appropriate level of leniency and strictness. For example, the costs of a lenient return policy can be larger return volumes and higher RL costs (Andresen & Istad, 2019:7; Oghazi, Karlsson, Hellström & Hjort, 2018:190), while the benefits can be an increase in sales (Andresen & Istad, 2019:7; Dapiran & Kam, 2017:835) and profits (Davidavičienė & Al Majzoub, 2021:4). Oppositely, the costs of a strict return policy can be a loss of sales and consumers (Dobson, 2023:10), while the benefits can be fewer returns and lower RL costs (Andresen & Istad, 2019:7). In online retailing a more generous return policy can be critical since it forms part of the online retailer's service offering (Hjort *et al.* 2019:782). However, designing a lenient return policy requires careful consideration of the way the RL processes will be handled to recapture maximum value from the consumer returns (Dapiran & Kam, 2017:835).

Although literature lacks a comprehensive overview addressing RLM through well-designed return policies, a clear RLM barrier that can be addressed by a well-designed return policy can be the organisational barrier of poor return policies (see section 2.3.3.2). Furthermore, Badenhorst (2016:19) identified that establishing clear return policies can address the operational barriers of problems with product quality, limited visibility and a lack of forecasting. Additionally, Nel and Badenhorst (2020:126-128) indicated that a well-designed return policy can address various challenges in online retailing, including negative impact of returns on profitability, slow and complex RL processes and fraudulent returns. Evidently, online retailers can address the economic barriers of financial constraints and risks (section 2.3.1), operational barriers of product return barriers and operational risks (section 2.3.2) and the external barriers of consumer buying behaviours and external risks (market risks) (section 2.3.4).

Moreover, a well-designed return policy can result in various beneficial *outcomes*, including the (1) *economic outcome* of higher profits (Davidavičienė & Al Majzoub, 2021:4; Nel & Badenhorst, 2020:127), (2) *operational outcomes* of increased RL process efficiency, shorter RL cycle time, reduction in fraudulent returns (Nel & Badenhorst, 2020:128), (3) *organisational outcome* of increased organisational performance (Karlsson *et al.* 2023:1), (4) *social outcome* of a good reputation (Jalil, 2019:1), and (5) *market-related outcomes* of higher sales (Andresen & Istad, 2019:7; Dapiran & Kam, 2017:835), a competitive advantage, enhanced consumer satisfaction (Jalil, 2019:1; Nel & Badenhorst, 2020:127), consumer loyalty and trust (Dobson, 2023:10; Jalil, 2019:1; Oghazi *et*

al. 2018:190), and demand satisfaction (Jalil, 2019:1). Evidently, the outcomes of a well-designed return policy confirm the competitive and social drivers of RLM adoption (section 2.4).

Essentially, a well-designed return policy can help online retailers to successfully manage consumer returns, address several RLM barriers and achieve various outcomes, making return policy design an important design success factor for effective RLM. In the next section, return process design for RLM will be discussed.

2.5.2.2 Return process design for RLM

Designing a good return process can be important (Wang, Wang *et al.* 2021:66) to effectively manage consumer returns, creating various opportunities for financial control, reduction of unwanted returns (Solati *et al.* 2023:2) and effective utilisation of resources (Ramana, Nikhitha & Reddy, 2023:6). Therefore, online retailers must thoroughly prepare for returns and establish an efficient return process (Nel & Badenhorst, 2020:127). Closely related to a well-designed return policy, a well-designed return process for successful RLM must be (1) formalised, (2) clear and consumer-centric, and (3) streamlined.

Formalising the return process can be an important practice (Badenhorst, 2017:611), helping online retailers to effectively manage consumer returns (De Araújo, 2018:354). A formalised return process can be implemented through various tools, including written policies, documented procedures, job descriptions and staff responsibilities and flow charts (De Araújo, 2018:354). A formalised return process must be developed by experienced managers and provide clear and written guidelines for staff to understand their roles and responsibilities in RL to manage consumer returns efficiently (Davidavičienė & Al Majzoub, 2021:6).

Moreover, a well-designed return process must be *clear* and *consumer centri*c, requiring minimal consumer effort, fewer gatekeeping rules, quicker consumer return resolutions and speedy restocking of returned products (Das *et al*. 2020:48; Ahsan & Rahman, 2022:155). Especially in online retailing, the return processes must be as user-friendly as possible (Castillo, 2023:7) and offer consumers with several return options (Sackos, 2022:1). In fact, Heyns and Kilbourn (2022:11) found that young online shoppers in South Africa rated multiple return channel options as one of the most important service quality expectations. Consequently, a hassle-free and consumer centric return process can be a critical for the success of online retailers (Wang, Dang *et al.* 2021:2). Similarly, a well-designed return process for RLM must be *streamlined,* which can be important speed and efficiency (Nel & Badenhorst, 2020:127). For example, automating return request and gatekeeping processes can help

streamline the return process, which can help online retailers to manage consumer returns more efficiently (Hjort *et al.* 2019:788).

In terms of addressing the *barriers* in RLM, formalising the return process can address various barriers, including the (1) *operational barriers* of limited forecasting and visibility (product return barriers and operational risks), (2) *organisational barriers* of a lack of awareness about RLM, management inattention (management barriers) and poor functional integration (functional barrier), and (3) *SC barrier* of a lack of SC collaboration (Badenhorst, 2017:608, 611). Moreover, a well-designed return process can help online retailers control capital and reduce unwanted returns (Solati *et al.* 2023:2), which can address the economic barriers of investment and financial risks (section 2.3.1) and external barrier of consumer buying behaviour (section 2.3.4.2).

Most importantly, a well-designed return process can result in various *outcomes*, including the (1) *economic outcomes* of cost savings and reductions (Ashan & Rahman, 2021:154; Jenkins, 2021:5; Nel & Badenhorst, 2020:127; Phuong, 2019:12), higher profits (Ermes & Niemann, 2023:5; Frei *et al.* 2020:9; Phuong, 2019:12) and financial control (Solati *et al.* 2023:2), (2) *operational outcomes* of an efficient RL process (Das *et al*. 2020:48), a speedy return process (Ahsan & Rahman, 2022:155; Sackos, 2022:1; Ramana *et al.* 2023:6) and reduction of product returns (Frei *et al.* 2020:9; Nel & Badenhorst, 2020:128; Solati *et al.* 2023:2), (3) *environmental outcome* of reduced environmental impact (Frei *et al.* 2020:9; Jenkins, 2021:5), (4) *social outcome* of enhanced green image (Ramana *et al.* 2023:6), (5) *market-related outcomes* of a competitive advantage (Ermes & Niemann, 2023:5), increased sales, consumer trust (Sackos, 2022:1), consumer loyalty (Sackos, 2022:1; Wang, Dang *et al.* 2021:2), consumer satisfaction (Ashan & Rahman, 2021:154; Castillo, 2023:7; Ramana *et al.* 2023:6), consumer retention (Castillo, 2023:7; Jenkins, 2021:5) and improved consumer service (Ramana *et al.* 2023:6), and (6) *SC outcomes* of increased SC visibility (Jenkins, 2021:5) and reduced SC uncertainties (Wang, Wang *et al.* 2021:66).

Essentially, return process design for RLM confirms the economic, competitive, social and environmental significance of RLM adoption. Additionally, through a well-designed return process online retailers can successfully manage consumer returns, while mitigating RLM barriers and realising various advantages. In the next section, the final design success factor of network design for RLM will be discussed.

2.5.2.3 RL network design for RLM

Like traditional logistics network design, RL network design is a crucial and strategic issue (Solati *et al.* 2023:3), indicating that it can be important for successful RLM. Network design for RLM entails

the location, allocation and capacity of facilities in a RL network (Misni & Lee, 2017:92; Tombido *et al.* 2018:246). Additionally, designing a RL network focusses on return collection and physical transportation to move products between facilities and locations (Misni & Lee, 2017:91). In studying the literature, it is apparent that online retailers can consider various network designs for effective RLM each with some advantages and disadvantages. Therefore, the designing an optimal network for RLM requires careful consideration and possibly a trade-off or cost-benefit analysis. A well-designed RL network for RLM involves various elements, including (1) RL network design requirements, (2) identification of the network design type, and (3) identification of facility location(s) and types.

The *RL network design requirements* for RLM involve resource commitment, network technology, network coordination, robustness, and eco-friendliness (if desired). Particularly, online retailers must *commit* a significant *number of resources* in designing a suitable RL network for product return collection, transportation, handling, storage and subsequent disposition for successful RLM (Das *et al*. 2020:48). Additionally, online retailers can use *network technology* for a collaborative RL network design, focusing on *coordination* with consumers (Andresen & Istad, 2019:5). An important IT that can be used for the coordination of RL network design can be customer relationships management (CRM) software (Andresen & Istad, 2019:5). Additionally, the coordination of RL network design must focus on efficiency and cost-effectiveness (Misni & Lee, 2017:91). Consequently, a well-designed RL network for RLM must be *robust* (Misni & Lee, 2017:85) and must enable speedy collection and transportation from the consumer to the online retailer to realise maximum value (Das *et al.*2020:49). Lastly, if online retailers desire a more environmentally friendly approach towards RL network design, they can design an *eco-friendly RL network,* which focuses on reducing emissions through multiple facilities (Le, 2023:1).

Identification of the network design type requires careful consideration between centralisation and decentralisation. According to Karlsson *et al.* (2023:8), return reasons can influence the selection of a centralised and decentralised network for online consumer returns, indicating that a differentiated approach is required. Nevertheless, the type of network design mostly associates with implementing RLM in-house or through a 3PRL provider. Particularly, for online retailers that keep RLM in-house it might be more beneficial to select a *decentralised network design* since it allows for quicker return lead times (Karlsson *et al.* 2023:8). Consequently, in a decentralised design, various facilities are strategically located closer to consumers, enabling speed and agility (Bozzi *et al.* 2022:20). Oppositely, a *centralised network design* is usually the preferred design by 3PRL providers, focusing on economies of scale (Wang, Wang *et al.* 2021:67). Therefore, online retailers that outsource RLM might benefit from a centralised network to attain economies of scale (Wang, Wang *et al.* 2021:67).

Closely related to the type of RL network, the *identification of facility location(s) and types* can be important for RLM. According to Misni and Lee (2017:91), facilities must be placed in strategic locations to maximise consumer responsiveness and flexibility. Furthermore, online retailers must select between combined (hybrid) facility or a separate facility to manage consumer returns effectively. In an *integrated hybrid facility* both RL and FL processes are concurrently performed in one location, enabling sharing of resources and lower operating costs (Misni & Lee, 2017:92). However, using one facility to perform RL and FL processes can be complex, requiring sufficient space and coordination (Misni & Lee, 2017:92).

Meyer *et al.* (2017:13) suggested that a *dedicated RL facility* can be located on the same property as the main facility. Therefore, a dedicated RL facility next to the main facility can be beneficial in terms of greater economies of scale, while at the same time enable quick restocking or pickup from suppliers. Alternatively, online retailers can use a *centralised return centre* (CRC) that specialise in RL processes, offering economies of scale and cost advantages (Hjort *et al.* 2019:781). Additionally, these facilities can provide consolidated reports and enable the identification of poorly designed products or suppliers and performance evaluation (Dapiran & Kam, 2017:830). Consequently, online retailers can negotiate better price rates with suppliers (Dapiran & Kam, 2017:830) as well as identify areas of improvement to avoid unnecessary returns (e.g. picking errors). Nevertheless, CRCs can reduce RL process speed due to longer transportation distances, which can negatively impact service performance (Hjort *et al.* 2019:781). Subsequently, online retailers must consider service levels and costs when designing a suitable RL network for successful RLM.

Literature lacked clear mention of addressing specific *barriers* through a well-designed RL network for RLM. However, Misni and Lee (2017:85) indicated that a robust network can address various *risks* in RL. These risks might entail *financial risks* (e.g. high costs and a loss of profits) (section 2.3.1.3), *operational risks* (e.g. product quality risks and inventory risks) (section 2.3.2.3), *organisational risks* (e.g. labour risk) (section 2.3.3.4) and *external risks* (e.g. SC risks) (section 2.3.4.4). Additionally, from the practices and various outcomes (discussed next) a well-designed RL network might address the (1) *economic barrier* of financial constraints (e.g. high costs and lack of economies of scale) (section 2.3.1.2), (2) *operational barriers* of product returns (e.g. quality problems and limited visibility) and support (e.g. inadequate IT and infrastructure) (section 2.3.2), (3) *organisational barriers* of management (e.g. management inattention), strategy, policy and control (e.g. lack of performance measuring) and functional barriers (e.g. lack of staff training) (section 2.3.3), and (4) *external barriers* of SC (e.g. lack of SC collaboration and information sharing) and external infrastructure (e.g. poor road networks) (section 2.3.4).

Although the *outcomes* of a RL network design can depend on the structure, facility locations and types, a well-designed RL network can offer various advantages. Specifically, a well-designed RL network can result in the (1) *economic outcomes* of cost savings (Hjort *et al.* 2019:781; Misni & Lee, 2017:92), higher profits, cost-effectiveness (Misni & Lee, 2017:91), economies of scale (Meyer *et al.* 2017:13; Hjort *et al.* 2019:781; Wang, Wang *et al.* 2021:67) and optimised value recovery (Das *et al.*2020:49), (2) *operational outcomes* of reduced product return uncertainties (Wang, Wang *et al.* 2021:67), improved operational efficiency (Meyer *et al.* 2017:13; Misni & Lee, 2017:91), speedy return processes and shorter lead times (Bozzi *et al.* 2022:20; Das *et al.*2020:49; Karlsson *et al.* 2023:8), and increased RL flexibility (Misni & Lee, 2017:91), (3) *organisational outcome* of improved performance evaluation (Dapiran & Kam, 2017:830), (4) *environmental outcome* of reduced environmental pollution (Le, 2023:1), (5) *market-related outcomes* of increased consumer convenience (Bozzi *et al.* 2022:20), enhanced consumer responsiveness (Misni & Lee, 2017:91) and improved consumer coordination and communication (Andresen & Istad, 2019:5), and (6) *SC outcomes* of improved SC information sharing (Dapiran & Kam, 2017:830).

Essentially, RL network design for RLM confirms the economic, competitive and environmental significance of RLM adoption. Additionally, a well-designed RL network can facilitate the effective management of consumer returns, address barriers and result in several beneficial outcomes. In the next section, the resource success factors for RLM will be identified and discussed.

2.5.3 Resource success factors for RLM

Successful RLM is generally dependent on the commitment of sufficient resources (Govindan & Bouzon, 2018:320). Since product return flows are different and more complicated than standard forward flows, sufficient resources are needed (Lin & Hsu, 2017:217). While sufficient resources are needed for successful RLM, efficient utilisation of resources can be important for realising cost efficiencies and RL performance improvements (Mahindroo, Samalia & Verma, 2018:55). Evidently, both the commitment and utilisation of resources can be important for successful RLM. Based on the literature study, the key resource success factors for successful RLM include (1) resource commitment and investment for RLM, (2) IT resources for RLM, and (3) human resource development for RLM, which will be discussed in the subsequent sections.

2.5.3.1 Resource commitment and investment for RLM

Resource commitment and investment for RLM can be regarded as the allocation of financial resources and investment into specific resources required for successful RLM. If organisations invest in sufficient resources in RL, they can expect various advantages (Goedhart *et al*. 2022:1). Evidently,

effective RLM requires significant investments for the handling of consumer returns (Phuong, 2019:3). The key areas of resource commitment and investment for RL involve (1) financial resource commitment, (2) commitment and investment of IT resources, (4) infrastructure investment, and (3) human resource commitment and investment.

Final resource commitment and financial support can be critical for a well-functioning and well-managed RL process, providing support for the information, infrastructure and labour requirements of RL (Andresen & Istad, 2019:15). Additionally, financial resource commitment can be important for effective application of IT and internal and external communication in the return process (Lin & Hsu, 2017:21). Consequently, organisations must consistently devote sufficient capital for the efficiency and effectiveness of RL operations (Meyer *et al*. 2017:1). Similarly, the complexity of RL and the uncertainty of return flows, necessitates sufficient *commitment and investment of IT resources*, including software and hardware, to support the management of consumer returns (Ahsan & Rahman, 2022:157; Kaynak *et al.* 2014:440). Therefore, organisations need to invest in information and technology systems for the effective management of RL processes (Frei *et al.* 2020:1619; Jović *et al*. 2020:160; Misni & Lee, 2017:92-93; Ravi & Shankar, 2015:15).

Along with the investment of IT sources, organisations must *invest* in the development of *infrastructure* for RL flows (Meyer *et al*. 2017:13). Specifically, investing into the right infrastructure for RL can be essential for the efficiency, effectiveness and overall performance of RL (Abdulrahman *et al.* 2014:463; Davidavičienė & Al Majzoub, 2021:19; Jenkins, 2021:10). Equally important for effective RL is *human resource commitment* and *investment*, which can strengthen the financial performance of organisations (Meyer *et al*. 2017:13; Le, 2023:15). Additionally, online retailers must invest in the consumer service function, which can be important for the management and reduction of consumer returns (Nel & Badenhorst, 2020:127). Lastly, online retailers must commit managerial resources for successful use of IT resources and integration across departmental functions (Lin & Hsu, 2017:21), which can be important for effective RLM.

Apart from the investment in IT for RLM, literature lacks a clear discussion on the *barriers* that can be addressed through financial, infrastructure and human resources. However, financial resources needed for infrastructure and human resources (Andresen & Istad, 2019:15) can clearly address economic, operational and management barriers. Specifically, financial resource commitment for infrastructure and human resources can address the (1) *economic barriers* of investment and financial risks (section 2.3.1), (2) *operational barrier* of support (i.e. lack of infrastructure) and operational risks (section 2.3.2), and (3) *organisational barriers* of functional barriers (i.e. lack of staff training) and management risks (e.g. management and labour risks) (section 2.3.3). Moreover, investment in IT

resources can address various barriers, including (1) *operational barriers* of a problems with product quality (Badenhorst, 2017:612), lack forecasting and visibility (product return barriers), a lack of IT systems (Badenhorst, 2016:9; Badenhorst, 2017:612) and a lack of infrastructure (support barriers), (2) *organisational barrier* of poor internal integration (functional barrier) and (3) SC (external) barriers of a lack of collaboration and information sharing (also SC risks) (Badenhorst, 2017:611-612).

Additionally, sufficient resource commitment and investment for RLM can provide various beneficial *outcomes*, including the (1) *economic outcomes* of cost savings and reduction (Le, 2023:15; Meyer *et al.* 2017:13), increased revenue/profits (Andresen & Istad, 2019:15; Le, 2023:15; Meyer *et al.* 2017:13; Phuong, 2019:12), enhanced cost control, increased asset recovery (Phuong, 2019:12), reduced inventory investment (Goedhart *et al*. 2022:1), (2) *operational outcomes* of increased RL process efficiency (Meyer *et al*. 2017:1), enhanced product return visibility (Ahsan & Rahman, 2022:157; Jenkins, 2021:10; Kaynak *et al.* 2014:440;) and product return reduction (Nel & Badenhorst, 2020:127), (3) *organisational outcomes* of improved RL performance (Davidavičienė & Al Majzoub, 2021:19), internal communication and integration (Lin & Hsu, 2017:21), and (4) *market-related outcomes* of improved consumer responsiveness (Lin & Hsu, 2017:21).

Essentially, resource commitment and investment for RLM, including financial resource commitment, investment and commitment of IT resources, infrastructure investment and human resource commitment and investment, can be significant success factors for effective RLM, addressing various barriers in RLM and providing several advantages. In the next section, the utilisation of IT resources for RLM will be explored.

2.5.3.2 Information technology (IT) resources for RLM

While the investment in IT can be regarded as important for RLM, appropriate implementation and use of IT resources can be critical for the effective RLM of consumer returns in online retailing (Davidavičienė & Al Majzoub, 2021:6; Karlsson *et al*. 2023:7). The implementation and successful use of the correct IT resources requires (1) knowledge about the functionalities of appropriate IT systems for RLM and (2) identification of the types of IT resources that can be implemented for RLM.

Appropriate IT for RLM involve various *functionalities* that online retailers can consider for the correct implementation and application of IT resources, including state-of-the-art, tracking, tracing, communication and integration capabilities, real-time information sharing, information quality and quantity, support decision-making, performance measurement, gatekeeping and return avoidance, and

return data capturing and analysis capabilities. *State-of-the-art IT* for product return *tracking* and *tracing* can be critical for effective RLM (Frei *et al.* 2020:1619; Ravi & Shankar, 2015:20). Additionally, appropriate IT for RLM must facilitate internal and external *integration, communication* and *real-time information sharing* (Karlsson *et al.* 2023:8), as well as possess the capabilities to be embedded into the website to facilitate RL processes (Bozzi *et al.* 2022:15).

Furthermore, to support RLM, appropriate IT must be capable of providing high *quality* and *quantity* of *information,* and *support decision-making* in RL processes (Starostka-Patyk, 2021:2594). Additionally, appropriate IT must be capable of *supporting performance measurement* in RL, *gatekeeping* and *return avoidance* (Karlsson *et al.* 2023:8-9). Especially, the IT system must facilitate the control of return rates, track return reasons and provide information to understand consumer behaviour (Bozzi *et al.* 2022:15; Jović *et al*. 2020:160). Subsequently, appropriate IT must be capable of *capturing* and *analysing data* about the nature, frequency and types of returns (Dapiran & Kam, 2017:832), enabling leveraging of data analytics for effective RLM and improvements (Ahlén & Johansson, 2023:31).

Following the knowledge on important functionalities of IT systems, online retailers must *identify the types of IT resources* that can be implemented for effective RLM. Specifically, online retailers must identify the appropriate computer systems and programmes, network requirements, software and electronic database resources to process, store and manage RL data (Davidavičienė & Al Majzoub, 2021:6). Additionally, online retailers can consider the implementation of dedicated return software and information systems (Hjort *et al.* 2019:788), tracking and Radio Frequency Identification (RFID) technologies (Starostka-Patryk, 2021:2591), the Internet of Things (Karlsson *et al.* 2023:8; Zhang *et al.* 2017:157), web-based systems (Robertson *et al.* 2020:172), blockchain technologies (Jović *et al*. 2020:164) and traditional technologies (Starostka-Patryk, 2021:2591).

To manage consumer returns effectively, online retailers can identify and implement *dedicated return software* and *information systems* aimed at automating returns, enabling streamlined and efficient RL processes (Ahlén & Johansson, 2023:31; Bozzi *et al.* 2022:21; Fox, 2023:5; Hjort *et al.* 2019:788). Specifically, online retailers can implement and utilise a Returns Management System (RMS) for various benefits related to speed, efficiency, consumer experience and return minimisation (Fox, 2023:5). Moreover, online retailers can identify and use computerised *return tracking systems* and *RFID technologies* for product return tracking and identification (Starostka-Patryk, 2021:2591). *RFID* can be an important IT system for the management of consumer returns in terms of product return monitoring (Biswas & Abdul-Kader, 2018:1021), tracking and verification and inventory management (Frei *et al.* 2020:1616). Like RFID technology, the *Internet of Things,* which involves

connections between smart devices and the internet, can be an important technology for managing consumer returns, providing online retailers with the ability to track products in real time and in-transit (Zhang *et al.* 2017:157).

Online retailers can identify *web-based systems* that facilitate the shopping process, enabling consumers to make more informed decisions, reducing unnecessary returns (Ahsan & Rahman, 2022:157; Robertson *et al.* 2020:172). Furthermore, online retailers can identify and implement *blockchain technology* that contains the attributes of appropriate IT resources for effective RLM. For example, blockchain that facilitate product identification, tracking and verification (Jović *et al*. 2020:164), as well as blockchain that can help prevent fraudulent behaviour (Shih, Huang, Chieh, Shih & Wu, 2021:2170). Lastly, online retailers can consider *traditional technologies* for RL, including Enterprise Resource Planning (ERP), Electronic Data Interchange (EDI), CRM and SCM systems (Starostka-Patryk, 2021:2591) and a Warehouse Management System (WMS) (Fox, 2023:5), which can enable successful management of RL processes (Fox, 2023:5; Starostka-Patryk, 2021:2591).

Based on the literature, the *barriers* in RLM that can be addressed by appropriate implementation and use of IT resources include (1) *economic barriers* of investments, high costs, lack of economies of scale (financial constraints) and risks (Ahlén & Johansson, 2023:32) and (2) *operational barriers* of limited visibility, lack of forecasting (product return barriers and operational risks) and inadequate of IT systems (operational support and risks) (Badenhorst, 2016:9). However, based on the abovementioned functionalities and outcomes (discussed next) the application of IT resources can address the (1) *organisational barriers* of strategic planning, policy and control (i.e. poor performance measurement) and functional barriers (i.e. lack of internal coordination and information sharing) (section 2.3.3), and (2) *external barriers* of SC (i.e. lack of SC collaboration and information sharing), consumer behaviour (i.e. opportunistic buying and fraudulent return behaviours) and external risks (i.e. SC risks) (section 2.3.4).

Apart from successful RLM, appropriate implementation and use of IT resources can provide various outcomes, including the (1) *economic outcomes* of cost savings (Jović *et al*. 2020:164), (2) *operational outcomes* of improved RL process efficiency and effectiveness (Ahlén & Johansson, 2023:31; Bozzi *et al.* 2022:23; Fox, 2023:5; Hjort *et al.* 2019:788; Jović *et al*. 2020:164; Starostka-Patryk, 2021:2591), speedy returns and disposition (Fox, 2023:5), improved inventory management and reduced pilferage (Fox, 2023:5; Frei *et al.* 2020:1616; Jović *et al*. 2020:164), product return visibility (Biswas & Abdul-Kader, 2018:1021; Frei *et al.* 2020:1619; Jović *et al*. 2020:164; Ravi & Shankar, 2015:20), return reduction, control (Ahsan & Rahman, 2022:157; Bozzi *et al.* 2022:15; Fox,

2023:5; Karlsson *et al.* 2023:8; Robertson *et al.* 2020:172) and monitoring (Biswas & Abdul-Kader, 2018:1021), (3) *organisational outcomes* of improved RL performance (Davidavičienė & Al Majzoub, 2021:6), improved RL decision making, information management, internal coordination (Karlsson *et al.* 2023:8-9; Starostka-Patyk, 2021:2594), internal information sharing and performance measurement (Karlsson *et al.* 2023:9), (4) *market-related outcomes* of improved consumer service (Ahsan & Rahman, 2022:157; Robertson *et al.* 2020:172) and experience (Fox, 2023:5), and (5) *SC outcomes* of improved SC coordination, communication and information sharing (Karlsson *et al.* 2023:8).

Clearly, the effective implementation and use of IT resources can be crucial for the successful management of consumer returns, addressing various RLM barriers and realising numerous outcomes. Therefore, online retailers must pay attention to the functionalities and types of IT resources to successfully implement and use IT resources for successful RLM. In the next section, the final resource success factor of human resource development will be discussed.

2.5.3.3 Human resource development for RLM

According to Badenhorst (2017:595), the training and development of staff can be one of the most important practices for effective RLM. Proper RL implementation and management requires appropriate human resources, including appropriate training and skills (Andresen & Istad, 2019:15; Lamba *et al.* 2020:384). Therefore, online retailers must allocate sufficient human resources to the RL process (Le, 2023:15; Meyer *et al*. 2017:13) in the form of training staff and skilled staff for RLM.

Pranomo *et al.* (2021:3) indicated that sufficient RL training must be conducted on all levels of the organisation, ranging from top-management level and operational level. However, a well-functioning RL process requires sufficient education and *training of staff* in the return process (Andresen & Istad, 2019:15), ensuring that staff possess sufficient knowledge in handling product returns (Dapiran & Kam, 2017:831). Online retailers must train staff to (1) communicate with consumers effectively, (2) understand the return process (Dapiran & Kam, 2017:831; Fox, 2023:19), (3) provide exceptional consumer service (Nel & Badenhorst, 2020:125), (4) conduct effective gatekeeping and uphold return policies (Dapiran & Kam, 2017:832; Zhang *et al.* 2023:10), (5) effective use of IT systems (Andresen & Istad, 2019:15; Fox, 2023:19; Lamba *et al.* 2020:384), (6) conduct accurate return inspections, and (6) make correct disposition decisions (Fox, 2023:19-20; Zailani *et al.* 2017:35). Furthermore, online retailers can consider training staff on fraud awareness, helping them to detect fraudulent return behaviour (Zang *et al.* 2023:16). Subsequently, online retailers must focus on human resource

development in terms of staff training (Lai *et al.* 2022:4), which can provide significant economic, social and environmental value in the return process (Pal, 2017:864).

Closely related to staff training for RLM, online retailers must ensure that both managers and staff acquire and possess the necessary *skills* for effective RLM (Karlsson *et al.* 2023:9). Equipped staff possess the right skills to facilitate product returns and disposition effectively (Davidavičienė & Al Majzoub, 2021:6; Nel & Badenhorst, 2020:128). Additionally, skilled RL staff will be able to practice effective gatekeeping, facilitate return claims and practice successful service recovery, contributing to both a cost-effective and service-focused RL process (Ahsan & Rahman, 2022:157). Furthermore, skilled staff will be able to analyse product return data and assess the product return performance, using various RL metrics (De Araújo *et al*. 2018:354). Therefore, RL staff must possess specialised knowledge and skills to operate consumer returns and add value to the online retailers (Karlsson *et al.* 2023:9).

Human resource development in terms of staff training and development can address various *barriers* in RLM, including the (1) *economic barriers* of investment and financial constraints (Badenhorst, 2017: 611), (2) *organisational barriers* of a lack of awareness about RLM importance, management inattention (Badenhorst, 2017:612) and resistance to change (Badenhorst, 2017:612; Bozzi *et al.* 2022:21; Mostert *et al.* 2017:14) (management barriers), lack of staff training and resources (Badenhorst, 2017:612; Pranomo *et al.* 2021:3), poor internal integration (functional barriers) (Badenhorst, 2017:612; Mostert *et al.* 2017:14) and organisational risks (e.g. culture and labour risks), and (3) *SC (external) barriers* of a lack of SC support and collaboration (Mostert *et al.* 2017:14). However, based on the requirements and outcomes, staff training and skills can potentially address the (1) *operational barrier* of product returns (e.g. product return uncertainties) and operational risks (e.g. data management and inventory risks) (section 2.3.2), (2) *organisational barrier* of strategic planning, policy and control (i.e. poor performance measurement) (section 2.3.3.2), and (3) *external barriers* of consumer behaviour (i.e. opportunistic buying and fraudulent return behaviours) and external risks (i.e. market risks) (section 2.3.4).

Additionally, effective human resource development can provide various beneficial outcomes for successful RLM, including the (1) *economic outcomes* of enhanced economic performance (Pal, 2017:864), cost savings (Ahsan & Rahman, 2022:157; Le, 2023:15; Meyer *et al*. 2017:13), increased profitability (Andresen & Istad, 2019:15; Le, 2023:15; Meyer *et al*. 2017:13) and improved asset recovery (Davidavičienė & Al Majzoub, 2021:6; Nel & Badenhorst, 2020:128), (2) *operational outcomes* of improved RL process efficiency (Ahsan & Rahman, 2022:157; Fox, 2023:20), speedy RL process (Ahsan & Rahman, 2022:157), reduced return lead time (Davidavičienė & Al Majzoub,

2021:6; Nel & Badenhorst, 2020:125), product return reduction (Dapiran & Kam, 2017:832) and fraudulent return reduction (Zang *et al.* 2023:16), (3) *organisational outcomes* of improved performance measurement (De Araújo *et al*. 2018:354) and staff compliance (Mostert *et al.* 2017:14), (4) *environmental outcomes* of enhanced environmental performance (Pal, 2017:864), (5) *market-related outcomes* of enhanced consumer experience, improved communication (Fox, 2023:20) and enhanced consumer service (Ahsan & Rahman, 2022:157; Nel & Badenhorst, 2020:125), and (7) *SC outcomes* of supplier benefits (Dapiran & Kam, 2017:831).

Essentially, human resource development can be a critical success factor for RLM, not only facilitating the effective management of consumer returns but also addressing RLM barriers and realising various outcomes. Consequently, online retailers must train staff and assign skilled staff to effectively manage consumer returns. In the next section, the operational success factors for RLM will be identified and described.

2.5.4 Operational success factors for RLM

Successful RLM operations requires monitoring and evaluation (Jenkins, 2021:10; Nel & Badenhorst, 2020:128), return avoidance and prevention (Anderson, 2020:7; Andresen & Istad, 2019:41), and management of risks (Panjehfouladgaran & Lim, 2020:1464; Senthil *et al.* 2018:718). Subsequently, the key operational success factors for RLM include (1) performance management for RLM, (2) return avoidance and prevention for RLM, and (3) risk management, which will be discussed in the subsequent sections.

2.5.4.1 Performance management for RLM

Performance measurement (PM) is often defined as the process of assessing the efficiency and effectiveness of an action (Euchi, Bouzidi & Bouzid, 2019:40). For the management of consumer returns, efficiency and effectiveness represents the degree of meeting consumer needs in the return process as well as the effective use of funds (or resources) to attain consumer satisfaction (Euchi *et al.* 2019:40). Therefore, online retailers must measure consumer returns and develop key performance indicators (KPIs) for overall financial success and sustainability (Karlsson *et al.* 2023:9). Performance management for RLM can involve various aspects, including (1) requirements for successful performance management, (2) performance focus areas, (3) development and capabilities of metrics for RLM, and (4) performance monitoring, evaluation and improvement.

Performance management for RLM involves several *requirements* to facilitate the measurement, monitoring and improvement of RL. Specifically, online retailers must use a sophisticated

performance measurement system for the measurement, management and improvement of RLM practices (Lamba *et al.* 2020:384). Similarly, to successfully measure consumer returns, online retailers must use appropriate *RL information systems* and *internal integration* for aligned and effective processes, common goals and appropriate cross-functional performance measures (Karlsson *et al*. 2023:9). Lastly, appropriate evaluation and monitoring of performance requires *skilled staff* and *managers* (De Araújo *et al*. 2018:354; Jenkins, 2021:10).

Focusing on the correct *areas of performance* can be important for successful performance management in RL. Specifically, the most important performance focus area in RLM include *consumers* (Sajjanit & Rompho, 2019:773). Therefore, online retailers must focus on consumer-centricity and consumer-oriented product returns for the development of appropriate KPIs (Karlsson *et al.* 2023:10; Sajjanit & Rompho, 2019:772). Additionally, online retailers must focus both on *efficiency and service performance* (Karlsson *et al.* 2023:9), including on responsiveness, speed, compensation (Karlsson *et al.* 2023:9-10; Sajjanit & Rompho, 2019:772), convenience, communication, empathy and reliability (Sajjanit & Rompho, 2019:772). Lastly, online retailers must focus on *costs, strategic intent,* and *return policy* and *process* design for the development of effective metrics (Karlsson *et al.* 2023:9).

Identifying the key performance focus areas can facilitate the *development of appropriate metrics for RLM.* Specifically, online retailers can develop various metrics for effective consumer return PM, including (1) product return rate, reasons and types (De Araújo *et al.* 2018:354; Fox, 2023:13), (2) return costs that involve return processing, handling and restocking costs (Fox, 2023:14), and (3) consumer service and efficiency that involve RL process speed, consumer responsiveness, service recovery (Karlsson *et al.* 2023:9) and consumers satisfaction (Jalil, 2019:2). These *developed metrics* for RL performance management must be *capable* of measuring, tracking and evaluating RL service performance (Sajjanit & Rompho, 2019:790). Additionally, these metrics must help online retailers to identify cost saving opportunities, understand the return process and emphasise performance improvement opportunities (Fox, 2023:14-15). Lastly, appropriate performance metrics must help with follow up on consumer responsiveness and product return efficiency (Karlsson *et al.* 2023:9).

Subsequently, successful performance management in RL involves *performance monitoring, evaluation* and *improvement.* Online retailers must consistently monitor and evaluate RL processes and practices (Jenkins, 2021:10; Nel & Badenhorst, 2020:128) to identify areas that require improvements (Nel & Badenhorst, 2020:128). Specifically, continuous performance monitoring of the RL process is needed from the return request stage to returned product disposition, ensuring that return processes can be improved and maintained (Fox, 2023:15), Online retailers can monitor

consumer return process efficiency by (1) tracking return metrics, (2) collecting consumer feedback and (3) performing return process audits (Fox, 2023:15). Moreover, RL performance measuring and monitoring must be reported to senior management, which can help with the identification of consumer product return problems and implementation of performance improvement practices (Frei *et al.* 2020:1618; Nel & Badenhorst, 2020:128). Additionally, online retailers can perform a profit and loss analysis from the measurements, which can facilitate understanding of the financial implications of RL processes and practices (Karlsson *et al.* 2023:9). Lastly, online retailers must conduct annual performance evaluation and examination of RL service metrics to facilitate the effective implementation of product return service strategies (Sajjanit & Rompho, 2019:790).

While literature lack clear discussions regarding the RLM *barriers* that can be addressed, performance management for RLM can clearly address the *strategy, planning and control (organisational) barrier* of problems with PM, including a lack of performance measurements and performance management systems (section 2.3.3.2). Additionally, from the abovementioned performance management requirements and practices, successful performance management can help address (1) *economic barriers* of investment, financial constraints and risks (section 2.3.1), (2) *operational barriers* of product returns (e.g. product return uncertainties) and operational support (i.e. lack of IT) (section 2.3.2), (3) *organisational barriers* of management (i.e. lack of knowledge about RLM importance, lack of top management commitment and management inattention) and functional barriers (i.e. lack of skilled staff and poor internal integration) (section 2.3.3), and (4) *external barriers* of consumer behaviour and external risks (i.e. market risks) (section 2.3.4).

Apart from successful RLM, performance management can help online retailers realise several beneficial *outcomes*, including the (1) *economic outcomes* of cost savings (Fox, 2023:14) and improved financial control (Euchi *et al.* 2019:40; Karlsson *et al.* 2023:9), (2) *operational outcomes* of RL process efficiency (Jenkins, 2021:10; Karlsson *et al*. 2023:9), speedy product returns, reduced fraudulent returns (Karlsson *et al.* 2023:10), (3) *organisational outcomes* of improved organisational and RL performance (Fox, 2023:14-15; Frei *et al.* 2020:1618; Jalil, 2019:2; Lamba *et al.* 2020:384; Nel & Badenhorst, 2020:128), enhanced performance measurement, monitoring and management (Frei *et al.* 2020:1618; Jenkins, 2021:10; Lamba *et al.* 2020:384; Nel & Badenhorst, 2020:128; Sajjanit & Rompho, 2019:773), and improved internal coordination (Karlsson *et al*. 2023:9), and (4) *market-related outcomes* of enhanced consumer responsiveness (Karlsson *et al*. 2023:9), loyalty (Fox, 2023:15) and satisfaction (Euchi *et al.* 2019:40; Fox, 2023:15; Sajjanit & Rompho, 2019:773).

Essentially, performance management can be an important success factor for the management of consumer returns, enabling online retailers to effectively measure, monitor, evaluate and manage RL

performance, as well as address RL barriers and realise several outcomes. In the next section, return avoidance and preventions as an operational success factor for RLM will be discussed.

2.5.4.2 Return avoidance and prevention practices for RLM

A significant focus area of effective RLM is on return avoidance and prevention, which aims at reducing returns and minimising the subsequent financial impact of returns (Andresen & Istad, 2019:41). In fact, one of the simplest ways to successfully manage RL is to avoid and prevent returns from taking place (Anderson, 2020:7). Literature extensively discusses return avoidance and prevention practices as an important part of RLM. Based on the literature, return avoidance and prevention practices can be practiced pre-sales, during the return process or after returns, and can range from fairly simple to more specialised and complicated with more serious intervention and improvement initiatives. Due to the comprehensive of literature discussions, the subsequent sections will discuss the general pre-sales, general post-sales and specialised return avoidance and prevention. At the conclusion of the section the barriers and outcomes of return avoidance and prevention will be identified.

2.5.4.2.1 General pre-sales avoidance and prevention

According to Dobson (2023:10), online retailers must implement any method thinkable to prevent consumer returns. Pre-sale return avoidance and prevention practices can include pre-purchase information, marketing initiatives, logistics efficiency and quality management.

Online retailers can practice effective return avoidance by providing consumers with adequate *pre-purchase information* for correct purchasing decisions and prevention of unnecessary product returns (Ahsan & Rahman, 2022:157; Nel & Badenhorst, 2020:127). Specifically, online retailers can provide (1) *appropriate and detailed descriptions of products* (Dobson, 2023:10; Chen *et al.* 2017:255; Gustafsson *et al.* 2021:877; Hjort *et al.* 2019:777; Nel & Badenhorst, 2020:127; Zhang *et al.* 2017:156), (2) *realistic and sufficient pictures of products* (Bozzi *et al.* 2022:15; Hjort *et al.* 2019:777; Nel & Badenhorst, 2020:127; Zhang *et al.* 2017:156), (3) *online videos* (Bozzi *et al.* 2022:15; Nel & Badenhorst, 2020:127), and (4) *accurate size guides* (Bozzi *et al.* 2022:15; Hjort *et al.* 2019:778).

Additionally, online retailers can implement *marketing measures* for return avoidance and prevention, which can include (1) *targeting appropriate consumer groups* to sell the right products to the right consumers (Hjort *et al.* 2019:776), (2) *promotional activities* (e.g. commercials) (De Araújo *et al.* 2018:359) and (3) *online consumer reviews* (Bozzi *et al.* 2022:29; Li, Ma & Chu, 2021:1824).

However, online consumer reviews may lead to higher expectations, which may lead to increasing returns. Li *et al.* (2021:1824) suggest a two-way dialogue with consumers to offset the potential negative impacts of consumer reviews by means of responding to comments and reviews publicly, employing chat apps, providing support by email or using FAQs on ancillary sites.

Furthermore, *logistics efficiency* can be important for return avoidance, which can include improvements in procurement (e.g. purchasing better quality products from reputable suppliers) (Zhang *et al.* 2017:156), reducing picking and delivery errors, and using appropriate packaging (Dobson, 2023:10; Hjort *et al.* 2019:779). *Quality management* directly impact the quantity and quality of product returns (Davidavičienė & Al Majzoub, 2021:19). Online retailers that practice quality management and control of products prior to sales can reduce defective product returns (Davidavičienė & Al Majzoub, 2021:19; Euchi *et al.* 2019:49).

2.5.4.2.2 General post-sales return avoidance and prevention

General post-sales return avoidance and prevention can take place during and after the return process. *During the return process*, online retailers can *establish a gatekeeping function* to differentiate and control the entry of products into the return stream (Anderson, 2020:10). Practicing gatekeeping can be important to protect the RL process from unwanted/fraudulent returns (Hjort *et al.* 2019:770). However, the gatekeeping function requires support from appropriate performance measures and RL information systems, ensuring that gatekeeping is practiced correctly (Karlsson *et al.* 2023:9).While gatekeeping can take place after the products arrive at the warehouse, Hjort *et al.* (2019:774) found that establishing a gatekeeping function at the point of the consumer can help online retailers interact with the consumer and implement consistent measures to prevent unwanted or unnecessary returns. For example, online retailers can perform home visits to ensure that the return reasons match the description of the product, before accepting the return (Hjort *et al.* 2019:770). Other prevention measures through gatekeeping can include early crediting or negotiating a discount, requesting the consumer to keep the product. (Hjort *et al.* 2019:770)

Post-sales avoidance and prevention practices *after the return process* can include product return data, consumer feedback and service and product quality improvements. According to Fox (2023:13), consumer returns can be a valuable *data source* that provides insight into consumer return behaviour, product quality issues and process inefficiencies, which can help with return avoidance. Furthermore, online retailers can *listen to consumer feedback* regarding product quality issues and return reasons for product/service improvements, which can help prevent future returns (Hjort *et al.* 2019:778; Meyer *et al*. 2017:13). Online retailers can use an information system to store product return data and consumer feedback information to critically review and *improve operational inefficiencies*

(Anderson, 2020:11; Meyer *et al*. 2017:13). Closely related to pre-sales quality management, online retailers can implement quality control and assessment systems to track consumer feedback and claims (Mahindroo *et al.* 2018:55), which can be used to *improve the quality of products* (Vlachos, 2016:425). Similarly, product return information sharing and collaboration with suppliers can help improve product quality issues and subsequently avoid future returns (Eriksson & Käck, 2023:24; Hjort *et al.* 2019:778).

2.5.4.2.3 Specialised return avoidance and prevention practices

While general pre- and post-sales return avoidance and prevention practices can help online retailers reduce unnecessary and unwanted product returns, specialised practices involve more sophisticated measures and interventions to curb both fraudulent and unnecessary future returns. However, the specialised practices can complement the general return avoidance and prevention practices, which can be implemented pre-sales, during the return process and after the return process. Based on the literature, specialised return avoidance and prevention practices can include (1) sophisticated information systems and technologies, (2) sophisticated data analysis techniques, (3) adjustment of the return policy and (4) human interventions.

Linking with the IT resources for RLM (section 2.5.3.2), online retailers can develop, implement and use *sophisticated information systems and technologies* for return avoidance and prevention. Specifically, *sophisticated web-based systems* can be used as pre-sales prevention measures, aimed at reducing consumer uncertainty during online shopping (Ahsan & Rahman, 2022:157; Robertson *et al.* 2020:172). For example, online retailers can use online chatbots and augmented reality to help the consumer find the right fit and style of the item prior to the purchase (Robertson *et al.* 2020:172). Additionally, online retailers can use various sophisticated IT systems, like *RFID* and *blockchain*, during the return process to avoid fraudulent and unnecessary returns. For instance, RFID tags on products can help online retailers to verify the accuracy of the return claim, preventing the acceptance of counterfeit or fraudulent returns (Frei *et al.* 2020:4; Zhang *et al.* 2023:15). Similarly, the information stored in the blockchain can confirm authenticity of the returned products and verify the return claim against the original purchase (Jović *et al*. 2020:164). Consequently, blockchain technology can be important for fraud detection and prevention in the RL process (Shi *et al.* 2021:2186).

Some sophisticated systems can be used for post-sales data collection, which can help improvement initiatives for unnecessary returns and prevention initiatives to avoid fraudulent returns. Particularly, online retailers can use an RMS (return management system) to identify return trends, identify service improvement opportunities and facilitate product return avoidance (Fox, 2023:5). Similarly, online

retailers can development of a sophisticated product return portal as a measure of preventing illegitimate and fraudulent product returns (Zhang *et al.* 2023:11). The product return portal can gather valuable product return data, including the identification of the returner, original order detailers, number of return requests and the selected return methods, which can help online retailers understand consumer return behaviour and identify suspicious return behaviour for further investigations (Zhang *et al.* 2023:11).

Closely related to the use of sophisticated IT for consumer return data, online retailers can use *data analytics and data analysis techniques* to identify root causes of returns and implement appropriate countermeasures. With data analytics online retailers gain meaningful insights from consumers to avoid unnecessary returns (Hjort *et al.* 2019:779). Additionally, online retailers can use statistical algorithms for the detection of fraudulent return behaviours that can be used to track and flag serial returners for targeted prevention (Bernon *et al.* 2016:585; Zhang *et al.* 2023:11). Some online retailers use consumer experience tools, like a net promoter score tool, to gain insights into customers' return patterns, which can help return avoidance (Hjort *et al.* 2019:778). Based on the statistics and data analytics online retailers can implement appropriate countermeasures, including (1) excluding fraudulent or serial returners from promotional emails and discount offers (Zhang *et al.* 2023:11), and (2) blocking the accounts of fraudulent or serial returns (Hjort *et al.* 2019:778; Zhang *et al.* 2023:11).

Online retailers that experience frequent fraudulent returns can consider *adjustments* to their *return policies.* Zhang *et al.* (2023:10) suggest that online retailers shortening the return period, use gift receipts or store credit or refunds through the same payment methods and refuse refunds for returns outside the return period, which can curb fraudulent returns but still maintain standard consumer service. Additionally, online retailers can use *human interventions* for return avoidance and prevention. According to Zhang *et al.* (2023:17), investment in human resources can be the most powerful tool in the prevention of fraudulent returns. Specifically, online retailers that experience high losses from fraudulent returns must consider the establishment of return prevention team, consisting of five to ten individuals to (1) investigate fraudulent returns, (2) call individual consumers suspected of fraudulent return behaviour, and (3) collect and analyse return data as evidence for future actions (Zhang *et al.* 2023: 11, 17). Additionally, online retailers must conduct regular staff training on fraud awareness, affording staff the skills to detect and prevent fraudulent returns (Zhang *et al.* 2023:16). Lastly, senior management involvement and cross-functional information sharing about fraudulent returns, which can help the creation of better return policies (marketing), adjustment of credit practices (finance) and implementation of appropriate systems (IT) (Zhang *et al.* 2023:12, 17).

Clearly, online retailers can address various RLM barriers through return avoidance and prevention practices, including *operational (product return) barriers* of product return uncertainties, limited visibility and poor return forecasting (Badenhorst, 2016:9). Additionally, from the practices and outcomes (described next), avoidance and prevention can help address the (1) *economic barriers* of investment, financial constraints and risks (section 2.3.1), (2) *operational barriers* of operational support (i.e. inadequate IT systems) and operational risks (i.e. demand, product quality, data management, technology and inventory risks) (section 2.3.2), (3) *organisational barriers* of management (i.e. lack of top management support and management inattention), strategy, policy and control (i.e. poor policies) function (i.e. lack of staff training and poor functional integration) and organisational risk (i.e. labour risk) (section 2.3.3), and (4) *external barriers* of SC (i.e. lack of SC collaboration and information sharing), consumer behaviour (i.e. opportunistic buying and fraudulent return behaviours) and external risks (i.e. SC, market and environment risks) (section 2.3.4). Consequently, effective return avoidance and prevention practices can address all RLM barriers, emphasising the significance of these practices for successful RLM.

Apart from successful RLM and product and fraudulent return reductions, online retailers can experience various outcomes through return avoidance and prevention practices, including the (1) *economic outcomes* of cost savings (Andresen & Istad, 2019:8; Eriksson & Käck, 2023:24-25; Gustafsson *et al.* 2021:877; Hjort *et al.* 2019:770; Jović *et al*. 2020:164), increased profitability and improved financial performance (Chen *et al.* 2017:255; Zhang *et al.* 2023:16-17), (2) *operational outcomes* of enhanced RL process and operational efficiencies (Eriksson & Käck, 2023:25; Fox, 2023:5; Meyer *et al*. 2017:13; Zhang *et al.* 2023:13), increased RL process speed (Fox, 2023:5; Zhang *et al.* 2023:13), enhanced product return visibility (Zhang *et al.* 2023:7) and improved inventory management (Jović *et al*. 2020:164; Zhang *et al.* 2023:11), (3) *organisational outcomes* of improved RL performance (Davidavičienė & Al Majzoub, 2021:19), RL decision making (Hjort *et al.* 2019:770), information management, internal communication, information sharing and collaboration (Zhang *et al.* 2023:11-12), (4) *environmental outcomes* of decreased pollution (e.g. less transportation) and waste reduction (Bozzi *et al.* 2022:30), (5) *social outcomes* of improved reputation (Eriksson & Käck, 2023:24-25; Zhang *et al.* 2023:16), (6) *market-related outcomes* of enhanced consumer services (Zhang *et al.* 2017:156) and experience (Fox, 2023:5), increased consumer satisfaction (Vlachos, 2016:425; Zhang *et al.* 2017:156) and loyalty (Eriksson & Käck, 2023:24-25; Vlachos, 2016:425), improved consumer engagement (Hjort *et al.* 2019:774) and enhanced consumer value (Ahsan & Rahman, 2022:157; Mahindroo *et al.* 2018:55), and (7) *SC outcomes* of improved SC collaboration and information sharing (Eriksson & Käck, 2023:24; Nel & Badenhorst, 2020:127; Zhang *et al.* 2017:156).

Essentially, return prevention and avoidance practices can be critical success factors for effective RLM. Consequently, online retailers can implement various pre-sales, post-sales and specialised return avoidance and prevention practices to not only manage consumer returns successfully but also to address various barriers and realise numerous advantages. Additionally, avoidance and prevention practices confirm the economic, competitive, social and environmental significance of RLM. In the next section, the final operational success factor of risk management will be briefly described.

2.5.4.3 Risk management for RLM

In general, risk management involves the identification, classification, mitigation and evaluation of SC risks, which can be an integral part of the operational strategy of a successful organisation (Senthil *et al.* 2018:718). Although the barriers in RLM involve various risks, limited studies in RL focused on risk management for RLM. Consequently, this section identifies elements of risk management based on the few studies from literature that focused on RL risk management. Like standard risk management, risk management for RLM requires risk identification, risk classification and assessment and risk mitigation (Ermes & Niemann, 2023:5; Panjehfouladgaran & Lim, 2020:1452; Senthil *et al.* 2018:718).

Risk identification for RLM entails defining all potential risks that can hamper effective RLM (Panjehfouladgaran & Lim, 2020:1452). Risk identification can be a significant part of risk management for RLM as it enables online retailers to develop appropriate mitigations strategies to minimise the negative impact of these risks on their performance and sustainability (Panjehfouladgaran & Lim, 2020:1450). As discussed in the barriers of RLM (section 2.3), online retailers can *identify* the potential risks in RLM as the (1) *financial risks* of financial instability, capacity and investment (Panjehfouladgaran & Lim, 2020:1465), a loss of money, high RL cost and profit loss risks (Ermes & Niemann, 2023:7), (2) *operational risks* of demand and forecast, product quality, technological, data management and inventory risks, (3) *organisational risks* of management, culture and labour risks (Panjehfouladgaran & Lim, 2020:1461-1462; Senthil *et al.* 2018:718) and (4) *external risks* of SC, outsourcing, market, political and external environment risks (Panjehfouladgaran & Lim, 2020:1461).

Following risk identification, online retailers can *classify* and *assess* risks since risk mitigation can be resource intensive (Panjehfouladgaran & Lim, 2020:1464). Classifying risks involve the grouping of RLM risks into categories (e.g. strategic, operational and tactical risks), which can help online retailers mitigate a set of risks through fewer risk mitigation measures (Panjehfouladgaran & Lim, 2020:1450, 1452). Following the classification, online retailers can assess RLM risks through a risk ranking or prioritisation assessment process whereby the most significant risks (i.e. highest

probability of occurring with the greatest potential loss) are addressed first (Senthil *et al.* 2018:718). Subsequently, based on the risk classification and assessment outcomes, online retailers can identify and implement risk mitigation strategies associated with higher risks first, followed by medium risks and lower risks.

Once the RLM risks are prioritised, online retailers can identify and implement *risk mitigation strategies* (Senthil *et al.* 2018:728). Identifying risk mitigation strategies can be essential for effective managerial decision making and the subsequent reduction of RLM disruptions (Panjehfouladgaran & Lim, 2020:1464). Online retailers can identify proactive and reactive risk mitigation strategies (Ermes & Niemann, 2023:8), which can be implemented based on the risk assessment. Based on literature, several *proactive risk mitigation strategies* can be implemented before the occurrence of RLM risks, including top management support, appropriate IT, return inspection, return prevention, establishment of risk procedures, skilled staff, organisational culture changes, appropriate RL network design and SC relationships. According to Panjehfouladgaran and Lim (2020:1466) effective risk management requires sufficient *top management support* since risk mitigation requires resources. Subsequently, with support from top management, the remaining proactive and later reactive risk mitigation strategies can be effectively implemented.

Appropriate IT can be a significant risk mitigation strategy for addressing various RLM risks. For example, implementing RFID increases product return visibility and enables real-time information sharing between SC parties (Ermes & Niemann, 2023:8), mitigating demand and forecast risks (section 2.3.2.3) and SC risks (e.g. poor SC communication) (section 2.3.4.4). Additionally, RFID improve product return tracking and increase inventory accuracy, which can mitigate inventory risks (e.g. pilferage) (Frei *et al.* 2020:4). Similarly, implementing a warehouse management system (WMS) can enhance operational security management, addressing inventory risks related to inadequate storage (Starostka-Patryk, 2021:2591). Additionally, through a robust IT system outsourcing risks related to information security risk can be mitigated (Panjehfouladgaran & Lim, 2020:1464).

Online retailers can use the *return inspection* process as a risk mitigation tool for potential risks taking place during RL process (Ermes & Niemann, 2023:5). For example, effective return inspections can mitigate product quality risk associated with poor inspection (section 2.3.2.3). Additionally, implementing *return prevention practices* can be a valuable strategy to reduce RL risks. For example, quality checks before products are dispatched and proper packaging design can mitigate risks related to unnecessary returns (Ermes & Niemann, 2023:8), like the financial risk of a loss of money and high costs (section 2.3.1.3). Additionally, proper packaging design can help consumers

with the product return and subsequently protect the product from damage and pilferage (quality and inventory risks) (Ermes & Niemann, 2023:9).

Another proactive risk mitigation strategy can include the *establishment of risk procedures,* which involves a step-by-step guide to help organisational members to understand their roles for effective risk management in the event of a disruption (Ermes & Niemann, 2023:9). Furthermore, *skilled staff* placed in strategic positions can be valuable as a mitigation strategy to combat risks during a disruptive event (Ermes & Niemann, 2023:9). Additionally, Ermes and Niemann (2023:9) found that instilling the correct *organisational culture* before a risk event can be an important mitigating strategy. Specifically, organisations can instil a problem-solving culture, which allows for quicker risk response and limited conflict between organisational members. Therefore, online retailers can address various organisational risks through these measures, including management risks (i.e. inconsistent decision making), culture risks (i.e. resistance to change) and labour risks (i.e. unskilled staff) (see section 2.3.3.4).

Designing a *robust RL network* can be used as a risk mitigating strategy, ensuring efficient product return flow to reduce SC risks (Misni & Lee, 2017:85). The final proactive risk mitigating strategy involve the development of *SC relationships.* Specifically, developing collaborative SC relationships can help with resources, knowledge and expertise to overcome a disruption more effectively (Ermes & Niemann, 2023:8). Likewise, online retailers can mitigate future risks by establishing strong partnerships and using multiple suppliers (Panjehfouladgaran & Lim, 2020:1464). Consequently, online retailers can mitigate financial risks (i.e. unavailability of financial resources) (section 2.3.1.3), organisational risks (i.e. lack of management expertise) (section 2.3.3.4) and SC risks (i.e. lack of shared goals) (section 2.3.4.4).

In contrast to proactive risk mitigation, *reactive mitigation strategies* are implemented in a response of a risk event or disruption. Only Ermes and Niemann (2023:9) identified some *reactive mitigation strategies* that can be implemented during a disruption in the SC. For example, online retailers can use consumer return data and refuse product returns from serial returners and customise return policies to accommodate fewer returns (Ermes & Niemann, 2023:9), indicating that both proactive and reactive risk management strategies involve return avoidance and prevention practices. Additionally, online retailers can establish a specific RL team, consisting of highly skilled individuals in RL, tasked at managing the risks during the disruptions (Ermes & Niemann, 2023:9). Essentially, online retailers can implement reactive strategies as an extension of the proactive strategies of return prevention and skilled staff.

Based on the discussions, risk management can clearly address all the *risks* identified in the *barriers* of RLM. Additionally, from the risk management practices and outcomes (discussed next), online retailers can potentially address the (1) *economic barriers* of investment and financial constraints (section 2.3.1), (2) *operational barriers* of product returns (i.e. limited visibility, quality problems and uncertainties) operational support (i.e. inadequate IT systems) (section 2.3.2), (3) *organisational barriers* of management (i.e. lack of top management support and management inattention), strategy, policy and control (i.e. poor policies) and function (i.e. lack of skilled staff) (section 2.3.3), and (4) *external barriers* of SC (i.e. lack of SC collaboration and information sharing) and consumer behaviour (i.e. opportunistic buying and fraudulent return behaviours) (section 2.3.4).

Moreover, several *outcomes* can be realised through effective risk management for successful RLM, including the (1) *economic outcomes* of cost savings, increased profits (Ermes & Niemann, 2023:5), higher recovery value, and reduced capital expenditure (Ermes & Niemann, 2023:10) and financial loss (Senthil *et al.* 2018:718) (2) *operational outcomes* of increased RL process efficiency (Ermes & Niemann, 2023:10; Misni & Lee, 2017:85), enhanced product return visibility and tracking (Ermes & Niemann, 2023:8; Frei *et al.* 2020:4), improved inventory management (Frei *et al.* 2020:4; Starostka-Patryk, 2021:2591), reduced pilferage (Ermes & Niemann, 2023:9; Frei *et al.* 2020:4), and fraudulent and product return reductions (Ermes & Niemann, 2023:9), (3) *organisational outcomes* of improved RL decision making (Ermes & Niemann, 2023:9; Panjehfouladgaran & Lim, 2020:1464), (4) *environmental outcomes* of improved environmental performance (Senthil *et al.* 2018:728), (5) *market-related outcomes* of increased sales, market share, competitive advantage, and consumer service, loyalty and retention (Ermes & Niemann, 2023:10-11), and (6) *SC outcomes* of improved SC information sharing, communication and collaboration (Ermes & Niemann, 2023:8; Panjehfouladgaran & Lim, 2020:1464).

Essentially, risk management can be an important success factor for effective RLM by mitigating RLM risks and barriers, while realising various beneficial outcomes. Therefore, online retailers must manage RL risks effectively through risk identification, classification, assessment and mitigation for the effective RLM of consumer returns. In the next section, relation success factors will be identified and discussed.

2.5.5 Relation success factors for RLM

Effective RLM of consumer returns in online retailing requires both internal (functional) coordination and external (SC and consumer) coordination (Ashan & Rahman, 2021:154). Subsequently, online retailers must adopt a multifaceted relation perspective to generate long-term benefits for the organisation, SC and consumers (De Borba *et al.* 2021:137). The key relation success factors that

organisations must focus on for successful RLM include (1) functional relationships for RLM, (2) SC relationships for RLM, and (3) consumer relationships for RLM, which will be discussed in the subsequent sections.

2.5.5.1 Functional relationships for RLM

Cross-functional collaboration and sharing of goals between different departments is essential in RLM to achieve common goals (Karlsson *et al.* 2023:9). Additionally, effective RLM practice needs synchronisation from all functional levels of the organisation, including lowest level to top management (Badenhorst, 2022:229; Bouzon *et al*. 2015:1369). Therefore, the development of good functional relationships can be important for successful RLM. To effectively manage functional relationships for RLM a few practices can be important, including organisational structure, organisational culture, functional integration and internal information sharing.

A conducive *organisational structure* focused on the needs of employees, operations and capacities can be important for the RLM performance of online retailers (Vlachos, 2016:424). In fact, an optimal organisational structure can change ineffective RL activities to a successful RLM function (Waqas *et al.* 2018:4202). According to Espinosa *et al.* (2021:791), effective RLM requires a flexible structure or an adaptability approach instead of a top-down management approach. This adaptability approach transforms managers into facilitators in RLM, empowering RL staff to self-organise, share information, develop relationships and acquire new knowledge through experience. Additionally, an *organisational culture* that supports the development of internal relationships through cross-functional coordination can be essential to address problems in RLM (Vlachos, 2016:424). The online retailer's top management and senior managers are responsible for creating a supportive organisational culture (Davidavičienė & Al Majzoub, 2021:9), emphasising the importance of senior management commitment to RLM (see section 2.5.1.1). Therefore, a good organisational structure and culture can be essential for effective RLM performance (Davidavičienė & Al Majzoub, 2021:19).

Similarly, efficient RLM requires *functional integration* between various departments (Ashan & Rahman, 2021:155). However, the establishment of functional integration for RLM requires top management commitment to RLM and close interdepartmental relationships (Mostert *et al.* 2017:9). Additionally, online retailers can facilitate functional integration by improving information availability and synchronising cross-functional RL processes (Mostert *et al.* 2017:1). Furthermore, sharing of cross-functional goals can be important in supporting functional integration (Karlsson *et al.* 2023:9). Aligning goals across functions can be supported through a centralised IT system, which can be essential for effective functional integration and controls (Mostert *et al.* 2017:9). Online retailers must especially focus on integrating the FL and RL functions for improved service

performance (Phuong, 2019:13) as well as the marketing, procurement and RL functions for joint decision-making in the development of appropriate RL policies and practices (Pal, 2017:874).

Closely related to functional integration, the development of good internal relationships for RLM requires effective *internal information sharing.* Appropriate IT systems can be critical for effective information sharing between departments. The centralised IT used for functional integration and alignment of goals can be used to internally coordinate and integrate RL information between functions (Mostert *et al.* 2017:8). Additionally, online retailers can consider modern technology, like Internet of Things, which provides visibility through storing and sharing of RL information across departments (Jović *et al*. 2020:164). Less sophisticated methods involve emails, messaging applications and cross-functional meetings (Mostert *et al.* 2017:8), which can further enhance internal integration and the development of good functional relationships.

While fewer RLM *barriers* can directly be addressed through functional relationships, from literature a few barriers that can be addressed included the (1) *operational barriers* of problems with quality, limited visibility and forecasting (Badenhorst, 2017:611) (product return barrier and operational risks), (2) *organisational barriers* of a lack of top management support (Mostert *et al.* 2017:9) (management barrier), problems with performance measurement (Karlsson *et al*. 2023:9) (strategy, policy and control barrier), a lack of internal coordination and information sharing (Badenhorst, 2017:611) (functional barriers) and problems with culture (Vlachos, 2016:424) (organisational risk), and (3) *external barrier* of a lack of SC collaboration (Karlsson *et al.* 2023:8) (SC barrier and SC risks). Additionally, effective establishment of functional relationships can indirectly address the operational support barrier of a lack of IT (section 2.3.2.2), which can in turn address various other barriers (see section 2.5.3.2).

Finally, online retailers can realise a few outcomes through functional relationships for RLM, including the (1) *operational outcomes* of improved RL process effectiveness (Waqas *et al.* 2018:4202), increased product return visibility and tracking (Jović *et al*. 2020:164), and product return reduction (Mostert *et al.* 2017:13), (2) *organisational outcomes* of improved RL performance (Davidavičienė & Al Majzoub, 2021:9), planning, control (Jović *et al*. 2020:164), information management (Ashan & Rahman, 2021:155), internal coordination (Ashan & Rahman, 2021:155; Karlsson *et al.* 2023:9; Mostert *et al.* 2017:1, Vlachos, 2016:424) and communication (Ashan & Rahman, 2021:155, Vlachos, 2016:424), (4) *environmental outcome* of improved environmental performance (Pal, 2017:885), (5) *social outcome* of improved corporate image (Pal, 2017:885), (6) *market-related outcomes* of enhanced consumer satisfaction (Sajjanit & Rompho, 2019:772), increased consumer convenience (Pal, 2017:885), improved consumer service (Mostert *et al.*

2017:13; Phuong, 2019:13) and competitive advantage (Phuong, 2019:13), and (7) *SC outcomes* of improved SC coordination and communication (Vlachos, 2016:424).

Essentially, the development of functional relationships through a good organisational structure, a supportive organisational culture, functional integration and internal information sharing can be important for successful RLM, addressing several barriers and realise various beneficial outcomes. Additionally, functional relationships for RLM emphasise the competitive, social and environmental significance of RLM. In the next section SC relationships for RLM will be discussed.

2.5.5.2 Supply chain (SC) relationships for RLM

According to Hjort *et al.* (2019:770) consumer returns will always be part of online retailing and all SC parties will be involved to some extent. Consequently, successful RLM is dependent on the support and participation of SC parties (Govindan & Bouzon, 2018:320). Like functional relationships, SC relationships involve several key practices, including effective SC alignment, SC collaboration, SC integration (SCI) and SC information sharing, which can be important for successful RLM.

SC alignment can be important for effective RLM, impacting overall operational efficiency and effectiveness (Dapiran & Kam, 2017:832). For successful SC alignment in RL, online retailers can align with SC partners by (1) sharing RLM responsibilities (Govindan & Bouzon, 2018:320), (2) integrating IT systems (Dapiran & Kam, 2017:835), (3) creating common return policies, (4) standardising RLM procedures, (5) establishing common performance measures, (6) sharing product return information, and (7) performing joint negotiations in RL (Dapiran & Kam, 2017:832). Similarly, *SC collaboration* can be important for the effective management of product returns (Badenhorst, 2022:330; Mahadevan, 2019:483). Effective SC collaboration requires sufficient information exchange between SC parties, cooperative policies (Ahlén & Johansson, 2023:32) and integrated IT systems, linking all SC parties in the return process (Frei *et al.* 2020:1618). Additionally, online retailers can establish collaborative partnerships in the reverse SC (RSC), which can enhance access to matching resources and RLM capabilities (Pal, 2017:883). Subsequently, collaborative SC relationships can benefit all SC parties, which can optimise RLM performance and address uncertainties (Wang, Wang *et al.* 2021:70).

Efficient RLM requires effective *SCI* since RL processes can involve manufacturers/suppliers, wholesalers/distributer, 3PLs or 3PRLs, retailers and consumers across various geographical regions (Ashan & Rahman, 2021:154). Successful *SCI* relates to the extent to which SC partners successfully align and collaborate (Mostert *et al.* 2017:9). Therefore, SCI can be realised through aligned RL

processes (Mostert *et al.* 2017:1), cooperative policies, SC information sharing (Ahlén & Johansson, 2023:32) and integrated information systems (Frei *et al.* 2020:1618). Moreover, online retailers can integrate with suppliers through contracts, stipulating shared responsibilities in RL, standardised RL processes, staff training, regular meetings, RL information sharing and product return data exchanges through systems, which can provide various RLM benefits (Mostert *et al.* 2017:10, 13).

Lastly, successful SC relationships for RLM require *effective SC information sharing,* which can be important for the coordination of RL operations across the RSC (Lai *et al.* 2022:4). Without SC collaboration and integration, effective information exchange and communication between SC parties will be unlikely (Ahlén & Johansson, 2023:32). Additionally, effective SC information sharing requires an information system accessible by SC partners that allows for efficient sharing of product return information (Meyer *et al*. 2017:13). Principally, the development of effective SC relationships for successful RLM requires a holistic implementation of SC alignment, collaboration, integration and information sharing.

SC relationships in the form of collaboration, integration and information sharing can address several RLM *barriers,* including the (1) *economic barriers* of investment and financial constraints, (2) *operational barriers* of problems with product quality, limited visibility and forecasting (product return barriers), a lack of IT systems and a lack of infrastructure (operational support barriers) (Badenhorst, 2017:613), (3) *SC barriers* of a lack of support from SC partners, a lack of SC collaboration and poor SC information sharing (Ahlén & Johansson, 2023:32; Badenhorst, 2017:611), and (4) *consumer behaviour barrier* of fraudulent return behaviour (Zhang *et al.* 2023:7). Consequently, SC relationships for RLM can help mitigate *financial risks* (i.e. lack of financial resources and high costs) (section 2.3.1.3), *operational risks* (i.e. demand and forecast, product quality, technology, data management and inventory risks) (section 2.3.2.3) and *external risks* (i.e. SC and outsourcing risks) (section 2.3.4.4).

Moreover, effective SC relationships for successful RLM can result in various beneficial *outcomes,* including the (1) *economic outcomes* of cost savings and reductions (Ahlén & Johansson, 2023:32; Badenhorst, 2022:330; Mostert *et al.* 2017:13), enhanced financial performance (Dapiran & Kam, 2017:835) and higher economic value recovery (Pal, 2017:865), (2) *operational outcomes* of improved operational efficiency and effectiveness (Ahlén & Johansson, 2023:32; Dapiran & Kam, 2017:835), enhanced product return visibility (Meyer *et al.* 2017:13; Wang, Wang *et al.* 2021:67), speedy RL processes and product return reduction (Mostert *et al.* 2017:1, 13), (3) *organisational outcome* of improved RL performance (Wang, Wang *et al.* 2021:70), (4) *environmental outcome* of improved environmental performance (Pal, 2017:883), (5) *social outcome* of enhanced corporate

image (Pal, 2017:865), (6) *market-related outcome* of increased consumer satisfaction (Lai *et al.* 2022:4; Mostert *et al.* 2017:13; Pal, 2017:865), and (7) *SC outcomes* of improved SC communication (Mostert *et al.* 2017:13), enhanced SC visibility and performance (Wang, Wang *et al.* 2021:67) and improved SC coordination (Lai *et al.* 2022:4).

Essentially, the development of effective SC relationships through SC alignment, collaboration, integration and information sharing can be important for successful RLM. Additionally, SC relationships for RLM can address various barriers and realise several outcomes, which can be important for the online retailers as well as the overall SC. In the next section, the final success factor of consumer relationships will be discussed.

2.5.5.3 Consumer relationships for RLM

According to Karlsson *et al.* (2023:8), online retailers must move away from only focusing on cost efficiencies and return avoidance and instead move towards a consumer-centric orientation for RLM. In fact, Wang, Dang *et al.* (2021:14) found that consumer engagement and information sharing are key determinants of RLM in online retailing. Subsequently, successful RLM in online retailing requires the establishment of consumer relationships. Several requirements and practices can be important for consumer relationships, including (1) adopting and implementing a consumer-centric approach, (2) consumer integration and collaboration, and (3) consumer information sharing and communication.

Adopting a consumer-centric approach involves offering a differentiated service to consumers for effective RLM (Karlsson *et al.* 2023:8). Specifically, a consumer-centric approach means that online retailers focus service efforts on enhancing consumer experience (Dobson, 2023:4; Karlsson *et al.* 2023:8) and meeting their expectations (Hjort *et al.* 2019:774). In the return process, consumer generally expect *accessibility* (Jalil, 2019:7), *responsiveness* (Lin & Hsu, 2017:219), *convenience* (Eriksson & Käck, 2023:25; Triani *et al.* 2019:469), *detailed information* (Triani *et al.* 2019:469), *transparency* (Eriksson & Käck, 2023:25; Hjort *et al.* 2019:774), *speedy return processes* (Hjort *et al.* 2019:774) and *flexibility* (De Borba *et al.* 2021:137). Additionally, online retailers must focus on intangible elements, like demonstrating *empathy and care*, which can be important service elements in the return process (Sajjanit & Rompho, 2019:789).

However, the adoption of a *consumer-centric approach* requires the *implementation* of several practices, including (1) functional integration and collaboration (Karlsson *et al.* 2023:8), (2) investment in an effective consumer return service (Nel & Badenhorst, 2020:127), (3) establishment of a consumer support system (Triani *et al.* 2019:471), (4) dedicated consumer service staff and (5)

maintenance of good consumer relationships (Davidavičienė & Al Majzoub, 2021:4). Additionally, online retailers must develop an understanding of consumer return behaviour, which can be essential for successful consumer service in RLM (Ashan & Raham, 2021:151). Particularly, understanding consumer return intentions and behaviours can help online retailers to improve their product return services, which can lead to a superior return service that benefit both consumers and online retailers (Ashan & Raham, 2021:151, 154; De Borba *et al.* 2021:137).

Like functional and SC relations success factors (sections 2.5.5.1 and 2.5.5.2), effective consumer relationships for RLM require *consumer integration* and *collaboration.* Consumer integration involves the alignment of consumer needs and values (Eriksson & Käck, 2023:25; Mostert *et al.* 2017:10) and aiding consumers with problems in the return process through effective communication and information sharing (Mostert *et al.* 2017:10). In terms of collaboration, online retailers must encourage consumer participation in the return process to create a service-driven return process (Sajjanit & Rompho, 2019:790). Additionally, like consumer integration, consumer collaboration involves information sharing and helping consumers make informed purchase decisions to avoid consumer dissatisfaction as well as unnecessary returns (Ahlén & Johansson, 2023:31). In essence, consumer integration and collaboration are the foundation of effective engagement, communication and information sharing with consumers before and during the return process, aiming to offer consumers a high-quality service and experience.

Subsequently, the most important elements of effective consumer relationships for RLM involves *consumer information sharing* and *communication,* taking place before, during and after the return process. Consumer information sharing and communication before the return process can take place pre-purchase and post-purchase. *Pre-purchase information sharing* and *communication* relate to return avoidance and prevention practices by educating consumers about product details for more informed purchase decisions (Mostert *et al.* 2017:10). Additionally, through a consumer support function on the online shopping site, online retailers can provide uncertain consumers with information about the return policy and procedures, making it more comfortable and easier if they decide to return the product (Triani *et al.* 2019:471). Therefore, online retailers must effectively communicate the return policy and procedures during the online shopping process (Zhang *et al.* 2023:10). Similarly, for effective *post-purchase information sharing* and *communication*, the return policies and conditions must be available at obvious locations on the shop platform (Zhang *et al.* 2017:157). Additionally, online retailers must provide clear return instructions on requesting a return, shipping options and other requirements (e.g. packaging and labelling requirements) (Fox, 2023:19), which can be supplemented with a flow map of the return process (Zhang *et al.* 2017:157). Therefore, consumer information sharing and communication must aim at increasing consumer awareness about

return and refund options (Mathu & Khunou, 2021:443) and providing consumers with a better understanding about the return process (Nel & Badenhorst 2020:127).

Furthermore, online retailers must continue *information sharing and communication during the return process* by providing full transparency about every RL process and activity (Eliav, 2022:3), using various communication channels, like email, Facebook Messenger, SMS and WhatsApp (Dobson, 2023:8). Specifically, effective information sharing and communication during the return process can include (1) prompt and professional responses about product return queries and concerns (Fox, 2023:19), (2) a notification that confirms pick-up (Eliav, 2022:3), (3) return tracking information (Dobson, 2023:8; Fox, 2023:19), (4) a notification that confirms receipt at the facility, (5) information about the estimated time of processing (Dobson, 2023:8) and (5) a notification that confirms reimbursement of a refund or shipment of an exchange (Fox, 2023:19; Eliav, 2022:3). Furthermore, for environmentally conscious consumers, online retailers can consider informing consumers about the repurposing or recycling of their returned products, emphasising their participation and contribution to sustainable practice (Eriksson & Käck, 2023:25). Lastly, *information sharing and communication after the return process* involve consumer feedback, which can be used for consumer service improvements in the return process (Jenkins, 2021:5; Lamba *et al.* 2020:388).

In terms of addressing the *barriers in RLM* through consumer relationships, online retailers can address the *economic barriers* related to investments, lack of economies of scale and high costs (financial constraints and risks), and the *SC barrier* related to poor SC coordination (Ahlén & Johansson, 2023:32). Furthermore, based on the practices and outcomes, online retailers can potentially address the (1) *operational barriers* of product returns (i.e. poor forecasting and limited visibility) and operational risks (i.e. demand and forecast risks) (section 2.3.2), (2) *organisational barrier* of function (i.e. lack of functional integration) (section 2.3.3.3), and (3) *external barriers* of consumer behaviour and external risks (i.e. market risks) (section 2.3.4).

Apart from successful RLM, the establishment of effective consumer relationships can result in various outcomes, including the (1) *economic outcomes* of cost reductions (De Borba *et al.* 2021:137), increased profitability (Bozzi *et al.* 2022:16) and economic value recovery (Ashan & Rahman, 2021:154), (2) *operational outcomes* of improved RL process efficiency (Ahlén & Johansson, 2023:31; De Borba *et al.* 2021:137), improved return forecasting (De Borba *et al.* 2021:137) and product return reduction (Ahlén & Johansson, 2023:31; Mostert *et al.* 2017:10; Nel & Badenhorst, 2020:127), (3) *organisational outcome* of improved RL performance (Davidavičienė & Al Majzoub, 2021:19), (4) *environmental outcome* of enhanced environmental performance (Eriksson & Käck, 2023:25), (5) *social outcomes* of enhanced corporate image (Eriksson & Käck, 2023:25;

Mathu & Khunou, 2021:443), green image (Eriksson & Käck, 2023:25) and reputation (Lin & Hsu 2017:219), (6) *market-related outcomes* of improved consumer service (Ashan & Raham, 2021:151; Davidavičienė & Al Majzoub, 2021:19; Lamba *et al.* 2020:338; Triani *et al.* 2019:469), increased competitive advantage (Dobson, 2023:8; Eriksson & Käck, 2023:25), met consumer needs (De Borba *et al.* 2021:137; Lai *et al.* 2022:4), and enhanced consumer satisfaction (Davidavičienė & Al Majzoub, 2021:19; Jalil, 2019:7), loyalty and retention (Dobson, 2023:4; Eliav, 2022:3; Eriksson & Käck, 2023:25), convenience (Triani *et al.* 2019:471), experience (Eriksson & Käck, 2023:25; Fox, 2023:19; Jenkins, 2021:5) and trust (Eliav, 2022:3; Eriksson & Käck, 2023:25; Triani *et al.* 2019:469), and (7) *SC outcomes* of improved SC coordination (Lai *et al.* 2022:4).

Essentially, the establishment of effective consumer relations through a consumer-centric approach, consumer integration and collaboration, and consumer information sharing and communication can be essential for successful RLM in online retailing. Additionally, consumer relationships for RLM confirms the economic, competitive, social and environmental significance of adopting RLM. Therefore, online retailers must focus on developing effective consumer relationships as a key RLM success factor to not only manage consumer returns effectively but also address several RLM barriers and realise various benefits. In the next section, the framework and summary of RLM success factors will be provided.

2.5.6 Summary of RLM success factors

Clearly, successful RLM contains various success factors, including strategic, design, resource, operational and relation success factors. RLM success factors involve several practices and requirements that can address various RLM barriers and realise numerous beneficial outcomes. Based on the literature study findings presented in section 2.5.6, Table 2.5, provides a summary of the success factors in RLM, including specific success factors, practices and requirements, addressed barriers, realised outcomes and literature sources.

Table 2.5 Success factors for effective RLM

STRATEGIC SUCCESS FACTORS FOR RLM				
SUCCESS FACTORS	**PRACTICES AND REQUIREMENTS**	**ADDRESS RLM BARRIERS**	**ACHIEVE OUTCOMES**	**SOURCES**
Strategic importance and commitment to RLM	***Adopt RLM orientation*** • Increase management attention and commitment • Enable resource commitment to RLM ***Adopt a holistic view of RLM*** • Enable the development of beneficial RLM strategies ***Recognise the advantages of RLM*** • Enhance top management commitment and support ***View RLM as a strategic asset***	***Economic barriers*** • Investment • Financial constraint • Financial risks ***Operational barriers*** • Product return • Operational support • Operational risk ***Organisational barriers*** • Management • Strategic planning,	***Economic outcomes*** • Profits • Cost savings • Improve bottom line ***Operational outcomes*** • RL process efficiency • Improve forecasting ***Organisational outcomes*** • Performance monitoring and evaluation • Improve RL performance	Ahlén and Johansson (2023) Andresen and Istad (2019) Badenhorst (2017) Chen *et al.* (2017) Chileshe *et al.* (2018) De Borba *et al.* (2020) Elive (2022) Frei *et al.* (2020)

	• RLM as part of consumer acquisition and retention • Enable an understanding of consumer behaviours and intention • Recognise impact on triple bottom line ***Involve senior management*** • Provide clear vision for RLM implementation • Develop strategic and tactical plans for RLM • Oversee RL function • Report to board of directors for returns to form part of corporate decision making	policy and control • Functional • Organisational risks ***External barriers*** • SC • Consumer behaviour • External risks	***Social outcomes*** • Enhance social responsibility • Enhance corporate image ***Market-related outcomes*** • Consumer satisfaction and loyalty • Improve consumer relationships • Competitive advantage ***SC outcome*** • Enhance SC competitiveness	Karlsson *et al.* (2023) Le (2023) Makaleng and Hove-Sibanda (2022) Pathak *et al.* (2020) Pramono *et al.* (2021) Ratchford *et al.* (2022) Schooling (2023)
Strategic implementation of RLM	***Strategically implement RLM inhouse*** • Full RLM responsibility and control ***Strategically implement RLM through outsourcing*** • RLM responsibility with 3PRL provider • Facilitate proper RL implementation and resource utilisation ***Perform a cost benefit analysis*** • Identify cost criteria • Identify benefit criteria ***Consider strategic implications and requirements of outsourcing*** • Impact on SC control • Impact on strategic decisions • Outsourcing decision must align with mission, goals and growth of organisation ***Strategically select the 3PRL provider*** • Identify selection criteria for best partner • Evaluate available 3PRLs to select a partner that offers the most value	***Economic barriers*** • Investment • Financial constraint • Financial risks ***Operational barriers*** • Product return • Operational support • Operational risk ***Organisational barriers*** • Management • Strategic planning, policy and control • Functional • Organisational risks ***External barriers*** • SC • External support • External risks	***Economic outcomes*** • Cost savings • Cost effectiveness and efficiency • Profits • Lower investment costs • Reduce assets • Economies of scale ***Operational outcome*** • Streamlined RL process ***Organisational outcomes*** • Focus on core competency • Effective management of returns • Reduce resources and risks ***Environmental outcomes*** • Environmental protection ***Social outcomes*** • Green image • Stakeholder satisfaction ***Market-related outcomes*** • Increase sales and market share • Increase consumer satisfaction • Competitive advantage	Anderson (2020) Andresen and Istad (2019) Badenhorst (2017) Davidavičienė and Al Majzoub (2021) Gu *et al.* (2019) Lamba *et al.* (2020) Le (2023) Prajapati *et al.* (2021) Sackos (2022) Tavana *et al.* (2016) Tombido *et al.* (2018) Wang, Dang *et al.* (2021)
RL strategies and systems	***Develop a strategic plan for RLM*** • Determine the strategic goals, • Envisaged strategy for returns • Consider the impact of returns on stakeholders • Include strategic plan for RLM into overall organisational strategic plan ***Develop a well-planned RL strategy*** • Focus must be on RL and marketing interface • Focus on the return policy • Focus on disposition strategies and strategic use of tactical recovery activities ***Create a well-developed RL system*** • Important for successful return processes • Focus on developing an efficient and cost-effective RL system	***Economic barriers*** • Financial constraint • Financial risks ***Operational barriers*** • Product return • Operational support • Operational risk ***Organisational barriers*** • Management • Strategic planning, policy and control • Organisational risks ***External barriers*** • SC • External risks	***Economic outcomes*** • Profits • Cost savings and effectiveness • Value and asset recovery • Improve bottom line ***Operational outcome*** • Enhance RL process efficiency • Increase RL process speed ***Organisational outcome*** • Improve performance ***Environmental outcomes*** • Reduce raw material use • Enhance sustainability • Compliance with legislation ***Social outcomes*** • Enhance corporate image and reputation ***Market-related outcomes*** • Increase market share and opportunities • Competitive advantage • Enhance consumer service • Consumer satisfaction	Anderson (2020) Ahsan and Rahman (2022) Badenhorst (2017) Chen *et al.* (2017) Davidavičienė and Al Majzoub (2021) Hjort *et al.* (2019) Le (2023) Phuong (2019) Prajapati *et al.* (2021) Ravi and Shankar (2015) Sajjanit and Rompho (2019) Xu (2019)
DESIGN SUCCESS FACTORS FOR RLM				
SUCCESS FACTORS	**PRACTICES AND REQUIREMENTS**	**ADDRESS RLM BARRIERS**	**ACHIEVE OUTCOMES**	**SOURCES**
Return policy design for RLM	***Well-designed return policy requires strategic alignment with RL strategies*** • Align with strategic objectives and RL strategy to achieve RL goals ***Well-designed return policy must be clear*** • Consider consumer behaviour and impact	***Economic barriers*** • Financial constraint • Financial risks ***Operational barriers*** • Product return • Operational risks	***Economic outcome*** • Higher profits ***Operational outcomes*** • RL process efficiency • Reduce RL process cycle time • Reduce fraudulent returns	Ahlén and Johansson (2023) Andresen and Istad (2019) Badenhorst (2016) Dapiran and Kam

	on RLM performance • Easy, hassle-free and flexible policy with clear information about RL processes and terms and conditions of returns • Helps consumers to understand their roles and responsibilities ***Well-design return policy must consider the level of leniency and strictness*** • Requires cross-functional collaboration • Consider the costs versus benefits of lenient and strict policies • Generous return policy as part of the service offering of the online retailers • A lenient return policy requires consideration of the way returns must be handled to ensure value recovery.	***Organisational barriers*** • Strategic planning, policy and control ***External barriers*** • Consumer behaviour • External risks	***Organisational outcome*** • Improve RL performance ***Social outcome*** • Good reputation ***Market-related outcomes*** • Increase sales • Competitive advantage • Enhance consumer satisfaction • Enhance loyalty and trust • Demand satisfaction	(2017) Das *et al.* (2020) Davidavičienė and Al Majzoub (2021) Dobson (2023) Heyns and Kilbourn (2022) Hjort *et al.* (2019) Jalil (2019) Karlsson *et al.* (2023) Lin and Hsu (2017) Makaleng and Hove-Sibanda (2022) Nel and Badenhorst (2020) Oghazi *et al.* (2018)
Return process design for RLM	***Well-designed return process must be formalised*** • Written policies • Document procedures • Job descriptions • Flow charts • Developed by experienced managers • Enable staff to understand their roles ***Well-designed return process must be clear and consumer centric*** • User-friendly and hassle-free return process • Minimise consumer effort • Fewer gatekeeping rules • Speedier return resolution and restocking • Offer consumer various return options ***Well-designed return process must be streamlined*** • Important for overall speed and efficiency • Automate pre-receipt return processes	***Economic barriers*** • Financial constraint • Financial risks ***Operational barriers*** • Product return • Operational risks ***Organisational barriers*** • Management • Functional ***External barriers*** • SC • Consumer behaviour • External risks	***Economic outcome*** • Cost savings and reduction • Higher profits • Financial control ***Operational outcomes*** • RL process efficiency • Speedy return process • Reduce returns ***Environmental outcomes*** • Reduce environmental impact ***Social outcomes*** • Enhance green image ***Market-related outcomes*** • Competitive advantage • Increase sales • Increase consumer satisfaction • Increase consumer loyalty and trust • Consumer retention • Improve consumer service ***SC outcomes*** • Enhance SC visibility • Reduce SC uncertainties	Ahsan and Rahman (2022) Badenhorst (2017) Castillo (2023) Das *et al.* (2020) Davidavičienė and Al Majzoub (2021) De Araújo (2018) Ermes and Niemann (2023) Frei *et al.* (2020) Heyns and Kilbourn (2022) Hjort *et al.* (2019) Jenkins (2021) Nel and Badenhorst (2020) Phuong (2019) Ramana *et al.* (2023) Sackos (2022) Solati *et al.* (2023) Wang, Dang *et al.* (2021) Wang, Wang *et al.* (2021)
RL network design for RLM	***RL network design requirements*** • Commit resources • Network technology and CRM software • Coordination with consumers • Robust • Eco-friendly ***Identification of the network design type*** • Centralised versus decentralised • Network type influenced by return reasons • Decentralised for speed and efficiency • Centralised for economies of scale ***Identification of facility locations and types*** • Focus on consumer responsiveness and flexibility • Integrated hybrid facility for RL and FL processes and sharing of resources • Dedicated RL facility at main facility for efficiency and scale • Centralised return centre (CRC) specialises in RL processing and provides information on poor quality products/suppliers and performance • CRC enables cost savings and scale but increases product return lead-time	***Economic barriers*** • Financial constraint • Financial risks ***Operational barriers*** • Product return • Operational support • Operational risk ***Organisational barriers*** • Management • Strategic planning, policy and control • Functional • Organisational risks ***External barriers*** • SC • External support • External risks	***Economic outcomes*** • Cost savings • Higher profits • Cost effectiveness • Economies of scale • Optimised value recovery ***Operational outcomes*** • Reduce product return uncertainty • Operational efficiency • Speedy returns and shorter lead times • Increase RL flexibility ***Organisational outcomes*** • Improve performance evaluation ***Environmental outcomes*** • Reduce environmental pollution ***Market-related outcomes*** • Increase consumer convenience • Enhance consumer responsiveness • Improve consumer coordination and communication ***SC outcomes*** • Improve SC information sharing	Andresen and Istad (2019) Bozzi *et al.* (2022) Dapiran and Kam (2017) Das *et al.* (2020) Hjort *et al.* (2019) Karlsson *et al.* (2023) Le (2023) Meyer *et al.* (2017) Misni and Lee (2017) Wang, Wang *et al.* (2021)

RESOURCE SUCCESS FACTORS FOR RLM				
SUCCESS FACTORS	**PRACTICES AND REQUIREMENTS**	**ADDRESS RLM BARRIERS**	**ACHIEVE OUTCOMES**	**SOURCES**
Resource commitment and investments for RLM	***Financial resource commitment*** • Important for well-functioning and well-managed RL process • Support information, infrastructure and labour requirements • Important for appropriate IT use and cross-functional integration • Consistently devote capital resources ***Commitment and investment of IT resources*** • Important for the return complexity and uncertainty • Invest in hardware and software ***Infrastructure investment*** • Right infrastructure required for efficiency and effectiveness • Important for RL performance ***Human resource commitment and investment*** • Important for financial performance • Managerial resources required for effective use of IT resources and functional integration	***Economic barriers*** • Investment • Financial risks ***Operational barriers*** • Product return • Operational support • Operational risk ***Organisational barriers*** • Functional barriers • Organisational risks ***External barriers*** • SC • External risks	***Economic outcomes*** • Cost savings and reductions • Increase revenue/profits • Increase cost control • Increase asset recovery • Reduce investment in inventory ***Operational outcomes*** • RL process efficiency • Enhance product return visibility • Reduce product returns ***Organisational outcomes*** • Improve RL performance • Improve internal communication and integration ***Market-related outcomes*** • Improve consumer responsiveness	Abdulrahman *et al.* (2014) Ahsan and Rahman (2022) Andresen and Istad (2019) Badenhorst (2016) Badenhorst (2017) Davidavičienė and Al Majzoub (2021) Frei *et al.* (2020) Jenkins (2021) Jović *et al*. (2020) Kaynak *et al.* (2014) Le (2023) Lin and Hsu (2017) Meyer *et al*. (2017) Misni and Lee (2017) Nel and Badenhorst (2020) Ravi and Shankar (2015)
IT resources for RLM	***Functionalities of appropriate IT*** • State-of-the art with tracking and tracing capabilities • Facilitate integration, communication and real-time information sharing • Ability to integrate with website • Provide high quality and quantity information • Support decision-making • Support performance measurement • Support gatekeeping and return avoidance • Capability to capture and analyse data ***Types of IT resources for implementation*** • Requires computer hardware, networks, software and electronic database • Dedicated return software and information systems, like RMS, to automate returns • Return tracking and RFID technologies for tracking and product identification • Internet of Things for tracking in real-time • Web-based systems for shopping assistance • Blockchain for tracking, monitoring and fraud • Traditional technologies, like ERP, EDI, CRM system, SCM system, and WMS	***Economic barriers*** • Investment • Financial constraint • Financial risks ***Operational barriers*** • Product return • Operational support • Operational risk ***Organisational barriers*** • Strategic planning, policy and control • Functional ***External barriers*** • SC • Consumer behaviour • External risks	***Economic outcomes*** • Cost savings ***Operational outcomes*** • RL process efficiency and effectiveness • Speedy returns and disposition • Improve inventory management and reduce pilferage • Improve product return visibility • Improve product return reduction, control and monitoring ***Organisational outcomes*** • Improve RL performance • Improve RL decision making • Improve information management • Improve internal coordination and information sharing • Improve performance measurement ***Market-related outcomes*** • Improve consumer service • Enhance consumer experience ***SC outcomes*** • Improve SC coordination • Improve SC communication and information sharing	Ahlén and Johansson (2023) Ahsan and Rahman (2022) Badenhorst (2016) Biswas and Abdul-Kader (2018) Bozzi *et al.* (2022) Dapiran and Kam (2017) Davidavičienė and Al Majzoub (2021) Fox (2023) Frei *et al.* (2020) Hjort *et al.* (2019) Jović *et al*. (2020) Karlsson *et al*. (2023) Ravi and Shankar (2015) Robertson *et al.* (2020) Shih *et al.* (2021) Starostka-Patyk (2021) Zhang *et al.* (2017)
Human resource development for RLM	***Staff training*** • RL training important on all organisational levels • Staff training in RL important for the handling of product returns • Train staff to communicate with consumers and understand RL processes • Train staff to provide exceptional consumer service • Train staff to conduct gatekeeping • Train staff to use IT appropriately • Train staff to conduct good inspection and disposition of returns • Train staff to identify fraud ***Skilled staff*** • Managers and staff require knowledge and	***Economic barriers*** • Investment • Financial constraint ***Operational barriers*** • Product return • Operational risk ***Organisational barriers*** • Management • Strategic planning, policy and control • Functional barriers • Organisational risks ***External barriers*** • SC • Consumer behaviour • External risks	***Economic outcomes*** • Enhance economic performance • Cost savings • Increase profits • Improve asset recovery ***Operational outcomes*** • RL process efficiency • Speedy RL process • Reduce return lead time • Reduce product returns • Reduce fraudulent returns ***Organisational outcomes*** • Improve performance measuring • Improve staff compliance ***Environmental outcomes*** • Enhance environmental	Ahsan and Rahman (2022) Andresen and Istad (2019) Badenhorst (2017) Bozzi *et al.* (2022) Dapiran and Kam (2017) Davidavičienė and Al Majzoub (2021) De Araújo *et al.* (2018) Fox (2023) Karlsson *et al.* (2023) Lai *et al.* (2022)

	skills for RLM • Skilled staff can facilitate product returns and disposition • Skilled staff can practice gatekeeping and facilitate speedy returns processing • Skilled staff can practice service recovery • Skilled staff can analyse product return data and assess RL performance		performance ***Market-related outcomes*** • Enhance consumer experience, service and communication ***SC outcomes*** • Benefit suppliers	Lamba *et al.* (2020) Le (2023) Meyer *et al.* (2017) Mostert *et al.* (2017) Nel and Badenhorst (2020) Pal (2017) Pranomo *et al.* (2021) Zailani *et al.* (2017) Zhang *et al.* (2023)
OPERATIONAL SUCCESS FACTORS FOR RLM				
SUCCESS FACTORS	**PRACTICES AND REQUIREMENTS**	**ADDRESS RLM BARRIERS**	**ACHIEVE OUTCOMES**	**SOURCES**
Performance management	***Performance management requirements*** • Performance measurement system • RL information systems • Internal integration • Skilled staff and managers ***Performance focus areas*** • Consumers • Service performance and efficiency • Costs and strategic intent • Return policy and process design ***Development and capabilities of appropriate metrics*** • Product return rate, reasons and types • Return cost metrics • Consumer service and efficiency metrics • Capable of measure, track and evaluate • Facilitate cost savings and improvement opportunities • Help understanding the return process • Help with follow up of responsiveness and efficiency ***Performance monitoring, evaluation and improvement*** • Constant monitoring and evaluation for improvements • Use return tracking, consumer feedback and performance audit to monitor RL • Report to senior management • Perform profit and loss analysis • Conduct annual performance evaluation and examination of RL metrics	***Economic barriers*** • Investment • Financial constraint • Financial risks ***Operational barriers*** • Product return • Operational support ***Organisational barriers*** • Management • Strategic planning, policy and control • Functional ***External barriers*** • Consumer behaviour • External risks	***Economic outcomes*** • Cost savings • Improve financial control ***Operational outcomes*** • RL process efficiency • Speedy returns • Reduce fraudulent returns ***Organisational outcomes*** • Organisational and RL improvement • Enhance performance measurement, monitoring and management • Improve internal coordination ***Market-related outcomes*** • Enhance consumer responsiveness • Enhance consumer satisfaction and loyalty	De Araújo *et al.* (2018) Euchi *et al.* (2019) Fox (2023) Frei *et al.* (2020) Jalil (2019) Jenkins (2021) Karlsson *et al.* (2023) Lamba *et al.* (2020) Nel and Badenhorst (2020) Sajjanit and Rompho (2019)
Return avoidance and prevention practices	***General pre-sales return avoidance and prevention*** • *Adequate pre-purchase information* – detailed product descriptions, good photos, videos and accurate size guides • *Marketing measures* – target correct consumer, promotions, online reviews, chatbots, support emails and FAQs • *Logistics efficiency* – improve purchases, reduce picking and delivery errors and use correct packaging • *Quality management* and control ***General post-sales return avoidance and prevention*** • *Establish a gatekeeping function during the return process* • Requires information system and PM • Engage with consumer through home visits • Early crediting and discount negotiations • *Use data sources, feedback and quality improvements* • Use consumers as sources of data	***Economic barriers*** • Investment • Financial constraint • Financial risks ***Operational barriers*** • Product return • Operational support • Operational risk ***Organisational barriers*** • Management • Strategic planning, policy and control • Functional • Organisational risks ***External barriers*** • SC • Consumer behaviour • External risks	***Economic outcomes*** • Cost savings • Increase profitability • Improved financial performance ***Operational outcomes*** • RL process and operational efficiency • Increase RL process speed • Enhance product return visibility • Improve inventory management • Reduce product and fraudulent returns ***Organisational outcomes*** • Improve RL performance and decision making • Improve information management • Improve internal communication, information sharing and collaboration ***Environmental outcomes*** • Decrease pollution • Reduce waste ***Social outcomes***	Ahsan and Rahman (2022) Anderson (2020) Andresen and Istad (2019) Badenhorst (2016) Bozzi *et al.* (2022) Chen *et al.* (2017) Gustafsson *et al.* (2021) Davidavičienė and Al Majzoub (2021) De Araújo *et al.* (2018) Dobson (2023) Eriksson and Käck (2023) Euchi *et al.* (2019) Fox (2023) Frei *et al.* (2020) Hjort *et al.* (2019) Jović *et al.* (2020) Karlsson *et al.* (2023)

	• Listen to consumer feedback • Use data to improve inefficiencies • Product quality control systems and supplier information sharing to improve product quality ***Specialised return avoidance and prevention*** • *Sophisticated IT systems* • Pre-sales shopping assistance through sophisticated web-based systems • RFID to verify the accuracy of the claim • Blockchain confirms authenticity of product and verify return claim • RMS identify returns trends • Sophisticate returns portal to identify return abusers • *Data analytics and analysis* • Statistical algorithms and experience tools for fraud detection • Enables fraud countermeasures • *Adjust return policy* – reduce return time and adapt refund terms • *Human interventions* • Establish a return prevention team • Conduct regular fraud detection training • Involve senior management and share information with other functions		• Improve reputation ***Market-related outcomes*** • Enhance consumer service and experience • Increase consumer satisfaction and loyalty • Improve consumer engagement • Enhance consumer value ***SC outcomes*** • Improve SC information sharing and collaboration	Li *et al.* (2021) Mahindroo *et al.* (2018) Meyer *et al.* (2017) Nel and Badenhorst (2020) Robertson *et al.* (2020) Vlachos (2016) Zhang *et al.* (2017) Zhang *et al.* (2023) Shih *et al.* (2021) Bernon *et al.* 2016
Risk management	***Risk identification*** • Identify all risk that can hamper RLM • Helps to identify risk mitigation strategies ***Risk classification and assessment*** • Group risk for fewer mitigation strategies • Rank and prioritise risk based on highest probability and greatest loss potential • Mitigate highest risk first, then medium and low risks ***Risk mitigation strategies*** • *Proactive risk mitigation* – before risk event • Top management support • Appropriate IT for visibility, tracking, inventory and information security • Return inspection reduce quality risks • Return prevention through improved quality checks and better packaging • Establish risk procedures • Skilled staff • Organisational culture shift to a problem-solving culture • Robust network for efficient returns • SC relationships to share risks, resources and expertise • *Reactive risk mitigation* – after risk event • Return avoidance to reduce return accommodations • RL team to manage risks	***Economic barriers*** • Investment • Financial constraint • Financial risks ***Operational barriers*** • Product return • Operational support • Operational risk ***Organisational barriers*** • Management • Strategic planning, policy and control • Functional • Organisational risks ***External barriers*** • SC • Consumer behaviour • External risks	***Economic outcomes*** • Cost savings • Increase profits • Higher recovery value • Reduce capital expenditure and financial loss ***Operational outcomes*** • RL process efficiency • Enhance product return visibility and tracking • Improve inventory management • Reduce pilferage • Reduce fraudulent and product returns ***Organisational outcomes*** • Improve RL decision making ***Environmental outcomes*** • Improve environmental performance ***Market-related outcomes*** • Increase sales and market share • Increase competitive advantage • Increase consumer service, loyalty and retention ***SC outcomes*** • Improve SC communication and information sharing • Improve SC collaboration	Ermes and Niemann (2023) Frei *et al.* (2020) Misni and Lee (2017) Panjehfouladgaran and Lim (2020) Senthil *et al.* (2018) Starostka-Patryk, (2021)

RELATIONSHIP SUCCESS FACTORS FOR RLM

SUCCESS FACTORS	PRACTICES AND REQUIREMENTS	ADDRESS RLM BARRIERS	ACHIEVE OUTCOMES	SOURCES
Functional relationships for RLM	***Organisational structure*** • Focus on needs of staff, operations and capacities • Adaptability approach with managers acting as facilitators and empower RL staff to self-organise, share information and obtain new knowledge ***Organisational culture*** • Supportive culture to promote functional	***Operational barriers*** • Product return • Operational support • Operational risk ***Organisational barriers*** • Management • Strategic planning, policy and control	***Operational outcomes*** • Improve RL process effectiveness • Increase product return visibility and tracking • Reduce product returns ***Organisational outcomes*** • Improve RL performance • Improve RL planning and control	Ashan and Rahman, (2021) Badenhorst (2017) Davidavičienė and Al Majzoub (2021) Espinosa *et al.* (2021) Karlsson *et al.* (2023)

	relationships and integration • Top management and senior managers must be responsible for a supportive culture ***Functional integration*** • Requires top management commitment • Requires close functional relationships • Increase information visibility and develop cross-functional processes • Share cross-functional goals • Use centralised IT system • Integrate FL and RL functions • Integrate RL, marketing and procurement ***Internal information sharing*** • Use centralised IT and alignment of goals • Use technology like Internet of Things • Use emails, messaging applications and cross-functional meetings	• Functional • Organisational risks ***External barriers*** • SC • External risks	• Improve information management • Improve internal coordination and communication ***Environmental outcomes*** • Increase environmental performance ***Social outcomes*** • Improve corporate image ***Market-related outcomes*** • Enhance consumer satisfaction • Increase consumer convenience • Improve consumer service • Competitive advantage ***SC outcomes*** • Improve SC coordination and communication	Mostert *et al.* (2017) Pal (2017) Phuong (2019) Sajjanit and Rompho (2019) Vlachos (2016) Waqas *et al.* (2018)
SC relationships for RLM	***SC alignment*** • Requires sharing of RLM responsibilities, integrated IT, common return policies and PM, standard procedures, information sharing and joint negotiations ***SC collaboration*** • Requires information sharing, cooperative policies and integrated IT • Establish collaborative partnerships to match resources and RLM capabilities ***SCI*** • RL process involves various SC parties from various geographical regions • SCI requires SC alignment and collaboration • Create contracts that stipulates RL responsibilities • Standardise processes, train staff, conduct meetings, share RL information and product return data exchange through IT ***SC information sharing*** • Important for coordination across the SC • Requires SCI and collaboration • Requires accessible IT for RL information sharing	***Economic barriers*** • Investment • Financial constraint • Financial risks ***Operational barriers*** • Product return • Operational support • Operational risk ***External barriers*** • SC • Consumer behaviour • External risks	***Economic outcomes*** • Cost savings and reduction • Enhance financial performance • Higher economic value recovery ***Operational outcomes*** • Improve operational efficiency and effectiveness • Enhance product return visibility • Enhance RL process speed • Reduce returns ***Organisational outcomes*** • Improve RL performance ***Environmental outcomes*** • Improve environmental performance ***Social outcomes*** • Enhance corporate image ***Market-related outcomes*** • Increase consumer satisfaction ***SC outcomes*** • Improve SC communication and coordination • Enhance SC visibility and performance • Effective SC collaboration and integration	Dapiran and Kam (2017) Badenhorst (2022) Mahadevan (2019) Ahlén and Johansson (2023) Frei *et al.* (2020) Pal (2017) Wang, Wang *et al.* (2021) Ashan and Rahman, (2021) Badenhorst (2017) Mostert *et al.* (2017) Lai *et al.* (2022) Meyer *et al*. (2017) Zhang *et al.* (2023)
Consumer relationships for RLM	***Adopt a consumer-centric approach*** • Offer a differentiated service in RL • Focus on consumer experience and expectations – access, responsiveness, detailed information, transparency, speed returns, flexibility and empathy • Requires function integration • Invest in consumer return service • Establish a consumer support system • Dedicated staff • Maintenance of good consumer relations • Understand consumer behaviours ***Consumer integration and collaboration*** • Align with consumer values and needs • Aid consumers through effective information sharing and communication • Encourage consumer participation ***Consumer information sharing and communication*** • *Pre-purchase* – educate consumers on purchases and use support system with details about the return policy • *Post-purchase* – return policies and procedures clearly available on website,	***Economic barriers*** • Investment • Financial constraint • Financial risks ***Operational barriers*** • Product return • Operational risk ***Organisational barriers*** • Functional ***External barriers*** • SC • Consumer behaviour • External risks	***Economic outcomes*** • Cost reduction • Increase profitability • Increase economic value recovery ***Operational outcomes*** • RL process efficiency • Improve forecasting • Reduce returns ***Organisational outcomes*** • Improve RL performance ***Environmental outcomes*** • Enhance environmental performance ***Social outcomes*** • Enhance corporate • Enhance green image • Enhance reputation ***Market-related outcomes*** • Improve consumer service • Competitive advantage • Meet consumer needs • Enhance consumer satisfaction • Enhance consumer loyalty and retention	Ahlén and Johansson (2023) Ashan and Raham (2021) Bozzi *et al.* (2022) Davidavičienė and Al Majzoub (2021) De Borba *et al.* (2021) Dobson (2023) Eliav (2022) Eriksson and Käck (2023) Fox (2023) Hjort *et al.* (2019) Jalil (2019) Jenkins (2021) Karlsson *et al.* (2023) Lai *et al.* (2022) Lamba *et al.* (2020) Lin and Hsu (2017) Mathu and Khunou (2021) Mostert *et al.* (2017)

	provide instructions about the return process and a return flowchart • *During the return process* • Full transparency during all RL stages • Use various communication channels • Provide prompt professional assistance • Provide time estimates • Notify on pick-up, receipt and refund or exchange • Provide tracking information • *After return process* obtain feedback		• Enhance consumer trust • Enhance consumer experience and convenience ***SC outcomes*** • Improve SC coordination	Nel and Badenhorst (2020) Sajjanit and Rompho (2019) Triani *et al.* (2019) Wang, Dang *et al.* (2021) Zhang *et al.* (2017) Zhang *et al.* (2023)

Source: Compiled by the researcher

Table 2.5 shows that various success factors can be adopted to manage consumer returns. While the success factors involve various requirements, several RLM barriers can be mitigated and various outcomes can be realised. Most success factors can address economic, operational, organisational and external barriers and realise various economic, operational, organisational, environmental, social, market and SC outcomes. Therefore, identifying and adopting success factors can be important for the effective RLM of consumer returns in online retailing.

In the next section, an overview of the current knowledge and gaps in RL literature is provided.

2.6 CURRENT KNOWLEDGE AND GAPS IN RL LITERATURE

From the literature study, several observations can be made regarding the current body of knowledge and the gaps in research. Firstly, the literature contains various definitions of RL, some more narrow while others are more comprehensive in scope. However, the literature lacks definitions for the concept of RLM and important elements related to consumer satisfaction and service (see section 2.2).

Secondly, the literature identified several barriers to the adoption and implementation of RLM, especially economic, operational, organisational and external barriers (section 2.3). However, the literature lacks adequate discussion/cover of economic, operational, organisational and external risks that can hamper effective RLM. Additionally, more literature can be directed towards consumer behaviour as an RLM barrier in online retailing.

Thirdly, the literature identified various drivers and reasons that represent the significance of RLM, including economic, legislative, competitive, corporate citizenship and environmental drivers (section 2.4). However, more literature is needed to identify the impact of circular economic principles and the 4th industrial revolution in adopting RLM. Furthermore, the literature lacks economic, legislative, competitive, corporate citizenship and environmental issues from a South African perspective.

Finally, the literature identified several RLM practices and strategies that may help with effective RLM but lacks a comprehensive analysis of addressing RLM barriers and realising ways to achieve successful RLM (section 2.5). Additionally, the literature paid considerable attention to return policy design, implementation of appropriate return processes, IT resources, performance management, general return avoidance practices and SC relationships. However, limited literature identified and covered the implementation of strategic management, specialised return avoidance, risk management, internal relationship management and consumer relationships.

While RL literature contains comprehensive overviews of barriers, drivers and practices (success factors), it lacks focus on the barriers, drivers and success factors for the RLM of 'consumer returns in online retailing'. Therefore, this study contributes to the gaps in the literature by examining consumer returns, processes and practices for the effective RLM of consumer returns in online retailing.

In the next section, the conclusion of this chapter is provided.

2.7 CONCLUSION

This chapter addressed the first secondary research objective of this study, which was ***to examine RLM and determine the factors that influence RLM implementation and success (SRO-1).*** The objective was achieved through a literature study aimed at (1) conceptualising RLM, (2) providing a theoretical overview of RLM, (3) exploring the definitions of RL, (4) identifying the barriers to effective RLM and implementation, (5) understanding the significance of RLM adoption, and (6) identifying the success factors and outcomes of effective RLM. Additionally, the findings in this chapter contributed to the primary objective of the study, which was to *develop a framework for the effective RLM of consumer returns in online retailing*.

This chapter started with the introduction (section 2.1), which was followed by an overview of the various definitions of RL (section 2.2), whereafter the barriers in RLM (section 2.3), significance of RLM (section 2.4) and the success factors for effective RLM (section 2.5) were explored and discussed. The chapter concluded with an overview of current knowledge and gaps in RL literature (section 2.6). The overview of the *RL definitions* included (1) a table to provide various definitions of RL from various authors/scholars that ranged from general to specific, (2) a data matrix table to explore definition elements that occur in two or more RL definitions, (3) an analysis of the definition elements to provide a general and an extensive definition for RL, and (4) a final definition of RL with a focus on the effective RLM of consumer returns.

The *barriers in RLM* involved internal and external barriers, problems and risks that hampers effective RL implementation and management. From the literature study the barriers were classified and identified as the (1) economic barriers of investment, financial constraints and risks, (2) operational barriers of product returns, operational support and operational risks, (3) organisational barriers of management, strategy, policy and control, function and organisational risks, and (4) external barriers of SC, consumer behaviour, external support and external risks.

The *significance of RLM* involved a broad overview of the importance of RLM, and the expected benefits associated with RLM adoption, serving as a starting point to address RLM barriers. The significance of RLM was classified as (1) economic significance, (2) competitive significance, (3) social significance, (4) legal significance, and (5) environmental significance.

The *success factors of effective RLM* involved various practices and requirements that online retailers could implement to address the barriers in RLM, confirm the significance and benefits of RLM adoption, and realise various outcomes associated with effective RLM. The success factors for effective RLM were classified as the (1) strategic success factors of strategic importance and commitment to RLM, strategic implementation of RLM, and strategies and systems for RLM, (2) design success factors of return policy, return process and RL network design for RLM, (3) resource success factors of resource commitment and investment, IT resources and human resource development for RLM, (4) operational success factors of performance management, return avoidance and prevention, and risk management for RLM, and (5) relation success factors of functional, SC and consumer relationships for RLM.

Finally, the current and knowledge and gaps in RL literature were identified, focusing on RL definitions, barriers in RLM, significance of RLM and success factors for effective RLM. Essentially, it was identified that this study contributes the lack of literature on the RLM of consumer returns in online retailing.

In the next chapter (chapter 3), the research methodology for the qualitative content analysis (QCA) of RL literature will be provided.

Chapter 3 - Qualitative research design of the study and research methodology of qualitative content analysis (QCA)

3.1 INTRODUCTION

This chapter was divided into two parts, with the first part focusing on the overall qualitative research design of this study, and the second part focusing on the qualitative content analysis (hereafter QCA) of RL literature. Specifically, in the first part an overview and justification of the qualitative research design of this study will be given in terms of justifying qualitative research designs, challenges in qualitative research, research paradigm and assumptions, research approaches to theory development and multimethod qualitative research. Additionally, in the second part the methodology and application of the QCA of RL literature will be discussed in terms of an overview, characteristics, phases and trustworthiness of QCA. The third part of the research methodology of this study will be given in chapter 7, focusing on the research methodology for the interviews with industry experts.

Figure 3.1 outlines the main sections of chapter 3, which includes (1) the introduction (section 3.1), (2) the qualitative research design of this study (section **Error! Reference source not found.**), (3) the QCA of RL literature (section 3.3), and (4) the conclusion (section **Error! Reference source not found.**).

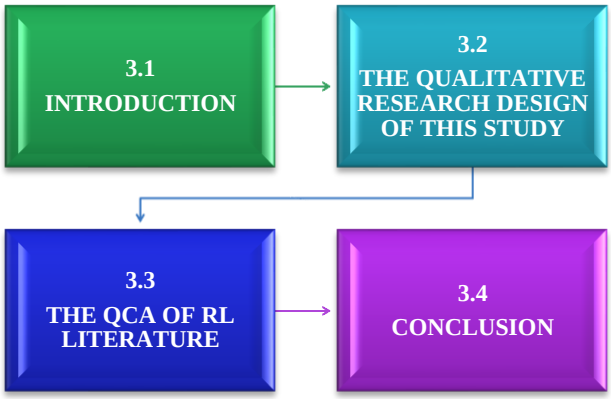


Figure 3.1 Overview of chapter 3
Source: Compiled by the researcher

Following Figure 3.1, the subsequent sections provide an overview and justification for a qualitative research design, the methodology and application for the QCA of RL literature and the conclusion for this chapter.

3.2 THE QUALITATIVE RESEARCH DESIGN OF THIS STUDY

The focus of this section is to provide an overview and justification of the qualitative research design adopted in this study. Figure 1.4 demonstrated the research design onion of this study, which showed the paradigm, approaches and methodological choice of this study, which will be the focus of this section. The specific research methods, data collection and data analysis techniques of this study will be discussed separately in section 3.3 (QCA method) and chapter 7 (interview method). Chapter 1 and 2 provided the methodology and findings of the literature study as one of the methods adopted to answer the research question.

This section starts with justifying qualitative research, followed by an overview of the challenges in qualitative research. Thereafter, an overview will be provided of the research paradigm and related assumptions of this study, followed by the research approaches adopted in this study for theory development. Finally, this section concludes with an overview and justification of adopting multimethod qualitative research as the methodological choice of this study.

3.2.1 Justifying qualitative research

Qualitative research designs progressed significantly through scientifically defensible theory, sampling strategies and analytical strategies (Trotter, 2012:398). Qualitative research can be characterised by a set of distinguishing features that sets it apart from quantitative research (Klenke, 2016a:8). While qualitative and quantitative research cannot be regarded as exact opposites, the two genres can be distinguished in terms of philosophical and research approaches, sampling and data collection methods and data analysis (Tarab, 2019:4). Consequently, to emphasise the value of qualitative research, a distinction between qualitative and quantitative research can be important. In the following sections, motivations for selecting qualitative research over quantitative research will be briefly described, followed by a justification of qualitative research in the field of business management and organisational practices.

3.2.1.1 Motivation for qualitative over quantitative research in philosophical perspectives

In a quantitative research design a positivist and objectivist epistemological perspective is followed, while in a qualitative research design a subjective ontology with an interpretivist approach is followed (Gupta & Awasthy, 2021:5; O'Gorman & MacIntosh 2015:59). While positivists aim at measuring social phenomena, interpretivists aim at exploring and understanding social phenomena (Collis & Hussey, 2021:41). Consequently, positivists adopt quantitative research methods, utilising questionnaires and demographics to produce statistical analysis, which contrasts interpretivists' adoption of qualitative research methods, seeking answers through interviews, observations and

documents (Tarab, 2019:4). Evidently, qualitative paradigms operate under different assumptions about ontology, epistemology, methodology, and axiology (see section 3.2.3), which require new ways of conceptualising the research process (Klenke, 2016a:18).

The specific research methods of qualitative inquiry reflect an underlying philosophy of science with the posture of "not knowing", underpinning the belief that social reality can only be subjective, which contrasts the traditional positivist belief in an objective reality that can only be understood through detached scientific inquiry (Collis & Hussey, 2021:40-41; Klenke, 2016a:13). Unlike quantitative researchers who perform statistical tests of prediction and control associated with a positivist approach, qualitative researchers seek a deeper understanding of the phenomenon (or topic) under investigation through thick descriptions (Klenke, 2016a:29). In other words, the interpretive perspective of qualitative researchers relates to understanding the way individuals experience and interact with their social world, and its meaning to them (Merriam & Grenier, 2019:4).

The key to understanding the value of qualitative research lies with the research philosophy, which specifies that meaning can be socially constructed by individuals interacting with their world, and not be based on the positivist approach of a fixed, single, agreed upon or measurable phenomenon in quantitative research (Merriam & Grenier, 2019:3). Consequently, qualitative research involves the core assumption that social reality is constructed, and that subjective meaning is a critical component of knowledge-building (Hesse-Biber *et al.* 2015:4).

Nevertheless, under the increasing use of multiparadigm, multimethod research, it can be counterproductive to view all qualitative methodologies under a single interpretive paradigm (Morgan, 2017:17; Klenke, 2016a:27). Therefore, this study adopted pragmatism as a research philosophy that contain some elements of interpretivism and minor elements of positivism. The research paradigm and assumptions will be discussed in section 3.2.3.

3.2.1.2 Motivation for qualitative over quantitative research in researcher roles

The orientation of qualitative researchers contrasts sharply with that of quantitative researchers on many dimensions (Suter, 2012:343), including active versus passive roles in research, engagement with data collection methods and approaches to data analysis and findings.

Specifically, a qualitative *researcher's role* can be different from a quantitative researcher in terms of focusing on an in-depth and comprehensive understanding of qualitative findings and playing an active role in the research process (Schutt & Chambliss, 2014:324). Evidently, a qualitative researcher can be an "instrument" or "tool" in data collection and analysis processes (Merriam & Grenier, 2019:5; Salkind, 2010:1160; Schutt & Chambliss, 2014:324). Instead of treating the

researcher as an invisible other, like in quantitative research, a qualitative researcher's individual standpoint and impact on research can be an integral part of the qualitative research process (Eaken & Gladstone, 2020:4; Klenke, 2016a:11). Qualitative researchers consistently interpret and re-interpret data, attempting new and provisional conceptual frameworks and explanatory frameworks, revisiting data collection strategies and even adapting research questions throughout the course of their research (Eaken & Gladstone, 2020:4). This characterisation acknowledges that qualitative researchers bring their experiences, values, insights, knowledge and identities to research by filtering all interpretations and observations (Eaken & Gladstone, 2020:4; Salkind, 2010:1160).

Contrastingly, a quantitative researcher can be described as a neutral instrument whose personal characteristics cannot significantly shape the responses of research respondents (Klenke, 2016a:11). Quantitative researchers focus on validity through strict adherence to research protocols and interpret results based on predetermined numeric criteria (Eaken & Gladstone, 2020:4). Consequently, a quantitative researcher can be described as a dispassionate (passive) investigator of relations among discrete variables (Schutt & Chambliss, 2014:324), seeking causal determination, prediction and generalisation of findings (Klenke, 2016a:8). Evidently, in quantitative research a researcher's presence must be minimised and neutralised (Morgan, 2017:19; Salkind, 2010:1161).

In terms of *data collection* processes, qualitative researchers can (1) expand their understanding through nonverbal and verbal communication, (2) process data immediately, (3) clarify and summarise material, (4) check with participants for accuracy of interpretation, and (5) explore unusual or unanticipated responses (Merriam & Grenier, 2019:5). Therefore, qualitative methods bring researchers closer to their informants, eliminating the need to rely on more remote, inferential (statistical) empirical materials (Klenke, 2016a:11). The qualitative researcher as a human instrument can not only adjust data collection processes but also simultaneously analyse the data, which may provide a more robust analysis and understanding of a phenomenon (Merriam & Grenier, 2019:5).

Consequently, qualitative and quantitative researchers can be different in their approaches to *data analysis*. Unlike quantitative researchers who perform statistical tests of prediction and control, qualitative researchers strive for deep understanding of a phenomenon through thick description (Klenke, 2016a:29), which requires creativity in analysis (Suter, 2012:343). For instance, qualitative researchers must record data through a variety of methods (interviews, observations, notes and documents), code and categorise data, identify themes or main categories, link and combine (or integrate) abstract concepts, create theory from generated themes, and produce an understanding of findings (Suter, 2012:348). Therefore, qualitative researchers focus on descriptions and analysis of words instead of numbers and quantification of data in analysis (Tarab, 2019:3).

Essentially, a qualitative researcher focuses on (1) meanings instead of on quantifiable phenomena, (2) a collection of limited cases/data instead of many cases/data, and (3) rich descriptions of the world rather than measurement of specific variables (Schutt & Chambliss, 2014:324). The practical approach of this study (e.g. determining RL processes, RL practices and RLM factors of consumer returns that informs online retailers) warrants a qualitative researcher who actively engages in the research process through qualitative data collection and analysis, which will be further motivated in the subsequent discussions.

3.2.1.3 Motivation for qualitative over quantitative research in research approaches and designs

Qualitative approaches are increasingly recognised as appropriate for exploring new questions beyond methodological and theoretical traditions of quantitative research approaches (Salmons, 2015:545). Quantitative research designs and approaches can be classified as fixed and predetermined, ensuring that mathematical assumptions underlying statistical tests can be realised (Salkind, 2010:1160). Consequently, quantitative research can be viewed as deductive, objective and general in nature, focusing on numbers and generalisation (Morgan, 2017:18), lacking flexibility and in-depth understanding of phenomena (Tarab, 2019:5).

While qualitative research can involve deductive approaches, qualitative research follows mostly inductive approaches for deeper understanding and exploration (Tarab, 2019:4). Consequently, qualitative designs can be classified as emergent and flexible, often resting on inductive approaches for knowledge creation (Morgan, 2017:18; Salkind, 2010:1160) through in-depth examinations of specific people in specific situations (Morgan, 2017:20). The inductive characteristic of qualitative research designs associates with building concepts, hypotheses or theory, rather than deductively deriving at hypotheses tested in quantitative research (Merriam & Grenier, 2019:6; Morgan, 2017:17). In other words, qualitatively driven approaches tend to be more open to exploratory research and theory generation because a researcher's goal can be to generate a hypothesis, not to test one (Hesse-Biber *et al.* 2015:6; Suter, 2012:353). Additionally, the aims of inductive approaches entail (1) condensing raw textual data into a summary of findings format, (2) establishing distinct links between the research questions and summary of findings, and (3) developing a conceptual framework from the summary of findings (Gupta & Awasthy, 2021:20).

Contrasting rigid quantitative research designs, qualitative research designs involve flexibility in data collection and analysis, which affords researchers with opportunities to pursue new paths of discovery throughout the research process (Gupta & Awasthy, 2021:20). Additionally, well-designed qualitative research contributes to science by a logical chain of reasoning, ruling out rival hypotheses

with convincing arguments and solid data (Suter, 2012:345). Nevertheless, qualitative research can build upon theory, existing knowledge and theoretical frameworks, allowing the researcher to extend existing knowledge with new knowledge (Gupta & Awasthy, 2021:21).

Therefore, a qualitative research design was appropriate for this study because it (1) started with a QCA of RL literature that involved exploring RL literature, identifying consumer return, RL process and RL practice categories and developing conceptual frameworks, (2) continued with empirical research that involved interviewing industry experts in RL, exploring raw interview data, discovering new RL practices and RLM factors and developing new frameworks from interview findings, and (3) concluded with a final framework for effective RLM derived from literature, QCA of RL literature and the interviews with industry experts. Section 3.2.4 discusses the research approaches adopted for theory development in the study.

3.2.1.4 Motivation for qualitative over quantitative research in sampling procedures and data collection

As mentioned in section 3.2.1.2, qualitative and quantitative researchers differ in their approaches in data collection, which also applies to sampling strategies (Salkind, 2010:1161). Evidently, the strategies, logics, and purposes of sampling clearly differentiate qualitative and quantitative methods (Cardano, 2020:30).

Particularly, quantitative research involves probability sampling designs, including simple random sampling, systematic sampling, stratified sampling, clustered sampling, and multistage clustered and stratified sampling (Salkind, 2010:923). These sampling designs are pre-planned in detail prior to data collection procedures (Cardano, 2020:16) and estimated mathematically based on preselected parameters and objectives (Salkind, 2010:923). Additionally, quantitative research requires large sample sizes (to reduce sampling errors) and statistical analyses (such as factor analysis or linear structural equation modelling techniques) to generalise results (Klenke, 2016a:9; Shaheen, Pradhan & Ranajee, 2019:26). Consequently, the large sample requirements of quantitative research can cause questions about reliability for effective generalisations across a population (Collis & Hussey, 2021:46; Tarab, 2019:5).

In contrast, qualitative research involves in-depth studies instead of wider populations or samples, typical of quantitative research (Cardano, 2020:30). Additionally, unlike probability sampling techniques in quantitative research, qualitative research involves non-probability sampling techniques, including convenience sampling, purposive sampling, quota sampling and snowball sampling (Saunders *et al.* 2019:317; Trotter, 2012:399). With non-probability sampling techniques,

the researcher intentionally selects participants who can contribute an in-depth, information-rich understanding of the phenomenon under investigation (Klenke, 2016a:9; Merriam & Grenier, 2019:13; Salkind, 2010:1161). Furthermore, contrasting quantitative research, qualitative research excludes stringent requirements about sample size (Shaheen *et al.* 2019:26). Evidently, large, random, representative samples are rarely the goal of qualitative research (Salkind, 2010:1161), making sample size less significant in qualitative research than in quantitative research (Collis & Hussey, 2021:46; Klenke, 2016a:9).

Qualitative research can be beneficial through in-depth interviewing, which enables a researcher to pursue new topics that emerged from conversations with participants (Morgan, 2017:24). Consequently, at the core of qualitative research, participants' voices and perspectives can be significant, giving a researcher the opportunity to learn from others' experiences and expertise (Klenke, 2016a:10; Morgan, 2017:24). Predominantly, participants with expertise in a particular field (such as RLM in online retailing) share their experiences with the researcher (e.g. during interviews), knowing that the researcher accepts and respects their knowledge as a valuable contribution to the topic or field of study (Klenke, 2016a:10).

Essentially, participants receive the opportunity to reveal their perspectives and express themselves in their own words without the researcher imposing any predetermined concepts or opinions on them (Azungah, 2018:384; Cardano, 2020:36). This openness permits a more accurate representation of the phenomena studied (Cardano, 2020:36), which can be important in this study to investigate RLM based on input from industry experts. Additionally, to infer statistics from a random probable sample to answer quantitative questions, like "how much?" or "how often?" (Merriam & Grenier, 2019:13; Salkind, 2010:925), falls outside the aim of this study. Therefore, the nonprobability sampling techniques associated with qualitative research can be more appropriate for an in-depth understanding into RL processes, RL practices and important RLM factors for the effective management of consumer returns (see sections 1.2 and 1.3).

3.2.1.5 Motivation for qualitative over quantitative research in data analysis and findings

As mentioned in section 3.2.1.3, qualitative research contrasts quantitative research in terms of inductive approaches to research designs. Consequently, qualitative data analysis mostly follows inductive approaches to data analysis that explicit theories, contrasting, strictly deductive approaches in quantitative data analysis that test specific hypothesis or theories (Suter, 2012:346). The exploration of data can be flexible and multifaceted, allowing qualitative researchers to be open to new concepts and develop hypotheses and theories without predefined and known variables associated with quantitative data analysis (Gupta & Awasthy, 2021:16; Suter, 2012:351). Evidently,

findings can be inductively derived from qualitative data (e.g. interviews and literature) in the form of themes, categories, typologies, concepts, tentative hypotheses, or even a substantive theory (Merriam & Grenier, 2019:6).

Qualitative data analysis often starts in the data collection phase and can be less linear than quantitative analysis (Gupta & Awasthy, 2021:5; Suter, 2012:352). Instead, qualitative data analysis can be described as iterative, which entails back-and-forth movement between raw data (such as interview transcripts), categories, codes and explanations (Suter, 2012:351; Terry & Hayfield, 2020:434). Throughout the research project, qualitative researchers often develop the analysis through experience-driven strategies and reflexivity to contextualise meanings (Eaken & Gladstone, 2020:5), which encourages generation of conceptual categories and themes (Gupta & Awasthy, 2021:17; Suter, 2012:346). Instead of focussing on numbers to arrive at a p value, qualitative data analysists find themes, identify meaningful patterns, and write creatively about their discoveries (Eaken & Gladstone, 2020:4; Suter, 2012:362). Therefore, the findings of qualitative data analysis typically focus on generating theory from identified patterns, which contrasts the testing of theory through statistical relationships in quantitative data analysis (Gupta & Awasthy, 2021:16; Morgan, 2017:18-19; Suter, 2012:351).

As mentioned in sections 3.2.1.2 and 3.2.1.3, qualitative researchers and participants play more active roles in qualitative research. Likewise, in qualitative research the presentation of findings involves a combination of the researcher's voice and participants' voices (Cardano, 2020:31). The participants' voices enter the text principally through quotations chosen by the researcher from empirical material, like interview transcripts and other documents collected (Cardano, 2020:31; Merriam & Grenier, 2019:6). Most importantly, combining the voices of the researcher and participants provide readers with the evidence of findings and soundness of proposed interpretations (Cardano, 2020:31; Merriam & Grenier, 2019:6).

Essentially, qualitative data analysis can be appropriate for this study, because it seeks to understand a phenomenon from the participants' (e.g. industry experts') perspectives and provide rich descriptions, new perspectives and useful insights from qualitative data, like literature and interview data (Merriam & Grenier, 2019:6; Suter, 2012:352). Additionally, the researcher can generate new knowledge about RLM in online retailing by reconceptualising known practices, reconfiguring known beliefs, and understanding (Eaken & Gladstone, 2020:12) about efficient and effective RLM in online retailing.

Derived from Hesse-Biber *et al.* (2015:4) and Leedy and Ormrod (2021:113), Table 3.**1** summarises the differences between qualitative research and quantitative research in terms of philosophical

approaches, research goals, research questions and problem statements, nature of research process, data collection, data analysis and presentation of findings/results.

Table 3.1 Differences between qualitative research and quantitative research

Element	Qualitative research designs	Quantitative research designs
Philosophical approaches	• Interpretivism and constructivism • Idealism • Subjective view • Social reality is multiple • Individuals are experts • Through intersubjectivity human behaviour can be studies • No definitive subject–object split in knowledge-building	• Positivism • Realism • Objective view • The social world is concrete • Scientists are the experts • Goal is to ascertain "the truth" to predict and uncover "laws" of human behaviour through objective social inquiry
Research goals	• To understand a phenomenon • To describe, explain, explore and interpret • To build theories	• To generalise, predict, control and validate • To test theory
Research questions and problem statements	• Focus on answering what, how and why questions	• Statement of relationship between independent and dependent variable • Question phrased in terms of a hypothesis • Answering how much or how often questions
Nature of research process	• Holistic with flexible guidelines • Unknown variables • Emergent methods • Bound by context • Personal view important	• Focused with established guidelines • Known variables • Pre-planned methods • Context-free • Detached view important
Data collection	• Textual or image-based data • Small and informative samples • Non-standardised instruments • Naturalistic setting: participant observation (fieldwork) • In-depth interviews • Focus groups • Unobtrusive data: Documents • Researcher acts as an instrument	• Numerical data • Representative and large samples • Standardised instruments • Experiments: randomised controlled trials • Surveys • Systematic reviews/meta-analyses • Researcher is passive, using questionnaire, tests and scales as instruments
Data analysis	• Inductive for theory generation • Analysis can be subjective and potentially biased • Search for general themes/patterns in the data • Uses thick descriptions • Compares and contrasts thematic data • Examples: grounded theory, narrative analysis, thematic analysis	• Deductive for hypothesis/theory testing • Objectivity important in analysis • Explain variation in the independent variables by controlling the dependent variables • Focus on statistical measurement • Examples: factor analysis, t-tests and inferences
Presentation of findings/results	• Use words • Narratives and participant quotations • Visual illustrations and nonnumerical graphs • Literarily style with personal voice (in some disciplines)	• Use numbers • Statics and aggregated data • Illustrate through graphs • Scientific style with formal voice

Source: Adapted by researcher from Hesse-Biber *et al.* (2015:4) and Leedy and Ormrod (2021:113)

In the next section, the final justification for qualitative research in business management and organisational practices will be provided.

3.2.1.6 Justifying qualitative research in business management and organisational practices

According to Myers (2013:13), qualitative research may be the best way for research in business management to simultaneously become rigorous and relevant. Qualitative research can be valuable in examining various organisational subjects, including marketing, information systems, strategies, finance and international business (Gupta & Awasthy, 2021:14). Evidently, qualitative research provides several advantages for business and management practices (Boodhoo & Purmessur, 2009:6).

Ciesielska and Jemielniak (2018:2) claims that certain questions in organisational research cannot be answered through quantitative research. Qualitative research provides a more realistic view of the business world that cannot be understood in numerical data and statistical analysis of quantitative research (Boodhoo & Purmessur, 2009:6). Consequently, qualitative research can be important in providing organisations or managers with different and new perspectives, which cannot be realised through quantitative research (Lanka *et al.* 2021:2).

An in-depth qualitative study must look at the complexity of organisations and often unquantifiable issues in organisations (Myers, 2013:13). The contribution of qualitative methodologies can be fundamental to inform practice and provide knowledge to organisational decision makers (i.e. managers and directors) (Guercini, 2014:670; Lanka *et al.* 2021:3). Evidently, qualitative research allows a researcher to see and understand the context within which decisions and actions take place in an organisational setting (Myers, 2013:5).

Although qualitative research remains under-represented in management studies, it can be essential in providing alternative perspectives and new knowledge (Lanka *et al.* 2021:4). Qualitative methods can be useful for unravelling and understanding what lies behind a little-known phenomenon (O'Gorman & MacIntosh 2015:66), enriching knowledge and understanding of effective management practices (Lanka *et al.* 2021:1). Therefore, qualitative research can be important in the context of organisations, enabling the researcher to provide organisations and managers with new insights into effective organisational practices (Tarab, 2019:17). Consequently, this study can bring value by addressing the under-representation of qualitative research in the field of RL management (RLM), providing online retailers with new knowledge about the effective management of consumer returns.

Essentially, qualitative research can be suitable for studying new topics (e.g. RLM in online retailing) in depth through exploratory research, addressing gaps in the research field (Myers, 2013:9), opening novel areas of research and enabling opportunities to generate new theories (Tarab, 2019:18). Because of limited research in South Africa on the topic of RLM in online retailing (see section 1.8), a qualitative research design can be valuable for exploring, understanding and determining consumer returns, RL processes, RL practices and important factors for the effective RLM of consumer returns in online retailing, addressing gaps in literature and practice.

Despite the importance and value of qualitative research, understanding common challenges in qualitative research before adopting a qualitative research design can be important. Consequently, the next section provides and overview of the challenges in qualitative research.

3.2.2 Challenges in qualitative research

Although the use of qualitative research was comprehensively motivated, certain challenges in qualitative research should be noted and addressed. These challenges in qualitative research relate to time, amount of data, budget, data collection and sampling, data analysis and interpretations, and the rigour of findings.

Qualitative research can be *time-consuming* (Glinka & Hensel, 2018:245) since qualitative researchers tend to collect a large amount of data (despite smaller sample sizes), which makes managing the *volume of data* challenging (Leedy & Ormrod, 2021:259; Myers, 2013:120). This overwhelming aspect of qualitative research could lead researchers, living in the real world, subjected to time and *budget constraints* (Roller, 2016:9; Tarab, 2019:16). Evidently, it may be a daunting task for qualitative researchers to take enormous amounts of data, in the form of interview transcripts or detailed field notes and communicate the findings in a credible way (Suter, 2012:364; Shaheen *et al.* 2019:38).

Additionally, qualitative *data collection* procedures often lack uniformity and largely depends on the researcher's creativity (Cardano, 2020:37). Coupled with a lack of uniformity in data collection, novice qualitative researchers often lack knowledge about the range of available qualitative research methods and appropriate application of these methods (Lanka *et al.* 2021:1). Nevertheless, a lack of uniformity can be regarded as context-sensitivity, which guarantees special accuracy of qualitative research (Cardano, 2020:38). In other words, the qualitative researchers can adapt data collection procedures to fit the aim of their studies, instead of relying on strictly prescribed quantitative data collection approaches (see section 3.2.1).

In terms of *sampling*, the most encountered problem in qualitative research associates with nonprobability samples, which varies by the nature of research questions and type of data collected (Salkind, 2010:923). Qualitative researchers must evaluate the most appropriate sampling technique(s), consider the protentional impact of the sampling technique(s) on their research and explicitly explain potential shortcomings of the selected sampling technique(s) (Shaheen *et al.* 2019:39), which can be less important in quantitative research that relies on mathematical estimations (Salkind, 2010:923). Furthermore, unlike quantitative research, characterised by large sample sizes, it can be difficult in qualitative research to generalise findings to a population (Myers, 2013:9), which may lead to questions about the reliability of outcomes (Tarab, 2019:4). Additionally, it can be challenging to determine sample size in qualitative research, as it relies on the notion of saturation, or the point that no new information can be obtained from the data (Salkind, 2010:924). Consequently, qualitative researchers need to identify the point of informational redundancy in data collection where

further data adds nothing new to the study (Gentles *et al*. 2015:1781; Klenke, 2016a:9; Saunders *et al.* 2019:315) (also see section 7.3.4.4.3).

Due to the complexity of qualitative research, the *analysis* of qualitative data can be problematic (Roller, 2016:9). In fact, qualitative data analysis can be far more challenging, time-consuming and creative than quantitative data analysis (Salkind, 2021:168; Suter, 2012:352). Subsequently, the more in-depth the data, the more challenging and time-intensive it can be to analyse (Forman & Damschroder, 2008:44). Furthermore, qualitative researchers face the analytic challenge to reduce data, code data, identify categories, develop themes and offer meaningful conclusions (Suter, 2012:353).

Additionally, like the lack of uniformity in qualitative data collection, qualitative research lacks a prescribed formula or procedures for conducting qualitative data analysis (Eakin & Gladstone, 2020:3). Therefore, the interpretation of qualitative data depends on the background and creativity of the researcher far more than the interpretation of quantitative data (Suter, 2012:364). Inexperienced qualitative researchers often fail to venture beyond surface-level meanings and pre-established conceptual frameworks, which hampers their ability to provide creative analyses and interpretations (Eakin & Gladstone, 2020:2). Essentially, the analysis process in qualitative research requires synthesis, creative insight and careful documentation of processes to enhance credibility of findings (Suter, 2012:353).

However, the concepts of reliability and validity in qualitative research can be less consistent than quantitative research (Suter, 2012:364), which poses significant challenges in terms of *rigour* and credibility of findings (Tarab, 2019:16). Additionally, the nature of qualitative research (in terms of time and large volumes of data) may lead researchers to succumb to a less-than-rigorous analytical process (Roller, 2016:9). Therefore, qualitative researchers must establish rigorous processes to manage the trustworthiness of their studies, while maintaining data confidentiality (Tarab, 2019:16).

Due to smaller sample sizes, the lack of generalisability in qualitative research excludes the statistical power of measuring reliability and validity in quantitative research (Cardano, 2020:37). Additionally, reliability and generalisability in qualitative research rely strongly on the information provided by participants (Shaheen *et al.* 2019:26). Moreover, replication can be difficult to achieve in qualitative methods, mainly because concepts can be tied to a researcher's point of view (Abdalla *et al.* 2018:17). Consequently, these mentioned challenges (or weaknesses) in qualitative research can be synthesised with an unappealable accusation of a lack of rigour (Cardano, 2020:37). Nevertheless, qualitative research cannot be subjected to the same criteria (reliability and validity) as quantitative

research since other criteria (related to trustworthiness) can be applied to demonstrate rigour (Braun & Clarke 2006:95).

Despite these abovementioned challenges in qualitative research, the justification of qualitative research over quantitative research, provides sufficient motivation for selecting a qualitative design in this study. Additionally, several strategies were implemented to counteract the identified challenges in qualitative research. Section 3.3. and chapter 7 provide more details of the strategies and processes adopted for effective qualitative data collection, sampling, analysis and trustworthiness.

In the next section, the research paradigm and philosophical position of this study is discussed.

3.2.3 Research paradigm and assumptions of this study

All research projects are based on some philosophical assumptions about the nature of the world and knowledge that can be obtained about the world (King & Brooks 2019:4; Myers, 2013:24). A paradigm involves the practice of science through various traditions, ideas, methods and concepts (Ciesielska & Jemielniak, 2018:9). Additionally, a research paradigm can be defined as a philosophical framework that guides the way scientific research must be conducted (Collis & Hussey, 2021:39), involving a pattern, model, plan (Klenke, 2016a:11) or theoretical framework (O'Gorman & MacIntosh 2015:54). Subsequently, a research paradigm can be important because it guides the research effort towards effective execution of a scientific research study (Ciesielska & Jemielniak, 2018:9).

According to Klenke (2016a:13) it can be impossible to conduct rigorous research without understanding its philosophical underpinnings. Furthermore, the purpose of setting out a research philosophy can be to help others understand a researcher's findings and the basis on which such claims were made (O'Gorman & MacIntosh, 2015:52). Qualitative researchers must especially be transparent about their paradigmatic assumptions and positions (Klenke, 2016a:18) and demonstrate a conscientious selection and defence of the most suitable philosophical approach (O'Gorman & MacIntosh 2015:52).

Although interpretivism mostly associate with qualitative research designs (see section 3.2.1.1), utilising multimethod qualitative research can be more suitable to a pragmatic research philosophy, which will be described in section 3.2.3.2. Regardless of the research approach, a researcher's philosophical assumptions about ontology, epistemology, methodology, and axiology can be critical in framing the research process (Klenke, 2016a:13-14), which will be discussed in the next section.

3.2.3.1 Philosophical assumptions in research

The philosophical assumptions of any research involve ontology, epistemology, methodology and axiology, which require careful consideration and justification by a qualitative researcher (Klenke, 2016a:13-14). The subsequent sections provide a description of each assumption and the associated beliefs from the main two paradigms, including positivism and interpretivism, as well as pragmatism as the adopted research paradigm in this study. This section will be concluded with a summary table comparing the philosophical assumptions of positivism, interpretivism and pragmatism.

3.2.3.1.1 Ontology assumption

According to Klenke (2016a:15) the first paradigmatic question is about *ontology*, which asks: "what is the nature of reality?". Ontological questions interrogate fundamental ideas about what is real (Salkind, 2010:1159), thus, ontology is the study of reality (O'Gorman & MacIntosh 2015:55; Salkind, 2010:1159) and the problem of existence (Ciesielska & Jemielniak, 2018:10). A philosophical question about reality affects the way research can be conducted (Gupta & Awasthy, 2021:4; Klenke, 2016a:15). Despite the importance of ontological questions, the term is rarely used beyond academic institutions as it may be difficult to describe (O'Gorman & MacIntosh 2015:55).

Ontological assumptions can be broadly divided into objective and subjective configurations (O'Gorman & MacIntosh 2015:56). Particularly, positivists view reality as objective and separate from the researcher, involving one reality and interpretivists view reality as subjective because it is socially constructed (Collen & Hussey, 2021:43). An *objective* perspective to ontology, follows a quantitative approach that views reality as solid objects that can be measured and tested, verifying relationships between variables (Lanka *et al.* 2021:3; O'Gorman & MacIntosh 2015:56). This perspective can be described as realism, in which something exists objectively and independently from the human mind (Ciesielska & Jemielniak, 2018:11). Therefore, an objective ontology assumes that reality exists independently from the researcher, and that it can be possible to establish and explain universal principles and facts through robust and replicable methods (O'Gorman & MacIntosh 2015:57).

In contrast, a *subjective ontology* looks at reality as made up of the perceptions and interactions of living subjects (O'Gorman & MacIntosh 2015:56). Unlike the realism of objective ontology, subjective ontology entails idealism, in which the world only consists of concepts, meanings and the terms created by humans to describe reality (Ciesielska & Jemielniak, 2018:11). Additionally, idealism reflects the aims of understanding subjective experiences of individuals in qualitative research (Lanka *et al.* 2021:3). A subjective ontology sees facts as culturally and historically located

and subject to various behaviours, attitudes, experiences and interpretations, associating with the subjectivity of the observer and the observed (O'Gorman & MacIntosh 2015:57). Subsequently, qualitative researchers endorse a relativistic ontology that is always subjective, socially constructed and shaped by context (Klenke, 2016a:15).

Nevertheless, objective and subjective ontologies are not mutually exclusive, and many researchers delineate their positions somewhere between the two (O'Gorman & MacIntosh 2015:58), which was the ontological position of this study due to its pragmatic approach. Under the *ontological approach of pragmatism*, researchers can renegotiate and interpret realities based on the context of their studies (Allemang, Sitter & Dimitropoulos, 2021:40) and as practical effects of ideas (Saunders *et al.* 2019:151). Consequently, questions related to the nature of reality are less central to pragmatism, focusing more on the usefulness of knowledge (Morgan, 2017:19). Evidently, pragmatists reject a distinction between objective and subjective ontologies but accept the differences between facts and values and different methods of inquiry appropriate to each (Klenke, 2016a:27).

3.2.3.1.2 Epistemology assumption

Epistemology refers to a theory of knowledge and cognition (Ciesielska & Jemielniak, 2018:10; O'Gorman & MacIntosh 2015:59; Salkind, 2010:1159), which addresses the second paradigmatic questions, "how do we know what we know?" and "what counts as knowledge?" (Gupta & Awasthy, 2021:9; Klenke, 2016a:15). Subsequently, epistemology can be concerned with the way a researcher obtains valid knowledge (O'Gorman & MacIntosh 2015:58), including questions about human cognition and roles of experience in knowledge creation (Ciesielska & Jemielniak, 2018:10).

Furthermore, epistemology can be the branch of philosophy that deals with the origin, nature and limits of human knowledge and the relationship between the knower and the known (Klenke, 2016a:15). Clarity on the manner that valid knowledge can be obtained provides clarity about the nature of any knowledge claim (O'Gorman & MacIntosh 2015:59). Additionally, epistemology deals with ways of knowing and the researcher's belief system about the nature of knowledge, for example, beliefs about certainty, structure, complexity, and sources of knowledge (Klenke, 2016a:15).

Every researcher brings some set of epistemological assumptions into the research process and these assumptions influence their understanding and interpretation of their data (Gupta & Awasthy, 2021:3; Klenke, 2016a:15). Particularly, (1) positivists adopt an independent and objective stance, believing that only observable and measurable phenomena can be regarded as knowledge, (2) interpretivists adopt a subjective stance with limited distance between the researcher and the researched, believing that knowledge comes from participants (Collis & Hussey, 2021:43), and (3) pragmatists consider

knowledge as unique, believing that all knowledge comes from individual experiences (Morgan, 2017:18) that can be used for problem solving and informed future practice (Saunders *et al.* 2019:145). Subsequently, the epistemological position of this study focuses on obtaining knowledge from the experiences and expertise of researchers (literature) and practitioners (industry experts), enabling the development of new knowledge.

3.2.3.1.3 Methodology assumption

Ontological and epistemological assumptions can be translated into specific methodologies, relating to the third philosophical question of "how should we study the world?" (Klenke, 2016a:16). Methodology sets the boundaries for development of theoretical and methodological frameworks (Klenke, 2016a:16), involving a set of choices about the way that a phenomenon can be studied (Ciesielska & Jemielniak, 2018:14). Consequently, methodologies signify practical ways of learning about the world through various research methods and analysis of quantitative or qualitative data (Ciesielska & Jemielniak, 2018:15), addressing issues like types of sampling, data collection, data analysis, and consequences of methodological choices (Klenke, 2016a:16). Like ontology and epistemology, the methodology of positivists, interpretivists and pragmatists can be different.

Particularly, (1) positivists usually adopt a deductive approach, employing quantitative research methods and using questionnaires or experiments to produce statistical analysis, (2) interpretivists usually adopt an inductive approach, employing qualitative research methods and using interviews and observations to develop theories (Collis & Hussey, 2021:42; Tarab, 2019:4), and (3) pragmatists usually adopt a combination of abductive, inductive and deductive approaches (Kelly & Cordeiro, 2020:7), employing mixed or multi research methods based on the usefulness of answering research questions (Collis & Hussey, 2021:49) for practical solutions and outcomes (Saunders *et al.* 2019:145).

Following the pragmatic approach to methodology, this study adopted multimethod qualitative research as a methodological position, involving multiple types of qualitative sampling, data collection and analysis, which will be discussed in section 3.2.5.

3.2.3.1.4 Axiology assumption

Collis and Hussey (2021:43) and Klenke (2016a:17) added axiology to the paradigmatic triad of ontology, epistemology and methodology, which refers to the role of values and ethics in research. Consequently, axiology can be described as the philosophical study of value, which involves ethics and aesthetics. Research ethics must inform data collection and values must inform the biases of a researcher (O'Gorman & MacIntosh 2015:69).

Like other philosophical elements, positivists, interpretivists and pragmatists operate on different axiological assumptions. Particularly, (1) positivists believe that researchers must be independent from the researched, which results in a value-free and unbiased research process, (2) interpretivists believe that researchers can bring their values to the research, which results in acceptable value-laden findings the acknowledges biases (Collis & Hussey, 2021:43), and (3) pragmatists view axiology as the cornerstone of their paradigm and place a premium on ethical and moral issues (Klenke, 2016a:27), which results in a value-laden and practical research process (Allemang *et al.* 2021:40).

Subsequently, pragmatist embed ethical considerations throughout the research process, which means they value different types of knowledge (Kelly & Cordeiro, 2020:7). Since this study adopted pragmatism as a research paradigm, axiology can be an important philosophical element. The role of the researcher in the interview process and the ethical considerations and practices of this study were discussed in chapter 7.

Essentially, research assumptions relate to a philosophical paradigm, involving issues of ontology (nature of reality), epistemology (nature of knowledge and relationship of the researcher to that being researched), methodology (research methods and techniques in a study) and axiology (role of values in a study) (Klenke, 2016a:15-17; O'Gorman & MacIntosh 2015:67).

Based on the discussions of the different philosophical elements, **Table 3.2** provides a comparison between the positivism, interpretivism and pragmatism paradigms with related ontological, epistemological, methodological and axiological assumptions.

Table 3.2 Comparison of research paradigms and philosophical elements

Research paradigm	Ontology	Epistemology	Methodology	Axiology
Positivism	• Reality is objective and separate from the researcher • Beliefs in one reality • Involves critical realism	• Knowledge stems from objective evidence about measurable phenomena • Knowledge excludes moral content • The researcher is distant from the studied phenomena	• Researcher adopts a deductive approach • Researcher uses statistical designs • Generalisations lead to prediction • Quantitative methodology, like surveys and experiments • Requires large samples • Quantitative data analysis • Results are accurate and reliable	• The researcher is independent from the study • Universal reason • Value-free research • Researcher adopts an objective stance
Interpretivism	• Complex and rich • Social reality is subjective and connected to the researcher • Beliefs in multiple realities, meanings and interpretations • Involves relativism or idealism	• Knowledge stems from subjective evidence and participants • Knowledge involves abstract descriptions of meanings through lived experiences of humans • The researcher interacts with the phenomena under study • Focus is on narratives, perceptions and	• Researcher adopts an inductive approach • Categories are identified in the research process • Patterns and theories are developed • Qualitative methodology, like case studies, interviews, phenomenology, hermeneutical and ethnography	• The researcher acknowledges that research is subjective with biases • Researcher is part of the researched • Value-bound research • Value-laden in context • Researcher's interpretation is key • Researcher is reflexive

		interpretations • Contributes to new understanding and worldviews	• Involves small samples • Qualitative data analysis • Findings are accurate and reliable through verification	
Pragmatism	• Complex and rich • Reality is the practical consequences of ideas • Renegotiates reality based on usefulness of the situation	• Knowledge is gained from experience and researcher subjectively looks at the objective meaning of actions • Knowledge is derived from interactions between people and their environments • Transactional realism • Focus is on problems, practices and relevance • Contributes to problem solving and informed future practice	• Researcher adopts abductive, inductive and deductive approaches • Follows research problems and questions • Mix methods, multimethod qualitative or quantitative research and action research • Involves case study, documents, interviews and surveys • Small and/or large samples • Various qualitative or quantitative data analysis techniques • Emphasis is on practical outcomes and solutions	• Regards ethical and moral issues as significant. The researcher's and participants' values are important • Value-driven research • Value-laden in practice • Researcher is reflexive

Source: Adapted from Allemang *et al.* (2021:40), Collis and Hussey (2021:42), Klenke (2016a:20) and Saunders *et al.* (2019:144-145)

Essentially, this study adopted the philosophical assumptions for pragmatism as a research paradigm, adopting the (1) ontological assumption that reality can be complex, rich, adaptable and practical, (2) epistemological assumption that knowledge can be realised through experience and the researcher's subjective view to solve problems and inform practice, (3) methodological assumption that multimethod qualitative research through a combination of deduction, induction and abductive reasoning can be used for practical outcomes and solutions, and (4) axiological assumption of ethical and moral principles as important aspects in a value-driven research process.

In the next section, a more comprehensive overview and justification for adopting pragmatism as a research paradigm in this study will be provided.

3.2.3.2 Pragmatism as the research paradigm of this study

Pragmatism as a research paradigm developed in the late 19th and early 20th century (Kelly & Cordeiro, 2020:2), stemming from the recognition that absolute truths can exist in various phenomena (Leedy & Ormrod, 2021:31). Pragmatism as a new research paradigm can be positioned in the middle of realism (positivist) and constructivism (interpretivist) (Morgan, 2017:17), taking into consideration the changing context of research, as organisations and society move into different directions (Klenke, 2016a:28). Subsequently, pragmatism focus on the value of knowledge (Morgan, 2017:4) and presents a practical and applied research philosophy that is oriented toward action (Klenke, 2016a:26).

In pragmatism, the research process starts with a research problem and objectives aimed at practical solutions, which can inform future practice (Saunders *et al.* 2019:151). Since pragmatism allows

flexibility in data collection and analysis, pragmatist researchers can follow an abductive approach, combining existing knowledge (deduction) with new knowledge (induction) (Kelly & Cordeiro, 2020:7). In other words, following an abductive approach in pragmatism means that the researcher moves back and forth between theory and data for effective theory building (Saunders *et al.* 2019:155-156). Nevertheless, pragmatism can include all three approaches, including deduction, induction and abduction (Thornberg, 2022:245), which was adopted in this study. Consequently, pragmatism enables researchers to consider theories, concepts, ideas and findings in terms of contribution to practice (Saunders *et al.* 2019:151).

Furthermore, Collis and Hussey (2021:49) explained that pragmatism can be independent from one philosophy and reality, and a freedom of choice can be given to individual researchers, which means pragmatic researchers can use various research methods. This methodological principle of pragmatism allows a researcher to study a phenomenon from various angles (Kelly & Cordeiro, 2020:3), justifying the use of mixed and multiple methods to holistically address research problems (Allemang *et al.* 2021:38; Collis & Hussey, 2021:49). Consequently, the research problem and research questions can be the most important determinants of selecting a research design and methodology (Saunders *et al.* 2019:151). Nevertheless, the researcher must plan to integrate multiple methods to drive the process of inquiry for successful application of pragmatism (Morgan, 2017:20).

According to Saunders *et al.* (2019:151), pragmatism can be an important research paradigm in organisational research, aiming to inform organisational practices. Similarly, Kelly and Cordeiro (2020:1) viewed pragmatism as a useful and significant paradigm for studying organisational processes and practices through qualitative research methods. A qualitative researcher that adopts pragmatism as a paradigm might be interested in practical questions designed to produce answers and address organisational problems (Klenke, 2016a:15; Salkind, 2010:1073). Since the epistemology of pragmatism recognises that knowledge comes from individual experiences (Morgan, 2017:18), pragmatism can be valuable to gain inputs from experienced individuals in organisations as a tool of problem solving in organisational processes and practices (Kelly & Cordeiro, 2020:3,4). Furthermore, pragmatism allows a researcher to improve problematic situations through decision-making elements that can be explored concurrently and interactively, which can result in policy suggestions, new practices and organisational change (Salkind, 2010:1073).

Essentially, pragmatism can be the best research paradigm in this study because it (1) identified practical problems with research questions aimed to inform RLM practices in online retailing, (2) adopted deductive, inductive and abductive approaches combining established knowledge (from RL literature) and with new knowledge (from industry experts) for theory development, (3) employed multiple qualitative methods for holistic problem solving, (4) involved organisational research about

consumer returns, RL processes and practices, (5) gained input from industry experts to solve RLM problems of online retailers, and (6) enabled the development of a RLM framework from various qualitative research findings, contributing to policy formulation and adoption of strategic RLM practices that can benefit the society (e.g. consumers, online retailers and supply chains) as a whole.

In the next section, the research approaches associated with pragmatism, will be described and applied.

3.2.4 Research approaches of this study for theory development

According to Leedy and Ormrod (2021:45) theory development entails active and intentional thinking about a phenomenon, which involves deduction, induction and abduction. Although qualitative studies adopt induction approaches, researchers must be aware of the value that deductive and abductive approaches can bring in qualitative research (Thornberg, 2022:225). As indicated in section 3.2.3.2, the pragmatic research paradigm selected in this study enabled the combination of deductive, inductive and abductive approaches.

While mostly associating with quantitative research (see section 3.2.1.3), Thornberg (2022:245) indicates that *deductive approaches* can be used in qualitative studies. Contrary to a deductive approach in quantitative studies, which involves testing of a hypothesis or theory testing through measurements of variables (Saunders *et al.* 2019:154), a deductive approach in qualitative research means that theory or existing data can be collected and analysed to develop a theoretical framework (Thornberg, 2022:246). Consequently, a deductive approach in qualitative research involves the use of existing theory (such as literature) for the collection and analysis of data (Kenny & Thornberg, 2018:50). Additionally, Thornberg (2022:225) indicated that qualitative research always starts from a theoretical framework, despite the intention to be explorative and discover new knowledge.

Evidently, in this study a deductive approach entailed a literature study and a QCA method of RL literature, which contributed to the final framework of this study. Although the interview data mostly involved inductive approaches, the researcher used the categories (related to consumer returns and RL processes) identified from the of QCA of RL literature and conducted a codebook thematic analysis (TA), using a pre-developed code framework to analyse interview data (see section 7.3.8). Additionally, the categories identified in the QCA of RL literature findings formed part of the interview questions, which not only enabled “development” as a motivating factor for multimethod research (see section 3.2.5.2) but also enabled abduction (see discussion below).

As indicated in section 3.2.1.3, an *inductive approach* aims at building concepts and theories through the discovery of themes, patterns, categories and concepts from empirical qualitative data (Merriam

& Grenier, 2019:6; Thornberg, 2022:248). Furthermore, in an inductive approach, participant experiences drive the analysis of raw (interview) data (Azunga, 2018:391), which means that the researcher avoids existing theory and knowledge in the development of themes (Collis & Hussey, 2021:62). Subsequently, induction allows the researcher to study a phenomenon in-depth and analyse qualitative data, resulting in theory formulation, often expressed as a conceptual framework (Saunders *et al.* 2019:155).

In this study an inductive approach was used in the QCA of RL literature and the interviews with industry experts. In the QCA of RL literature, the researcher used existing theory (literature) and inductively discovered new patterns and concepts through inductive coding and category development (see section 3.3.2.6), which enabled the development of conceptual frameworks for further exploration. Additionally, in the data analysis of the interviews with industry experts a reflexive TA was applied for the generation of themes and discovery of new concepts and practices, avoiding existing theory and knowledge. While parts of the TA used a codebook approach, which was deductive in nature (e.g. confirming literature and theory), new inductive codes and themes through a reflexive TA enabled the researcher to add new knowledge to existing knowledge (Gupta & Awasthy, 2021:21). Like the deductive approach, the findings produced through an inductive approach, contributed to the final framework of this study.

Saunders *et al.* (2019:155) indicated that organisational researchers often adopt *abductive* research approaches, moving between deductive and inductive approaches to develop theories. Likewise, in qualitative research, an abductive approach enables researchers to move back and forth between deduction, induction and abduction until meaningful conclusions can be reached (Thornberg, 2022:249). An abductive approach involves the discovery of new concepts, explanations and practices that cannot be explained through existing knowledge (Kenny & Thornberg, 2018:52). Furthermore, when existing theory (or literature) cannot adequately account for a phenomenon, a good researcher can abandon it and formulate a more appropriate theory (Leedy & Ormrod, 2021:46). Alternatively, the researcher can modify and elaborate upon existing knowledge by reorganising existing knowledge to produce new knowledge (Kenny & Thornberg, 2018:52). Consequently, an abductive approach involves a creative research process, which can lead to new theoretical knowledge about a phenomenon (Thornberg, 2022:246).

In this study, the findings of the QCA of RL literature allowed the formulation of a “provisional hypothesis” (see Thornberg, 2022:249), meaning that the researcher envisaged that the RL processes and practices identified from the QCA of RL literature (through deduction and induction) can also apply online retailing. Based on this provisional hypothesis, the researcher continued data collection by interviewing industry experts about consumer returns, RL processes and RL practices in online

retailing, exploring if practice confirms theory. Although this study confirmed that most RL processes and practices identified in the QCA of RL literature findings can apply to online retailing, new practices and RLM factors were identified, extending and modifying existing knowledge about RL in online retailing. Subsequently, an abductive approach was followed throughout the research process, which enabled the effective development of the final framework for the RLM of consumer returns in online retailing. Particularly, abduction enabled the utilisation of existing knowledge (from theory and confirmed in practice) about consumer returns, RL processes and RL practices and discovered knowledge (from practice) about RL in online retailing to create new knowledge and theory about RL processes, practices and RLM factors important for the effective RLM of consumer returns in online retailing. The final framework derived from deductive, inductive and abductive reasoning will be presented in chapter 9.

Essentially, adopting deductive, inductive and abductive approaches, created a strong iterative research process between data and theory and data collection and analysis, which enabled the researcher to effectively contribute to the field of RLM in online retailing (Kenny & Thornberg, 2018:64). In the next section, multimethod qualitative research as part of the methodological pragmatist approach of this study will be discussed, explained and justified.

3.2.5 Multimethod qualitative research as the methodological choice of this study

Research methods are the tools, techniques or processes that can be used in research (Klenke, 2016a:17). Multimethod research refers to the use of two or more methods drawn from the same paradigm and methodological approaches (Collis & Hussey, 2021:63). New high-tech tools, the internet and sharing of information caused some strain on the traditional single research methodologies, like surveys, experiments, observations and interviews, which prompted a "hybridisation" between different qualitative methodologies (Guercini, 2014:663). Evidently, researchers started conducting qualitative research studies with more than one qualitative research method to explore topics in depth (Roller, 2016:15). Therefore, multimethod qualitative research uses more than one method and multiple ways to collect and analyse data within a qualitative research design (Salmons, 2015:524; Saunders *et al.* 2019:179).

According to Guercini (2014:667), contemporary qualitative research studies associate with a combination of two or more qualitative methods, which can include new (1) techniques in content analysis, text analysis software and applications, (2) software for analysing texts and website content, (3) forms and applications of traditional methods in management research, (4) methods stemming from qualitative research techniques and, (5) ways to apply traditional qualitative methods to management research. Consequently, qualitative multimethod research can be balanced by integrating

theoretical and empirical qualitative data (Reis, Amorim & Melão 2017:287), which was adopted in this study.

In subsequent sections the significance of selecting multimethod qualitative research as the methodological choice of this study will be explored with specific reference to (1) the differences between multimethod and mixed-method research, (2) motivations for conducting multimethod qualitative research and (3) forms of multimethod mixing adopted in this study.

3.2.5.1 Differences between mixed method and multimethod research

Mixed method and multimethod research are often used as synonyms in literature, but in practice clear distinctions can be made. Mixed method research refers to the use of methods drawn from different paradigms (e.g. positivism and interpretivism) by collecting, analysing and integrating qualitative and quantitative data in a single study (Collis & Hussey, 2021:63). In contrast, multimethod research refers to the use of more than one method from the same paradigm (e.g. interpretivism), involving either a quantitative research design or a qualitative research design in one study (Collis & Hussey, 2021:63; Hunter & Brewer 2015:187). In other words, mixed method research involves the collection and integration of qualitative and quantitative data, logics and philosophies, while multimethod research involves the collection of data using a multiple qualitative or quantitative methodologies and techniques (Johnson & Walsh, 2019:5).

Although mixed method research often overshadows multimethod research, Johnson and Walsh (2019:5) argues that both mixed method and multimethod studies can be important and bring new ideas for studying a phenomenon. However, unlike mixed method research that can be restricted to qualitative and quantitative data collection and analysis, multimethod research can be open to a variety of possible methodological combinations, enabling multiple data collections, techniques, analysis and ways in presenting findings in a single study (Hunter & Brewer, 2015:187).

The most significant differences between mix method and multimethod studies relate to the reasons for adopting mixed or multimethod research approaches (Reis, *et al.* 2017:285). For mixed method research designs, the combination of quantitative and qualitative research can be used to (1) enhance generalisability of qualitative data, (2) enhance validity and reliability of the research, (3) assist with defining the population, (4) obtain a more robust understanding of qualitative findings, (5) generate new questions, and (5) test qualitative theory (Hesse-Biber *et al.* 2015:7-8).

Although mixed method research can involve motivations related to complementarity, development, triangulation and expansion, these motivations can be more important in multimethod research designs (Reis, *et al.* 2017:285). Additionally, triangulation (the convergence of findings across

methods) can be a stronger motivating factor in multimethod research, seeking empirical divergence and knowledge using different perspectives of the phenomenon (Johnson & Walsh, 2019:5). The reasons of complementarity, development, expansion and triangulation that can distinguish multimethod from mixed method research will be described in section 3.2.5.2.

Essentially, mixed method research combines qualitative and quantitative methods in a single study to (1) overcome potential weaknesses of using a single qualitative or quantitative approach, (2) enhance credibility of findings and (3) gain a greater understanding of a phenomenon. Multimethod research combines two or more qualitative or quantitative research methods that are conducted separately, rigorously and completely (e.g. the findings of each method can be used independently), enabling (1) triangulation of findings, (2) an in-depth understanding of a phenomenon (e.g. RLM) and (3) development of a comprehensive framework (e.g. framework for the RLM of consumer returns in online retailing) (Schwandt & Lichty, 2015:587).

In the next section, the motivations for multimethod qualitative research will be described in greater detail.

3.2.5.2 Motivating multimethod qualitative research

Multimethod qualitative research involves the use of more than one qualitative method in a single study, providing various benefits (Wellman, Tröster, Grimes, Roberson, Rink & Gruber, 2023:1007). According to Schwandt and Lichty (2015:588), multimethod qualitative research signifies actual scientific investigation by deploying multiple qualitative methods and research designs to generate knowledge and develop in-depth understanding of phenomena. Researchers may conduct qualitatively driven multimethod research for several reasons (Hesse-Biber *et al.* 2015:6), which can be summarised as follows:

- Unexpected findings in a single-method qualitative study that require further exploration to answer the research question (Hesse-Biber *et al.* 2015:9)
- Improve soundness of the research findings (Cardano, 2020:101) and increase the credibility of a study to reduce scepticism about qualitative research findings (Hunter & Brewer 2015:186; Schwandt & Lichty, 2015:588)
- Use multiple methods to complement, develop, expand and triangulate findings (Reis *et al.* 2017:282)
- Develop a more rounded understanding or theoretical framework (Hesse-Biber *et al.* 2015:8; Wellman *et al.* 2023:1007)

- Obtain a more comprehensive understanding of a phenomenon from differing perspectives (Hesse-Biber *et al.* 2015:8; Schwandt & Lichty, 2015:592), using deductive, inductive and abductive approaches (Wellman *et al.* 2023:1012)
- Facilitate a more complete understanding of organisations and empirically examine factors of high importance to managerial theory and practice (Wellman *et al.* 2023:1007)
- Facilitate innovation in scientific practice and new way of thinking about a phenomenon (Schwandt & Lichty, 2015:592)

Subsequently, researchers can adopt multimethod qualitative research to improve their understanding of phenomena and produce findings that provide new knowledge and add value to research and practice. Nevertheless, Wellman *et al.* (2023:1007) indicated that researchers must provide clear justifications for selecting multiple methods and demonstrate the value of multiple methods in advancing theory in the fields of their studies. Consequently, the following sections emphasise the motivating factors for selecting qualitative multimethod research as the methodological choice of *this study*, which associate with the dimensions of complementarity, development, expansion, triangulation, practical problem-solving and innovation (also see section 3.2.5.1).

3.2.5.2.1 Complementarity, development and expansion as motivating factors for qualitative multimethod research

According to Reis *et al.* (2017:285) and Hunter and Brewer (2015:188), pure multimethod qualitative studies are mostly used for *complementarity* purposes. Complementarity involves the combination of qualitative methods to compensate for any weaknesses in one of the methods (Schwandt & Lichty, 2015:588-589). Therefore, the findings of one qualitative method (e.g. QCA of RL literature) can complement the findings of another qualitative method (e.g. interviews with industry experts), strengthening the overall findings of a study (Schwandt & Lichty, 2015:588-589; Reis *et al.* 2017:276). Evidently, complementarity enhances the validity of research findings, which adds to the trustworthiness of a qualitative study (Reis *et al.* 2017:276). Furthermore, complementarity can involve mixing of inductive and deductive approaches to test and explore qualitative data, offering creative ways of investigating a phenomenon and generating new ideas and categories (Wellman *et al.* 2023:1010, 1012).

Development as a motivating factor in multimethod qualitative research relates to the use of findings from one method to develop or inform data collection and analysis of another method (Reis *et al.* 2017:284). For instance, in this study the findings of the QCA in RL literature (phase 2) informed the interview protocol (questions) and codebook TA approach of the interviews with industry experts (phase 3), forming part of the deductive approach of this study (see section). Subsequently, like

complementarity, development can enhance the validity and trustworthiness of qualitative research findings (Reis *et al.* 2017:285).

Finally, the *expansion* dimension means that more than one method extends the breadth and range of a study for different inquiry components (Reis, *et al.* 2017:284). Evidently, a lack of expansion in multimethod research means that researchers apply different methods to test one hypothesis or answer the same research questions, which can only add value in replication of findings/results and not significant value in the field of study (Wellman *et al.* 2023:1011). Subsequently, this study applied different secondary objectives and research questions to different qualitative methods, which extended the range of the study and allowed for significant contribution to the field of RLM in online retailing.

3.2.5.2.2 Triangulation as a motivating factor for qualitative multimethod research

Although complementarity, development and expansion can be important motivating factors for employing qualitative multimethod research, literature mostly focuses on triangulation to motivate multimethod research. According to Abdalla, Oliveira, Azevedo and Gonzalez (2018:3) one of the most popular ways of seeking confirmation in qualitative research can be triangulation, which involves using different angles to study the same phenomenon or research topic. Particularly, triangulation relates to the use of multiple methods, techniques and data sources to (1) overcome the flaws of a single method (Abdalla *et al.* 2018:11) and (2) verify the findings from one research method with the findings of another research method (Schwandt & Lichty, 2015:588). Evidently, like the complementarity dimension, triangulation enables the researcher to capitalise on the strengths of each approach, reducing the weaknesses of a single approach (Salkind, 2010:1539).

Researchers can employ various forms of triangulation, including data triangulation, methodological triangulation and between-methods triangulation. *Data triangulation* means collecting data in different time periods from different sources for a richer and more detailed description of the phenomena (Abdalla *et al.* 2018:8; Collis & Hussey, 2021:63). For example, in this study, qualitative data (from the QCA RL literature and interviews with industry experts) was collected at different times (i.e. in 2016 and 2020) to gain an in-depth understanding of consumer returns, RL processes, RL practices and RLM factors from theory and practice.

Methodological triangulation refers to more than one method of collecting and analysing data (Collis & Hussey, 2021:63). For example, this study combined QCA[6] and interviews as methods of data collection as well as combined QCA and TA (thematic analysis) as methods of analysing data (see section 3.2.5.3). This allowed the researcher to use multiple qualitative methods to obtain comprehensive data about the phenomenon (e.g. RLM in online retailing) (Abdalla *et al.* 2018:8).

Between-methods triangulation offers the possibility that the biases of one approach will be mitigated by the inclusion of other sources of data, methods or researchers (Salkind, 2010:1538). Therefore, researchers may use multiple sources of data or multiple approaches of data analysis to enhance credibility of a research study (Salkind, 2010:1538) and offset limitations of single methodologies (Wellman *et al.* 2023:1009). Evidently, between-methods triangulation can enable complementarity, ensuring that weaknesses in one method can address the weaknesses of another method (see section 3.2.5.2.1), and producing diverse data sources.

Although the nature of many research studies justifies the use of more than one triangulation method (Glinka & Hensel, 2018:249), researchers might place different emphasis on the purpose of triangulation. For instance, some researchers view triangulation as critical to establish corroborating evidence, while other researchers (including the researcher of this study) view triangulation as critical to provide multiple lines of sight and contexts for a rich understanding of a research question or problem (Salkind, 2010:1538). Consequently, information coming from different angles can be used to confirm, develop or illuminate the research problem (Abdalla *et al.* 2018:7).

Essentially, triangulation offers the opportunity to (1) deepen the understanding of the research question, (2) explore multiple realities (Salkind, 2010:1539), (3) create inventive methods (Abdalla *et al.* 2018:7), (4) reduce the impact of potential biases, and (5) increase the possibility of reproducing findings (Abdalla *et al.* 2018:7; Bowen, 2009:28).

3.2.5.2.3 Practical problem-solving and innovation as motivating factors for qualitative multimethod research

The final motivating factors for adopting qualitative multimethod research involves practical problem-solving and innovation that associates with pragmatism. Particularly, multimethod qualitative research was appropriate because it enabled (1) thorough investigation of a research problem (Reis, *et al.* 2017:280), (2) asking different questions about a given phenomenon of interest

[6] Qualitative content analysis (QCA) can be a research method that involves different methods of data collection and steps to analyse qualitative data. Therefore, unlike thematic analysis, which is purely a qualitative data analysis technique, QCA can be broader in scope and used as a research method. Section 3.3 discusses QCA as a research method in greater detail.

(Brannen & O'Connell 2015:259; Hunter & Brewer 2015:199), and (3) solving of managerial problems in practice (Guercini, 2014:664).

Additionally, multimethod research can be a credible form of inquiry not only for practical utility but also for innovation in scientific practice (Schwandt & Lichty, 2015:588). Multimethod research can be suitable for topics/fields of studies that lack theoretical frameworks, enabling effective exploration of under-researched areas, like RLM in online retailing (Hesse-Biber *et al.* 2015:9). Furthermore, multimethod researchers can create new knowledge that significantly develops theory, contributing to organisational success (Wellman *et al.* 2023:1013). Subsequently, multimethod qualitative research can be open to new, innovative and, at times, unanticipated techniques for effective problem-solving in management practice (Hunter & Brewer 2015:187).

Essentially, a multimethod qualitative study is not only a pragmatic option for dealing with different elements of a phenomenon/topic and addressing practical challenges, but also for producing innovative research findings using two or more methods in a single research study (Ahmed & Sil, 2012:936). In the next section, the forms of multimethod mixing adopted in this study will be explored.

3.2.5.3 Forms of multimethod mixing adopted in this study

Various forms of multimethod mixing (or combining) can occur in a qualitative study. The focus of this section is on the forms of mixing used in this multimethod qualitative study, including mixing (or a combination) of research paradigms and approaches, sampling and data collection methods, data analysis methods and presentation of findings, which will be described in the subsequent sections.

3.2.5.3.1 Mixing of research paradigms and approaches

A specific paradigm can be coupled with another tradition (Klenke, 2016a:27) and various paradigms and perspectives can be used to determine a research design and approach of a study (Merriam & Grenier, 2019:5). Since this study adopted pragmatism as a research paradigm, which falls between the positivists and interpretivists paradigms, and uses multiple methods to solve complex problems (see section 3.2.3.2), it can be viewed as multi-paradigmatic. Therefore, pragmatism can include elements of positivism and interpretivism, depending on the research design. Subsequently, this study involves qualitative research, which means that some elements of interpretivism can apply (see section 3.2.3).

Similarly, using pragmatism as a paradigm enabled mixing of research approaches in this study, including deductive, inductive and abductive approaches, enabling effective theory development (see

section 3.2.4). Moreover, Saunders *et al.* (2019:156) indicated that pure deduction and induction can be impossible to achieve in organisational research, which necessitates a combination of deduction, induction and abduction. Consequently, the mixing of research approaches in this study was critical to effectively contribute to management practices.

3.2.5.3.2 Mixing of sampling and data collection methods

Purposive sampling (non-probability sampling) can often be combined (or mixed) with two or more sampling strategies to select adequate evidence for answering the research questions (Suri, 2011:72). Saunders *et al.* (2019:325) describes this as multi-stage sampling, which, depending on the research design, refers to any two probability or non-probability sample techniques occurring in succession. Evidently, this study used multiple or multi-stage non-probability sampling techniques to obtain the necessary data for answering the research question.

Although both the QCA of RL literature and interviews with industry experts involved purposive non-probability sampling techniques, the interviews with industry experts added snowball sampling. While purposive sampling involves the selection of individuals or objects that can provide the best information about the topic, snowball sampling involves asking existing participants to refer or recruit other individuals (e.g. industry professionals) with experiences and knowledge relevant to the topic (Leedy & Ormrod, 2021:272). Subsequently, employing purposive and snowball sampling techniques can increase the sample size (Collis & Hussey, 2021:119) and provide a greater understanding of the field of study. The sampling techniques employed for interviews with industry experts will be discussed in section 7.3.4.

Sections 3.2.5.1 and 3.2.5.2 mentioned that multimethod studies involve multiple forms of data collection methods, which in this study, involved mixing of (1) online databases, e-journals, library and Internet searches for RL literature, with (2) online interviews (e.g. using Ms Teams) with industry experts. The purpose of combining data collection methods in a qualitative research design can be to develop specific strategies to increase the scope of the phenomenon (Klenke, 2016a:27), investigate new problems (Silver & Lewins, 2014:11) and obtain comprehensive data about the phenomenon (Abdalla *et al.* 2018:8). Evidently, using multiple methods of data collection added value in terms of scope, problem investigation and comprehensiveness of data.

3.2.5.3.3 Mixing of data analysis methods and presentation of findings

Like data collection techniques, a multimethod research approach often features two or more types of qualitative data analysis (Ahmed & Sil, 2012:936). This study used different data analysis methods to analyse different sets of qualitative data. Particularly, QCA was used as a method to analyse RL

literature and TA as a qualitative data analysis technique was used to analyse interview data. Additionally, within each qualitative data analysis method more mixing occurred. For instance, the QCA of RL literature involved deductive development code categories with deductive coding of RL articles and inductive development of codes and categories with inductive coding on coded materials (i.e. only using the quotations assigned to deductive codes as text for the coding process).

Similarly, the TA used for the interview findings involved two approaches, including a codebook approach and a reflexive approach (section 7.3.8), representing between-methods triangulation (also see section 3.2.5.2.2). While the codebook approach enabled a descriptive analysis comparing the QCA findings with the interview findings, the reflexive approach enabled a true reflexive TA generating inductive themes for the discovery of new concepts.

Accordingly, presentation of findings can be mixed to support different qualitative data analysis techniques. Qualitative researchers can present findings through themes supported by direct quotations from interview transcripts, descriptions and models of processes, diagrams and visual illustrations of key concepts, and narratives that represent participants' experiences (Roulston, 2014:305). The findings of the QCA of RL literature involved a mixed approach, including (1) quantitative results in terms of deductive code frequencies, (2) text matrices (data tables) for the presentation of inductive categories, subcategories, supporting authors and key quotations (from RL literature), (3) discussion of findings from the data tables, (4) development of conceptual framework for main deductive categories, and (5) conceptual frameworks and typologies to explore the relationships between categories (see section 3.3.2.7).

Furthermore, the interviews with industry experts involved (1) a codebook TA, which compared the QCA findings with the interview findings, using the presentation style of the QCA of RL literature (i.e. data tables to present categories and key quotations from interviews and discussion of findings), and (2) reflexive TA, which involved narrative discussions with supporting quotations embedded in the discussions and analytical frameworks that summarise key findings. Subsequently, like the mixing of data analysis techniques, between-methods presentation of findings occurred throughout the study.

Essentially, the aim of multiple methods and techniques can be to adequately address a research question (or problem statement) and secondary objectives that drives the research project (Morse & Maddox, 2014:525). Therefore, it can be important that qualitative researchers adapt research approaches, methods and techniques to reach meaningful conclusions for valuable contributions to their fields of study.

In the next section the methodology and application of the QCA of RL literature will be discussed.

3.3 THE QUALITATIVE CONTENT ANALYSIS (QCA) OF RL LITERATURE

The aim of this section is to provide the methodology and practical application of conducting the QCA method of RL literature. Particularly, QCA as a method was applied to phase two of the study, as illustrated in Figure 3.**2**. The research questions that stemmed from the research objectives (presented Figure 3.**2**), will be described in the first phase of the QCA of RL literature (section 3.3.2.1). Additionally, the findings of the QCA of RL literature will be presented and discussed in chapters 4 to 6.

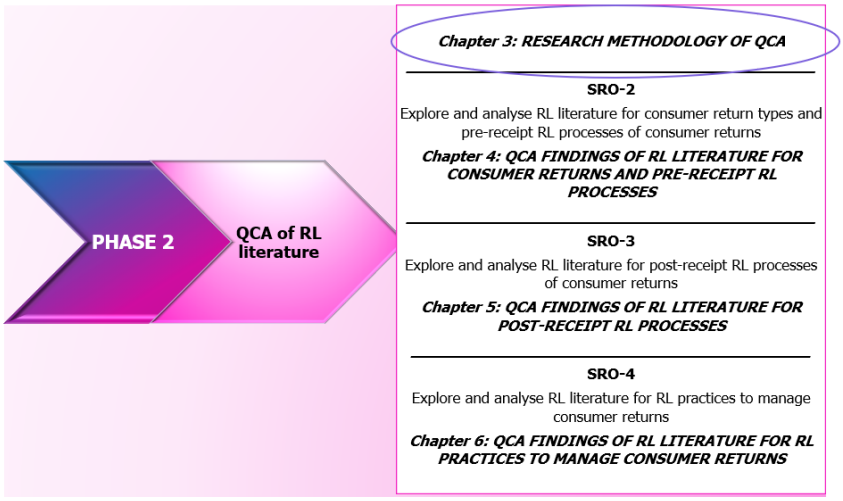


Figure 3.2 Methodology of QCA of RL literature and related objectives and chapters
Source: Compiled by the researcher

The overall purpose of the QCA of RL literature was to gain a theoretical perspective from RL literature on the types of consumer returns, RL processes and RL practices, which was used to (1) identify consumer return types, RL processes and practices from theory for triangulation with the interview method (chapter 8), (2) develop conceptual frameworks for consumer return types, pre-receipt and post-receipt RL processes and RL practices for the management of consumer returns (chapters 4 – 6), and (3) contribute to the final framework for effective RLM of consumer returns in online retailing (chapter 9).

In the subsequent sections, the methodology and application of the QCA of RL literature will be discussed in terms of (1) an overview of QCA as a research method, (2) phases in the QCA of RL literature and (3) trustworthiness of the QCA of RL literature.

3.3.1 Overview of QCA as a research method

As a research method, QCA stands out as a preferred choice for researchers from various disciplines because it can be categorised as a highly flexible, pragmatic and systematic method to investigate various phenomena (Selvi, 2019:450). In the past many researchers viewed QCA as a mere analytical tool but increasingly QCA can be viewed as distinguished qualitative research method (Graneheim, 2017:33) that offers new insights to increase the understanding of a phenomenon for practical application (Krippendorff, 2022:24). Subsequently, QCA as a research method can be appropriate for pragmatism as a research paradigm (see section 3.2.3.2).

Furthermore, Klenke (2016b:95) suggested that QCA can be viewed as a systematic and rule-based method, preserving some of the strengths of quantitative content analysis (hereafter CA). Therefore, it can be important to understand the similarities and differences between QCA and CA. In the subsequent sections, the overview of QCA as a research method will be provided by explaining the similarities and differences of QCA and CA and characteristics of QCA. The overview will be concluded with this study's definition of QCA as a method.

3.3.1.1 Similarities and differences of QCA and CA

QCA and CA share some similarities and differences, which can be important to understand. Schreier (2014:173) provided a clear overview of the similarities between QCA and CA, which included (1) a systematic approach, (2) clear procedures related to a coding frame, categories, segmenting data in coding unit, conducting a pilot study and main analysis, (3) quality criteria of reliability and validity (less strict for QCA), and (4) findings that can be quantified (i.e. frequency counts). Krippendorff (2022:92) added that both QCA and CA involves research questions that guide the implementation of procedures. Subsequently, QCA builds upon the rule-orientated and the systematic values of CA (Mayring, 2020:2).

Nevertheless, like the differences between qualitative and quantitative research (see section 3.2.1), QCA and CA can be distinguished in terms of approaches, aims, trustworthiness criteria and presentation of findings. Specifically, *CA* as a quantitative method usually involves larger volumes of text and the participation of a research team, requiring explicit description of procedures and steps to ensure reliability and validity (Krippendorff, 2022:92). Furthermore, like other quantitative methods, researchers conduct CA to test hypotheses, involving the development of a purely deductive coding framework (Schreier, 2014:173; Selvi, 2019:442). Evidently, CA involves objective coding and data-mining tools (Preiser *et al.* 2022:279), focusing on manifest (clear or apparent) meaning (Schreier, 2014:173; Selvi, 2019:442). Finally, quantitative researchers view the coding process as the basis for

later stages of complex statistical analysis, excluding qualitative analysis and presentation of data (Schreier, 2014:173; Selvi, 2019:442).

In contrast, in QCA, researchers normally work alone with the data and may be less concerned with replicability (Krippendorff, 2022:92). Researchers can adopt various research questions and apply multi-valued codes to the topic of interest (Krippendorff, 2022:93). Furthermore, unlike CA, the coding frame in QCA can include deductive and inductive data-driven codes, focusing on both manifest and latent (context-dependent) meaning (Schreier, 2014:173). Consequently, researchers derive meaning from text, which requires careful reading and sound judgement (Preiser, García, Hill & Klein, 2022:279).

Although QCA can include (limited) elements of reliability and validity, trustworthiness criteria can be added, distinguishing QCA from CA (Krippendorff, 2022:93). Finally, QCA involves a detailed account of the data (Schreier, 2014:173; Selvi, 2019:442), which can be supported by including quotations with the discussion of findings, elaborating on the meaning of data and providing readers with compelling context of the analysed data (Krippendorff, 2022:93).

Essentially, QCA and CA share some characteristics in terms of procedures and structure but can be distinguished in terms of approaches to the analysis, quality criteria and presentation of findings. In the next section, QCA will further be explored through a description of the characteristics of QCA.

3.3.1.2 Characteristics of QCA

The analysis of textual content originated with quantitative newspaper analysis, which developed into CA in the 1930s that focused purely on quantification of large volumes of text (Krippendorff, 2022:11, 12). However, newer research approaches lead the development of QCA (Krippendorff, 2022:21), which included detailed and systematic examination of the contents of material to identify categories, patterns and/or themes and determine the meanings derived from text (Leedy & Ormrod, 2021:265; Preiser *et al.* 2022:270).

Krippendorf (2022:1-4) suggested that contemporary content analysis (including QCA and CA) can be characterised as (1) an empirically grounded method that involves exploratory research with inferential intent, (2) extends historical views of symbols, contents and researcher intents, and (3) an individual and separate research methodology, involving systematic planning, execution, communication and critical evaluation of qualitative and/or quantitative analyses. Additionally, QCA as a research method can be characterised as (1) a scientific and systematic method, (2) an integrative and flexible design and approach, (3) research question and category orientated, (4) suitable for large

bodies of variety material, and (5) a time-consuming process, which will be described in the subsequent sections.

3.3.1.2.1 Scientific and systematic method

QCA can be described as a scientific and systematic method, which contrasts other qualitative research methods that can be regarded as less scientific and systematic (see section 3.2.1). Various scholars claimed that QCA can be a scientific tool or method, which involves a series of steps and procedures that allow for replicability (Krippendorff, 2022:24; Mayring, 2014:53; Salkind, 2010:235). However, for QCA to be classified as a scientific method, researchers must carefully record and describe research procedures, working at different times with the data (applicable to single researcher) or creating training and coding instructions (applicable to multiple researchers/coders) (Krippendorff, 2022:86; Mayring, 2014:53; Salkind, 2010:235).

Accordingly, QCA can be characterised as a rule-based systematic method that involves a step-by-step process (Mayring, 2020:3). Subsequently, a systematic procedure means that the researcher form rules for the analysis in advance and establish a comprehensive procedural framework, stipulating well-defined steps (Mayring, 2014:39). These well-defined steps take the researcher from the identification of appropriate material based on the research question(s) to the final analysis and interpretation of data (Klenke, 2016b:96). Additionally, procedures within QCA steps can be systematic, for example, the development of a coding frame can be systematic through double coding of selected material to test category definitions (Schreier, 2014:171).

Consequently, in this study the QCA of RL literature can be characterised as a scientific and systematic research method that entailed a detailed recording and description of procedures and a rule-based step-by-step systematic process. The systematic procedures and phased followed in the QCA of RL literature will be discussed in section 3.3.2.

3.3.1.2.2 Integrative and flexible design and approach

According to Mayring (2020:12), QCA can be an important starting point in a qualitative study. Evidently, QCA may form part of a larger qualitative study (Leedy & Ormrod, 2021:266), indicating that QCA fit well in a multimethod research study. The qualitative nature of QCA enables a flexible design, allowing researchers to use the research questions/objectives as guides to integrate QCA with other qualitative research methods (Leedy & Ormrod, 2021:267).

Although QCA involves systematic procedures, Mayring (2014:39) stressed the importance of adapting QCA procedures to fit the objectives, material and research approaches adopted in a study.

Subsequently, QCA can be flexible in research approaches, meaning that deductive, inductive and abductive approaches can be adopted in QCA. This flexibility enables researchers to derive code categories both from relevant and existing theory (deductive) and from the data (inductive) (Selvi, 2019:450). Therefore, the coding framework of QCA allows for flexibility and can be partly concept-driven and partly data-driven, providing researchers with the flexibility of matching material to existing theory (Schreier, 2014:171). Moreover, Krippendorff (2022:45) indicated that QCA involves abduction, originating from text and concluding with answering of research questions, emphasising the pragmatic nature of QCA.

Essentially, QCA can be an appropriate qualitative research method for this study due to the ability of integrating QCA with other research methods and flexibility of deductive, inductive and abductive approaches. Section 3.2.4 provided an overview of the research approaches used for theory development, explaining deduction, induction and abduction.

3.3.1.2.3 Research question and category orientated

Research questions can be important in QCA, which relates the empirical grounded characteristic of content analysis (Krippendorff, 2022:39). Therefore, QCA can be characterised as a research question orientated qualitative research method (Mayring, 2020:3). Formulating research questions in advance and focusing on answering the research questions throughout the QCA procedures protects researchers from aimless abstractions and self-serving categorisation (Krippendorff, 2022:40). Subsequently, guided by the aim and research questions, researchers can select appropriate samples and adopt procedures that enable them to provide relevant answers to their questions (Krippendorff, 2022:39; Mayring, 2020:3).

Apart from research questions, QCA can be characterised as category orientated (Mayring, 2020:3), which means that categories form the central instrument of the analysis (Mayring, 2014:40). Furthermore, using categories enables intersubjectivity, allowing for replicability (Mayring, 2014:40) and contributing to the scientific characteristic of QCA (section 3.3.1.2.1). Categories allow researchers to select and analyse only parts of the text that brings meaning to the analysis (Mayring, 2020:3). Subsequently, QCA helps reducing vast amounts of text, enabling researchers to select parts of text related to their research questions (Schreier, 2014:170).

In this study, the research questions were formulated in advance and guided data collection, analysis and presentation of findings, adhering the research question orientated characteristic of QCA. Additionally, categories formed a central part of the analysis and presentation of findings with the researcher only selecting relevant extracts (or quotations) to answer the research questions of the

QCA. The research questions and categories developed for the QCA of RL literature, will be discussed in section 3.3.2.

3.3.1.2.4 Suitable for large and variety bodies of material

QCA as a research method is suitable for the collection and analysis of large bodies of material (Mayring, 2020:7). Additionally, QCA can be appropriate for a wide range of materials, including (1) sampled texts from books, journals, websites, newspapers and magazines, (2) self-generated transcribed text or audio recordings from interviews or focus groups, and (3) sampled audio and visual materials, like films, music, art and television (Leedy & Ormrod, 2021:265; Schreier, 2014:180). However, visual materials must be treated as texts, requiring appropriate software (Mayring, 2014:44), like ATLAS.ti to assign categories/codes to audio and video materials (see Friese, 2014:99).

Additionally, large bodies of text call for the utilisation of computer software to convert material in manageable depictions and preserve data to effectively answer the research questions (Krippendorff, 2022:5). In this study, the material selected can be described as sample text from online scientific databases for the selection of published articles in RL. Additionally, ATLAS.ti was used as the software to support most procedures in the QCA of RL literature. The selected text and the use of ATLAS.ti will be described in sections 3.3.2.

3.3.1.2.5 Time-consuming process

Linking with the large bodies of material, QCA can be characterised as a time-consuming process associated with reading, coding and analysis of material. Accordingly, coding and analysing text in the QCA can be classified as the most time- and effort-consuming phases, involving familiarisation of the data (Klenke, 2016b:104), careful reading of documents, attaching codes to relevant sentences, remembering codes and code definitions (Kunz, 2019:2), identifying patterns in the data (Preiser *et al.* 2022:280) and building and applying conceptual or theoretical frameworks (Klenke, 2016b:104). Evidently, QCA can be a mentally challenging and slow process (Kunz, 2019:2), requiring the allocation of sufficient time to carefully read, code and work through the data (Preiser *et al.* 2022:280).

Nevertheless, as mentioned in the preceding section, researchers can use software, like ATLAS.ti, to simplify systematic coding and analysis of the data, eliminating time-consuming manual tasks (Friese, 2014:1). Subsequently, using ATLAS.ti for the QCA of RL literature helped the researcher to avoid additional time-consuming manual processes of managing documents, manually coding data and manually extracting quotations for the presentation of findings. However, the QCA of RL

literature was a time-consuming process in the data collection, analysis, interpretation and presentation of findings, emphasising the importance allocating sufficient time and effort for a successful QCA.

Based on the overview of QCA discussed in section 3.3.1 this study defines *QCA as a pragmatic, scientific, empirical grounded, systematic and flexible research method that can be part of mixed method or multimethod qualitative research designs, involving (1) step-by-step procedures (2) research question(s), (3) development of categories, (4) large and variety bodies of text, audio or visual material, and (5) time-consuming data coding and analysis processes, which can benefit from appropriate computer software (e.g. qualitative data analysis software, like ATLAS.ti) for effective data collection, analysis and presentation of qualitative findings*.

In the next section, a detailed discussion of the systematic (step-by-step) procedures of the QCA of RL literature will be provided.

3.3.2 Phases in the QCA of RL literature

As indicated in the characteristics and this study's definition (section 3.3.1.2), QCA involves step-by-step procedures. Although literature describe QCA procedures in steps, this study created phases based on the steps provided by Schreier (2012)[7] and Schreier (2014) and added several steps within these phases (if applicable). The steps of standard QCA includes (1) deciding on a research question/objective, (2) selecting material, (3) building a coding frame, (4) executing the coding frame, (5) evaluate and modify the coding frame, (6) main analysis of the qualitative data, and (7) interpreting and presenting the findings (Schreier, 2012:17; Scheier, 2014:174).

Based on these steps from Schreier (2012:17) and Schreier (2014:174), Table 3.3 provides an overview of the phases applied to the QCA of RL literature, including related descriptions and steps (except phase 3) developed by the researcher.

Table 3.3 Overview of phases in the QCA of RL literature

Phase	Name	Description	Steps in the phase
1	Identifying the research objectives and questions for the QCA of RL literature (section 3.3.2.1)	This phase involves the development of research objectives and questions based on the problem statement of a study.	-

[7] Margrit Schreier is as a seminal author in QCA, popularised by the 2012 publication of her book "Qualitative Content analysis in Practice". The book provides clear and step-by-step descriptions with practical examples of a QCA. Therefore, using Schreier as a reference was critical for the effective application of the QCA of RL literature.

2	Selecting materials for the QCA of RL literature (section 3.3.2.2)	This phase involves the selection of material that can be appropriate for answering the research questions. The unit of analysis can be identified, and a sampling strategy can be selected. The inclusion and exclusion criteria for the material must be defined and the process of selecting the material must be defined. This phase concludes with the identification and presentation of selected material.	• **Step 1**: Defining the unit of analysis for the QCA of RL literature • **Step 2**: Developing a sampling strategy for the QCA of RL literature • **Step 3:** Identifying sample material and data sources for the QCA of RL literature • **Step 4**: Defining search criteria for the QCA of RL literature • **Step 5**: Creating alerts and searching RL literature • **Step 6**: Scanning RL literature for sample selection • **Step 7**: Describing material excluded from for the QCA of RL literature • **Step 8**: Identifying and presenting the final sample of the QCA of RL literature
3	Developing the coding frame for the QCA of RL literature (section 3.3.2.3)	In this phase the coding frame is developed, which involves the identification, structure and description of categories and codes.	• **Step 1**: Selecting relevant categories for the QCA of RL literature • **Step 2**: Structuring the coding frame for the QCA of RL literature • **Step 3**: Defining categories for the QCA of RL literature • **Step 4**: Revising and expanding the coding frame for the QCA of RL literature (Schreier, 2012:91; Schreier, 2014:174)
4	Testing the coding frame for the QCA of RL literature (section 3.3.2.4)	The purpose of this phase is to test the developed coding frame. The phase involves sample selection for testing, preparation for coding and two trial coding rounds on the selected sample (if one researcher is involved). If software is used for the coding of documents, this phase can involve software training.	• **Step 1**: Training in ATLAS.ti for trial coding • **Step 2**: Selecting material for trial coding • **Step 3**: Preparing for trial coding in ATLAS.ti • **Step 4**: First trial coding round on selected sample • **Step 5**: Second trial coding round on selected sample
5	Assessing the coding frame of the QCA of RL literature (section 3.3.2.5)	In this phase the results of the two trial coding rounds completed in phase 4, are examined. The purpose of this phase is to determine consistency of the trial coding rounds and the validity of the coding frame.	• **Step 1**: Exporting trial coding results from ATLAS.ti • **Step 2**: Quantitative analysis of trial coding results • **Step 3**: Qualitative analysis of trial coding results • **Step 4**: Assessing outcomes of the coding frame analysis
6	Main analysis in the QCA of RL literature (section 3.3.2.6)	In this phase all material in the selected sample is coded with the developed and tested code frame. This phase is one of the most time-consuming phases in QCA. Depending on the approach followed in the development of the coding frame, this phase can include inductive coding and development of inductive categories from content assigned to deductive codes.	• **Step 1**: Creating a new project and adding documents in ATLAS.ti • **Step 2**: Preparing codes in ATLAS.ti for the main analysis of RL literature • **Step 3**: Coding articles in ATLAS.ti • **Step 4**: Exporting results and generating quotation output reports • **Step 5**: Inductive coding on quotation output reports
7	Interpreting and presenting the findings of the QCA of RL literature (section 3.3.2.7)	In this phase the QCA is concluded with interpretation and presentation of findings. The findings can be presented quantitatively and qualitatively through various styles of presentation.	-

Source: Compiled by the researcher

In subsequent sections, greater details of the phases and steps for the QCA of RL literature, will be provided. Due to the comprehensiveness of some of the phases and steps, some content was added to

appendices, which will be referenced in relevant discussions. This section concludes with a final table presenting a short summary of the content discussed in phases 1 to 7 for the QCA of RL literature.

3.3.2.1 Phase 1: Identifying the research objectives and questions for the QCA of RL literature

QCA process begins with deciding on the research questions (Selvi, 2019:444), which can be the most important phase for a successful QCA research design (Krippendorff, 2022:387). However, before the research questions can be formulated, the topic of interest (e.g. RL) must first be researched (Klenke, 2016b:96) for the identification of research gaps and problems (see sections 1.2 and 1.3). Thereafter, research problems must be converted into research objectives and related research questions (Krippendorff, 2022:386).

Evidently, the researcher must start by defining a study's objectives to develop research questions that must guide QCA procedures (Kunz, 2019:7). In this study the aim of the QCA of RL literature was to (1) *explore and analyse RL literature for consumer return types and pre-receipt RL processes of consumer returns (SRO-2)*, (2) *explore and analyse RL literature for post-receipt RL processes of consumer returns (SRO-3),* and (3) *explore and analyse RL literature for RL practices to manage consumer returns (SRO-4).* Subsequently, the research questions used to guide the of QCA of RL literature, included:

- *What are the types of consumer returns? (SRO-2)*
- *What are the pre-receipt RL processes for consumer returns? (SRO-2)*
- *What are the post-receipt RL processes for consumer returns? (SRO-3)*
- *What are the RL practices to manage consumer returns? (SRO-4)*

Identifying the purpose and research questions of the QCA of RL literature, enabled effective selection of materials, which will be described in the next section.

3.3.2.2 Phase 2: Selecting materials for the QCA of RL literature

Before building a coding frame, suitable amounts of material must be selected, reflecting a full diversity of sources (Schreier, 2014:175; Selvi, 2019:444). Selecting the materials in the QCA of RL literature involved several steps that will be described in subsequent paragraphs.

3.3.2.2.1 Step 1: Defining the unit of analysis for the QCA of RL literature

Before material can be selected, the researcher must first define the required material (Mayring, 2014:56), which entails a description of the unit of analysis that must be based on the purpose and research questions of a study (Kunz, 2019:7). With the expansion of the Internet and full-text

electronic databases, researchers can access large bodies of content-analysable texts (Krippendorff, 2022:391).

Although literature can include various forms, like scientific journal articles, conference proceedings, books, industry articles and magazines, this study only focused on scientific peer-reviewed journal articles since textbooks, working and conference papers and Internet articles may go through less rigorous peer-reviewed processes (Santos & D'Antone 2014:1014). Additionally, other publications that analysed RL literature used scientific journal articles as a unit of analysis (see section 3.3.2.2.3). Accordingly, the unit of analysis for the QCA of RL literature included *scientific peer-reviewed journal articles in RL.*

3.3.2.2.2 Step 2: Developing a sampling strategy for the QCA of RL literature

Due to the large volumes of available literature, Krippendorff (2022:392) and Schreier (2014:175) suggested that researchers break material down into smaller units. Therefore, the selection of materials can include a sampling strategy (Mayring, 2014:12), enabling the selection of statistically or conceptually representative subsets from the unit of analysis (Krippendorff, 2022:122).

Since this study involved qualitative research, the sampling strategy for the QCA of RL literature included *non-probability sampling,* which involves subjective judgement to reach objectives and answer research questions (Saunders *et al.* 2019:315). Particularly, *purposive sampling* was used to carefully select material that contributed to answering the research questions (Krippendorff, 2022:122; Saunders *et al.* 2019:321). Subsequently, the aim of purposive sampling was not to obtain a statistical representation from the population of material but to obtain relevant material to answer research questions, thereby excluding any irrelevant material (Krippendorff, 2022:123).

Nevertheless, sampling in QCA requires exact descriptions of the origin of data sources, conditions of selecting material (Mayring, 2014:57) and inclusion and exclusion criteria (Kunz, 2019:7), which will be described in subsequent steps.

3.3.2.2.3 Step 3: Identifying sample material and document sources for the QCA of RL literature

The identification of materials started in February 2016 with an initial search on Google Scholar for RL articles that contained either content analysis on RL literature or literature reviews in RL. The aim was to identify appropriate accredited peer review journals that was previously used by other scholars to analyse RL literature. A few articles with similar methodologies were identified, which enabled the identification of potential journals as a starting point in the selection of appropriate materials for the

QCA of RL literature. Specifically, the journals were identified from Hazen, Hall and Hanna (2012), Govindan, Soleimani and Kannan (2015) and Agrawal, Singh and Murtaza (2015).

Following the identification of materials, document sources must be identified (Kunz, 2019:7). For the QCA of RL literature, the University of South Africa's (Unisa's) online library e-journal search function was used to identify online databases that provide access to identified journals. These databases included Science Direct, Emerald, Tandofline, Wiley online library, ProQuest and Springer Link. However, since the identified journals were international or non-local, South African databases, namely Sabinet African Journals and AOSIS, were added as document sources to access local journals.

3.3.2.2.4 Step 4: Defining search criteria for the QCA of RL literature

Before searching the literature, Kunz (2019:7) indicated that search criteria for the identification of relevant literature must be defined. The keywords "returns management or reverse logistics management", "consumer returns", "reverse logistics processes" and "reverse logistics practices" formed part of the search criteria for the QCA of RL literature. Furthermore, only articles published between 2006 and 2016 was included in the search criteria. A date range of ten years was identified as standard for the analysis of literature, for example, Hazen *et al.* (2012) selected publications from 2000 to 2010.

3.3.2.2.5 Step 5: Creating alerts and searching RL literature

Since the selection of material for the QCA of RL literature commenced in 2016, the keywords defined in step 4 were used to create Google Scholar alerts. The Google Scholar alert function sends notifications via email, containing links to articles that may be relevant for answering the research questions. Additionally, the Google Scholar alerts resulted in the identification of additional peer-reviewed scientific journals, which were added to the journal sample.

From the accessible online databases, the advanced search function for each journal was used to add the keywords, "returns management or reverse logistics management", "consumer returns", "reverse logistics processes" and "reverse logistics practices" and to set the publication range between 2006 and 2016. An Excel spreadsheet was used to create a data matrix, listing the journal names in rows of the first column and the remaining column headings with the year of publication from 2006 to 2016 and publication totals. This document was used to present the final sample, provided in step 8.

3.3.2.2.6 Step 6: Scanning RL literature for sample selection

Step 6 involved scanning of RL literature to identify published articles in RL that can be included in the sample. Krippendorff (2022:88) indicated that reading material during the initial stages of QCA can involve scanning of words, sentences, paragraphs or whole publications for sample selection. For the QCA of RL literature the researcher scanned the entire article to purposively identify if the content of the article can be appropriate for answering the research questions.

A new data matrix was created in Ms Excel for each journal to record the scanning results. The data matrix included six columns with the following headings: (1) full reference, (2) consumer return type/reason, (3) pre-receipt RL process, (4) post-receipt RL process, (5) RL practice and (6) non-applicable. Columns two to five represented elements from the research questions (see section 3.3.2.1), ensuring that the sample contained articles that can be used to answer the research questions.

The references for all articles generated from the search results were added to the first column, whereafter each recorded article was scanned. The results of the scan enabled completion of the remaining columns in the data matrix. If an article contained sufficient content related consumer return types/reasons, pre-receipt RL processes, post-receipt RL processes or RL practices, it was marked with a corresponding "X", downloaded and saved in a folder. Furthermore, the data matrix created in step 5 was completed, adding a number to the relevant journal and date of publication. However, any article that excluded content related to the research questions was marked as non-applicable and discarded from the sample. If a journal failed to produce any relevant articles, it was deleted from the sample data matrix. The same scanning procedure applied to new published articles identified from the Google Scholar alerts.

Apart from identifying an appropriate sample, scanning of materials in QCA can be important for the development of conceptions and identification of potential points of analyses (Krippendorff, 2022:391). Consequently, scanning RL literature helped the research to identify potential subcategories for the development of the coding frame in phase 3.

3.3.2.2.7 Step 7: Describing materials excluded from the QCA of RL literature

Describing content excluded from the QCA can be important for transparency and replicability of a study (Kunz, 2019:7). For the QCA of RL literature, the researcher was unable to access some of the journals identified from Hazen *et al.* (2012), Govindan *et al.* (2015) and Agrawal *et al.* (2015). Unlike the 2020s', fewer open-access journals existed in 2016, which restricted access to journals from databases attainable through the researcher's institution (Unisa). However, some journals identified

from these studies lacked articles relevant for answering the research questions that were subsequently omitted from sampled journals.

Furthermore, the sample excluded RL articles that contained inadequate descriptions for a qualitative analysis, for example articles that mostly involved quantitative models, equations and statistical results. Nevertheless, the sample included a few RL articles with quantitative methodologies that contained sufficient descriptions of consumer return types, pre-receipt RL processes, post-receipt RL processes and/or RL practices. Consequently, the sample for the QCA of RL literature excluded any inaccessible and irrelevant material outside the scope of the research questions, unit of analysis and defined search criteria.

3.3.2.2.8 Step 8: Identifying and presenting the final sample of the QCA of RL literature

The final step of selecting material involves the identification and presentation of the final sample, which can contain defined characteristics, like publication names and years (Kunz, 2019:2). Due to the comprehensiveness of the sample, the data matrix (see steps 5 and 6), containing journal names, year of publications and corresponding number of publications, was used to present the final sample. Table 3.4 illustrates this data matrix, including details of the journals, the corresponding year ranges and total number of articles that was included in the final sample of the QCA of RL literature.

Table 3.4 Final sample of QCA of RL literature

Journal name	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total
International Journal of Production Research	1	2	1	1	4	3	11	1	1	2	0	**27**
International Journal of Production Economics	0	2	3	0	1	1	4	5	5	1	3	**25**
European Journal of Operational Research	1	3	1	1	1	1	1	1	3	3	0	**16**
Journal of Cleaner Production	0	0	0	0	0	2	0	5	0	4	3	**14**
Computers and Industrial Engineering	1	0	1	1	2	2	1	1	3	1	0	**13**
Resources, Conservation and Recycling	0	0	0	2	0	0	0	2	0	5	4	**13**
International Journal of Physical Distribution & Logistics Management	2	0	2	0	1	2	1	2	0	0	3	**13**
International Journal of Advanced Manufacturing Technology	0	0	1	0	4	0	0	2	1	0	2	**10**
International Journal of Supply Chain Management	0	0	0	0	0	0	0	3	4	2	0	**9**
International Journal of Logistics Management	1	0	1	0	0	2	0	2	2	0	0	**8**
Supply Chain Management: An International Journal	0	0	1	1	1	0	0	0	1	1	2	**7**
Omega	2	0	1	0	0	1	0	1	1	0	1	**7**
Computer & Operations Research	0	5	1	0	0	0	0	0	0	0	0	**6**
International Journal of Sustainable Engineering	0	0	4	1	0	0	0	0	0	1	0	**6**
Supply Chain Forum: An International Journal	1	0	1	0	0	3	1	0	0	0	0	**6**
Waste Management	0	0	0	1	1	0	1	0	0	2	0	**5**
International Journal of Logistics Research and Applications	0	2	2	0	0	0	0	0	0	0	1	**5**
Benchmarking: An International Journal	0	0	0	0	0	1	0	0	0	2	1	**4**
Decision Science	0	1	0	0	0	1	1	0	0	0	1	**4**
Industrial Marketing Management	0	0	0	0	1	0	1	0	0	1	0	**3**
International Journal of Computer, Electrical, Automation, Control and Information Engineering	0	0	0	0	1	0	0	0	0	2	0	**3**

Journal name	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total
International Journal of Operations & Production Management	0	0	0	0	0	0	0	1	0	0	2	**3**
Journal of Transport and Supply Chain Management	0	0	0	0	0	0	1	1	0	0	1	**3**
Production and Operations Management	2	0	0	0	0	0	0	0	1	0	0	**3**
Transportation Research Part E	0	0	0	1	0	0	1	1	0	0	0	**3**
Annals of Operations Research	0	0	0	0	0	0	0	0	0	0	2	**2**
Information Technology and Management	0	0	0	0	0	0	1	0	0	1	0	**2**
International Journal of Environmental Science and Technology	0	0	1	0	1	0	0	0	0	0	0	**2**
Journal of Business Logistics	0	0	0	1	0	0	1	0	0	0	0	**2**
Journal of Contemporary Management	0	0	0	1	0	0	0	0	0	1	0	**2**
Journal of Industrial Engineering International	0	0	0	0	0	0	0	0	0	0	2	**2**
Journal of Manufacturing Systems	0	0	0	0	0	0	0	0	0	2	0	**2**
Journal of Marketing	0	0	0	1	0	0	1	0	0	0	0	**2**
Journal of Modelling in Management	0	0	0	0	0	0	0	0	0	1	1	**2**
Journal of Remanufacturing	0	0	0	0	0	0	0	1	1	0	0	**2**
Journal of Retailing	0	0	0	0	0	0	0	0	0	0	2	**2**
Management Research News	1	0	0	1	0	0	0	0	0	0	0	**2**
Management Research Review	0	0	0	0	0	0	1	0	1	0	0	**2**
Measuring Business Excellence	0	0	0	0	0	0	2	0	0	0	0	**2**
Supply Chain Management Review	0	0	0	0	0	1	0	1	0	0	0	**2**
Uncertain Supply Chain	0	0	0	0	0	0	0	2	0	0	0	**2**
Journal of Intelligent Manufacturing	0	0	0	0	0	0	0	0	0	1	0	**1**
Journal of Retailing and Consumer Services	0	0	0	0	0	0	0	0	1	0	0	**1**
Applied Soft Computing	0	0	0	0	0	0	0	0	0	0	1	**1**
Asia Pacific Journal of Marketing and Logistics	0	0	0	1	0	0	0	0	0	0	0	**1**
British Journal of Management	0	0	0	0	1	0	0	0	0	0	0	**1**
Business Horizon	0	0	0	1	0	0	0	0	0	0	0	**1**
Clean Technologies and Environmental Policy	0	0	0	0	0	0	0	0	0	1	0	**1**
Corporate Social Responsibility and Environmental Management	0	0	0	0	1	0	0	0	0	0	0	**1**
Ecological Indicators	0	0	0	0	0	0	0	0	0	0	1	**1**
Environment Systems and Decisions	0	0	0	0	0	0	0	1	0	0	0	**1**
European Journal of Marketing	0	0	0	0	1	0	0	0	0	0	0	**1**
European Management Journal	0	0	0	0	0	0	0	0	0	0	1	**1**
Flexible Services and Manufacturing Journal	0	0	0	0	0	0	0	0	1	0	0	**1**
Global Journal of Flexible Systems Management	0	0	0	0	0	0	0	0	1	0	0	**1**
Group Decision and Negotiation	0	0	0	0	0	1	0	0	0	0	0	**1**
IEEE Transactions on Engineering Management	0	0	0	0	0	0	0	0	0	0	1	**1**
Industrial Management & Data Systems	0	0	0	1	0	0	0	0	0	0	0	**1**
Information Systems and Operational Research	0	0	0	0	0	0	0	0	0	0	1	**1**
International Journal of Commerce and Management	0	0	0	0	0	0	0	0	0	1	0	**1**
International Journal of Core Engineering & Management	0	0	0	0	0	0	0	0	1	0	0	**1**
International Journal of Engineering and Industrial Management	0	0	0	0	0	0	0	0	0	0	1	**1**
International Journal of Life Cycle Assessment	0	0	0	0	0	0	0	1	0	0	0	**1**
International Journal of Mathematical, Computational, Physical, Electrical and Computer Engineering	0	0	0	0	0	0	1	0	0	0	0	**1**
International Journal of Mechanical, Aerospace, Industrial, Mechatronic and Manufacturing Engineering	0	0	0	0	0	0	0	0	0	0	1	**1**
Journal of Organizational Analysis	0	0	0	0	0	0	1	0	0	0	0	**1**
International Journal of Productivity and Performance Management	0	0	0	1	0	0	0	0	0	0	0	**1**
International Journal of Research in Business and Social Science	0	0	0	0	0	0	0	0	0	0	1	**1**
International Journal of System Assurance Engineering and Management	0	0	0	0	0	0	0	0	0	0	1	**1**
International Journal of Systems Science: Operations & Logistics	0	0	0	0	0	0	0	0	0	0	1	**1**

Journal name	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total
Journal of Advances in Management Research	1	0	0	0	0	0	0	0	0	0	0	**1**
Journal of Business Economics	0	0	0	0	0	0	0	1	0	0	0	**1**
Journal of Fashion Marketing and Management: An International Journal	0	0	0	0	0	1	0	0	0	0	0	**1**
Journal of Operations Management	0	0	0	0	0	0	1	0	0	0	0	**1**
Journal of Supply Chain and Customer Relationship Management	0	0	0	0	0	0	1	0	0	0	0	**1**
Logistics Research	0	0	0	0	0	0	0	0	0	1	0	**1**
Marketing Letters	0	0	0	0	0	0	0	0	0	1	0	**1**
Multimedia Tools and Applications	0	0	0	0	0	0	0	0	0	1	0	**1**
OPSEARCH	0	0	0	0	0	0	0	0	0	0	1	**1**
Soft Computing	0	0	0	0	0	0	0	0	0	1	0	**1**
Sustainable Production and Consumption	0	0	0	0	0	0	0	0	0	0	1	**1**
The International Journal of Business & Management	0	0	0	0	0	0	0	0	0	0	1	**1**
Total Journals: 82	**13**	**15**	**21**	**17**	**21**	**22**	**34**	**35**	**28**	**39**	**44**	**289**

Source: Compiled by the researcher

Table 3.4 shows that the final sample of the QCA of RL literature covered 82 (international and local) journals with a combined total of 289 peer-reviewed scientific articles in RL published between 2006 and 2016. The journal with the highest number of RL publications included the International Journal of Production Research with 27 publications, followed by the Journal of Production Economics with 25 publications. Contrastingly, 41 journals included only one publication in RL relevant for answering the research questions.

Additionally, the highest number of articles (44) used for this study were published in 2016, while the least number of articles (13) were published in 2006. Essentially, RL literature that focused on consumer returns, RL processes, RL practices and RL management (RLM) increased by at least 50% between 2006 and 2016, which shows the increasing importance of RL as a research topic. The full list of the articles selected in the sample of the QCA of RL literature can be viewed in Appendix A.1.

In the next section, the development of a coding frame for the QCA of RL literature will be discussed.

3.3.2.3 Phase 3: Developing the coding frame for the QCA of RL literature

The coding frame can be described as the heart of the QCA method (Schreier, 2014:174), which functions as a system that transforms data into smaller more manageable units (Selvi, 2019:444). A coding frame provides rules for a scientific, systematic and logical QCA (Klenke, 2016b:98). Developing a coding frame involves the deductive and/or inductive identification of main categories and subcategories (or codes) (Schreier, 2014:176). A deductive approach uses existing knowledge and theory, like other research studies, to identify categories (Mayring, 2014:97; Schreier, 2014:176;

Selvi, 2019:446). An inductive approach uses the selected material to develop code categories and subcategories (Mayring, 2014:97; Schreier, 2014:176).

For the development of the coding frame for the QCA of RL literature, a deductive approach was used to identify categories and codes. However, later stages of the analysis involved inductive coding derived quotations assigned to deductive codes, which will be described in section 3.3.2.6. Schreier (2012:91) and Schreier (2014:174) indicated that the process of developing a coding frame can include several steps, including (1) selecting relevant categories, (2) structuring the coding frame, (3) defining categories and (4) revising and expanding the coding frame, which will be described in the subsequent sections.

3.3.2.3.1 Step 1: Selecting relevant categories for the QCA of RL literature

In this step the researcher determines the relevant and irrelevant parts of material. While sampling material involves inclusion and exclusion criteria, selecting relevant parts of material involves the identification of categories (Krippendorff, 2022:104). The relevant categories can be identified by (1) breaking down data according to sources or (2) breaking down data according to topic (Schreier, 2012:91). Furthermore, categories can be identified from the research questions or from theoretical constructs (Klenke, 2016b:103). For the QCA of RL literature, data was reduced according to topic, which covered consumer returns, pre-receipt RL processes, post-receipt RL processes and RL practices. Subsequently, only categories relevant to the research questions were selected as main categories in the coding frame.

As indicated in the introduction of section 3.3.2.3, code categories or subcategories can be derived deductively from theory and knowledge about the topic under investigation (Klenke, 2016b:103). The code categories for the QCA of RL literature were deductively identified, through a preliminary literature review on consumer returns, RL processes and RL practices. The preliminary literature review showed that consumer returns are limited in scope, meaning that no further code categories can be assigned to consumer returns. Contrastingly, RL processes and practices are broader in scope, requiring the identification of several code categories (subcategories). The code categories for the pre- and post-receipt RL processes were identified from Bernon, Rossi and Cullen (2011), Hazen *et al.* (2012) and Stock and Mulki (2009), and the code categories for the RL practices were identified from Badenhorst (2013) and Lambert *et al.* (2011).

Particularly, the code categories (or subcategories) for the (1) pre-receipt RL processes included a consumer return request, gatekeeping, collection and transportation, (2) post-receipt RL processes included receiving, processing, inspection/sorting, disposition and redistribution, and (3) RL practices

included information technology (IT), integration, outsourcing/insourcing, disposition practices, performance measurement (PM), facility/location practices, resource commitment (RC), financial management (FM), return avoidance and gatekeeping practices, procedural practices and staff and management practices. Some broader code categories required further subdivisions, which can be viewed in the coding framework presented in Appendix A.2.

3.3.2.3.2 Step 2: Structuring the coding frame for the QCA of RL literature

After selecting relevant categories, the coding frame can be structured for effective analysis. Although a deductive approach was used to identify code categories, Schreier (2012:102) suggested that a coding frame should allow for additional inductive categories (new categories identified during the analysis) by creating residual categories (miscellaneous categories). Since consumer returns as a main category excluded subcategories, two subcategories were created, namely general consumer returns and miscellaneous return types. Additionally, a miscellaneous category was assigned to the remaining main categories, enabling the identification of new categories or codes.

Using ATLAS.ti for the coding of RL articles, Friese (2012:1) suggested that coding categories must be structured according to the main category (such as Category A) and subcategories (such as Category A_sub1). When importing codes in ATLAS.ti (see section 3.3.2.6.2) the software automatically arranges the codes in alphabetical and numerical order. Therefore, the structure facilitated the grouping of main categories with related subcategories, simplifying the coding process in ATLAS.ti. Table 3.5 shows the broad structure of the coding frame for the QCA of RL literature.

Table 3.5 Broad structure of the coding frame for the QCA of RL literature

Main category	Code categories
CatA: Pre-receipt processes	CatA_Sub1: Customer return request CatA_Sub2: Gatekeeping process CatA_Sub3: Collection CatA_Sub4: Transportation of return CatA_Sub5: Miscellaneous pre-receipt process
CatB: Post-receipt processes	CatB_Sub1: Receiving CatB_Sub2: Processing CatB_Sub3: Inspection/sorting CatB_Sub4: Disposition CatB_Sub5: Redistribution CatB_Sub6: Miscellaneous post-receipt processes
CatC: Consumer returns	CatC_Sub1: General consumer returns CatC_Sub2: Miscellaneous types of returns

CatD: RL Practices	CatD_Sub1: IT practice CatD_Sub2: Integrations CatD_sub3: Outsourcing/insourcing CatD_sub4: Disposition practices CatD_sub5: Performance measurement CatD_sub6: Facility/locations strategies CatD_sub7: Resource commitment CatD_sub8: Financial management practices CatD_sub9: Return avoidance and gatekeeping practices CatD_sub10: Procedural practices CatD_sub11: Staff and management practices CatD_sub12: Miscellaneous practices

Source: Compiled by the researcher

Since some of the broader code categories included additional subcategories, additional code labels were assigned to the code categories, for example, CatB_sub4_1, CatB_sub4_2 and so forth. All categories identified in the coding frame represented deductive codes used for the main analysis of RL literature. Due to the comprehensiveness of the coding framework, these additional subcategories can be viewed in Appendix A.2.

3.3.2.3.3 Step 3: Defining categories for the QCA of RL literature

Following the structuring of the code frame for the QCA of RL literature, the next step involves category definitions (Selvi, 2019:446). Category definitions represent coding rules or selection criteria for assigning data to relevant categories (Mayring, 2014:82; Schreier, 2012:105). While brief descriptions can be provided for main categories, subcategories/codes can include more extensive definitions, enabling effective selection of relevant data (Selvi, 2019:446). Particularly, code definitions must describe the meaning of the code, provide decision rules (Friese, 2014:159; Schreier, 2014:177) or include examples that list the characteristics of the code (Krippendorf, 2022:142; Leedy & Ormrod, 2021:265).

Friese (2014:159) indicated that the process of defining categories and writing code definitions improves methodological rigour, forcing the researcher to think about a code's meaning in comparison to other codes. For the QCA of RL literature the codes were defined in several ways: (1) self-explanatory descriptions that excluded examples, (2) definitions identified from literature, (3) descriptions/examples of content relevant to the code, and/or (4) descriptions of content irrelevant to the code. The category/code definitions for the QCA of RL literature can be viewed in Appendix A2.

3.3.2.3.4 Step 4: Revising and expanding the coding frame for the QCA of RL literature

The final step in the development of the coding frame includes revision and expansion (Selvi, 2019:446), which involves the identification of categories/codes that must be included, excluded or altered in the coding frame (Scheier, 2012:115). Since the coding frame was developed from the

research questions and specific deductive subcategories derived from literature, no expansion, exclusions or changes were made during this stage of the QCA. However, the structure of the coding frame can only be finalised after the testing phase, which will be discussed in the next section.

3.3.2.4 Phase 4: Testing the coding frame for the QCA of RL literature

Before conducting the main analysis, pretesting is needed to recognise and modify any shortcomings in the coding frame. Since QCA excludes standardised instruments (of reliability and validity), a pilot study must be conducted to test the coding frame (Mayring, 2014:41). The process of testing the coding frame involves the selection and preparation of material and trial coding.

According to Mayring (2014:111), trial coding can either involve intra-coding agreement (one coder conducting two coding rounds) or inter-coder agreement (two coders), which measures the reliability of the coding frame. For the QCA of RL literature, intra-coding was conducted to test the coding frame, which involved coding of selected material on two separate occasions, approximately 10 to 14 days apart (Schreier, 2014:179). The aim of the trial coding was to obtain a structured code list that can be applied to the rest of the data in the main analysis (Friese, 2014:17).

Testing the coding frame for the QCA of RL literature consisted of several steps, including (1) ATLAS.ti training for trial coding, (2) selecting material for trial coding, (3) preparing for trial coding in ATLAS.ti, (4) first trial coding round on selected sample and (5) second trial coding round on selected material. These steps will be described in subsequent sections.

3.3.2.4.1 Step 1: Training in ATLAS.ti for trial coding

According to Klenke (2016b:109) threats to reliability of the QCA include inadequate coder training. Consequently, training in the use of computer-assisted qualitative analysis software (CAQDAS), like ATLAS.ti, can be essential for a sound QCA (Preiser *et al.* 2022:280). Nevertheless, Smit and Scherman (2021:3) indicated that few research studies provide examples for using ATLAS.ti to analyse literature. Evidently, training in ATLAS.ti was important for the QCA of RL literature.

Although limited research provided examples of using ATLAS.ti for literature reviews, Friese (2014) published a book, titled "Qualitative data analysis with ATLAS.ti", which was purchased prior to formal training. Containing practical examples and training exercises, the book was used as a reference in the QCA of RL literature. In 2016, the researcher's institution (Unisa) offered several ATLAS.ti workshops and training sessions, which the researcher attended in preparation for trial coding in August 2016. Consequently, the book and training ensured adequate preparation for the

effective testing (and later main analysis) of the developed coding frame for the QCA of RL literature.

3.3.2.4.2 Step 2: Selecting material for trial coding of the QCA of RL literature

Before trial coding can be conducted, a sample must be selected from the body of materials selected for the analysis. According to Schreier (2014:178), material selected in the trial coding phase must cover all aspects of the data (e.g. entire article) and most categories of the coding frame. Like the main process of selecting a sample (see section 3.3.2.2), purposive sampling was used to identify articles with sufficient content to test the coding frame.

The Excel data tables that recorded the results of the initial scanning of RL articles for each journal (see section 3.3.2.2.6) were used as a starting point to identify articles that covered most main categories derived from the research questions. Thereafter, each article was scanned to identify if the article contained sufficient content for effective testing of the coding frame. Subsequently, ten articles were selected from the 289 articles that sufficiently covered consumer returns, RL processes and RL practices and most categories in the coding frame. Table 3.**6** provides details of the articles purposively selected for trial coding, including the article number (generated in ATLAS.ti), full reference and justification for selection.

Table 3.6 Sample of articles included in trial coding

	REFERENCE OF ARTICLE	JUSTIFICATION
P1	Bernon, M. & Cullen, J. 2007. An integrated approach to managing reverse logistics - International Journal of Logistics Research and Applications. *International Journal of Logistics Research and Applications*. 10(January 2015):41–56.	This article contained content that covered consumer returns, pre- and post-receipt RL processes and RL practices.
P2	Bernon, M., Rossi, S. & Cullen, J. 2011. Retail reverse logistics: a call and grounding framework for research. *International Journal of Physical Distribution & Logistics Management*. 41(5):484–510.	This article contained content that covered consumer returns, pre- and post-receipt RL processes and RL practices.
P3	Genchev, S.E. 2009. Reverse logistics program design: A company study. *Business Horizons*. 52(2):139–148.	This article contained content that covered consumer returns, pre- and post-receipt RL processes and RL practices.
P4	Hazen, B.T., Hall, D.J. & Hanna, J.B. 2012. Reverse logistics disposition decision-making. *International Journal of Physical Distribution & Logistics Management*. 42(3):244–274.	This article contained content related to various post-receipt RL processes and practices.
P5	Lambert, S., Riopel, D. & Abdul-Kader, W. 2011. A reverse logistics decisions conceptual framework. *Computers and Industrial Engineering*. 61(3):561–581.	This article contained content that covered pre- and post-receipt RL processes and RL practices.
P6	Li, X. & Olorunniwo, F. 2008. An exploration of reverse logistics practices in three companies. *Supply Chain Management: An International Journal*. 13(5):381–386.	This article contained content that covered consumer returns, pre- and post-receipt RL processes and RL practices.
P7	Ravi, V. & Shankar, R. 2015. Survey of reverse logistics practices in manufacturing industries: an Indian context. *Benchmarking: An International Journal*. 22(5):874–899.	This article contained content that covered consumer returns, pre- and post-receipt RL processes and RL practices.
P8	Rogers, D.S., Melamed, B. & Lembke, R.S. 2012. Modeling and analysis of reverse logistics. *Journal of Business Logistics*. 33(2):107–117	This article contained content that covered consumer returns, pre- and post-receipt RL processes and RL practices.
P9	Skinner, L.R., Bryant, P.T. & Richey, R.G. 2008. Examining the impact of reverse logistics disposition strategies. *International Journal of Physical Distribution & Logistics Management*.	This article contained content that covered pre- and post-receipt RL processes and RL practices.

	REFERENCE OF ARTICLE	JUSTIFICATION
	38(7):518–539.	.
P10	Stock, J.R. & Mulki, J.P. 2009. Product returns processing: an examination of practices of manufacturers, wholesalers/distributors, and retailers. *Journal of Business Logistics*. 30(1):33–62.	This article contained content related to various post-receipt RL processes and practices.

Source: Compiled by the researcher

These ten articles presented in Table 3.**6**, represented valuable articles in the sample of 289 articles, which in combination applied to the entire code frame. The scope of other articles was limited, meaning that only parts of the coding frame can be applied to these articles. Subsequently, pilot testing on these articles would be futile and add additional time to the QCA process.

3.3.2.4.3 Step 3: Preparing for trial coding in ATLAS.ti

This step involves preparation of documents, codes and code definitions in ATLAS.ti for trial coding. A project file called a hermeneutic unit (HU) in ATLAS.ti is (Friese, 2014:23), was created and named "Trial coding 1" for the first trial coding round. Various file types can be added to ATLAS.ti, for example, text documents (e.g. interview transcripts, reports or articles), images (e.g. screenshots or photos), audio recordings (e.g. interviews, music or podcasts), video clips, geo data (Google Earth) and PDF files (Friese, 2014:24).

For this study, PDF documents were added since all sampled articles (289) were downloaded in PDF format. Subsequently, the ten articles selected for the trial coding (Table 3.**6**) were added to the project file (Trial coding 1). ATLAS.ti automatically arranges the files in alphabetical order and assign the letter "P" [8] and a number to the document. The letter "P" represents the ATLAS.ti term "primary documents" or "P-Docs" and the number represents the numerical order of the document. For example, the first document will be "P1" and the second document "P2".

After adding the documents and saving the project file, the codes must be added to the project. In ATLAS.ti codes can be imported from an external source, eliminating the need of creating codes manually in the programme. The coding frame developed in phase 3 was copied (without definitions) into an Excel worksheet and saved. Thereafter, the code list was imported using the codebook import function in ATLAS.ti, which organised the codes in alphabetical and numerical order. Section 3.3.2.6 provides more details on importing a coding frame into ATLAS.ti.

Following the import of codes in the project file, the definition of each code was manually added using the code comment function of ATLAS.ti. The importance of code definitions was discussed in

[8] The letter "P" was replaced with "D" (documents) in later ATLAS.ti versions

section 3.3.2.3.3. When selecting the code in ATLAS.ti, the definition becomes visible, ensuring that the content is coded consistently and accurately. Subsequently, the project was saved, concluding the preparation step in phase 4 of the QCA of RL literature. The application of ATLAS.ti will be described in greater detail in phase 6 (section 3.3.2.6), involving the main analysis phase of the QCA of RL literature.

3.3.2.4.4 Step 5: First trial coding round on selected sample

Following the preparation of materials, the first trial coding round of selected material (Table 3.**6**) commenced. The coding process involved reading each article, line by line, to identify if the content can be applied to the coding frame (Mayring, 2014:82). If a sentence, sentences, paragraphs or sections from the article applied to the coding frame, it was selected and assigned with the relevant code. The process of coding in ATLAS.ti will be explained in greater detail in section 3.3.2.6. Subsequently, ten articles were meticulously coded with the coding frame developed in phase 3 of the QCA of RL literature. No problems with the developed coding frame, including code definitions, were identified in the first trial coding round.

3.3.2.4.5 Step 6: Second trial coding round on selected sample

As suggested by Scheier (2014:19), the second trial coding round started two weeks (14 days) after the first trial coding round concluded. The same preparation process of creating a project file ("Trial coding 2"), adding documents (ten articles from the sample), importing codes and creating code definitions in ATLAS.ti applied to the second trial coding round.

In the second trial coding round of the QCA of RL literature, the researcher repeated the coding process, meticulously reading each article, line by line, without referring to the results of the previous coding round (Mayring, 2014:111). Like the first trial coding, the second trial coding confirmed that the coding frame and definitions can be used for the main analysis. The second trial coding round concluded phase 4, involving effective application of the developed code frame for the QCA of RL literature. In the next phase, the results of the trial coding rounds will be analysed.

3.3.2.5 Phase 5: Assessing the coding frame of the QCA of RL literature

In this phase the results of the two trial coding rounds (section 3.3.2.4) must be examined in terms of consistency and validity, which can help to identify potential problems with the coding frame and coding process. The higher the consistency between the two trial coding rounds, the higher the quality of the coding frame (Schreier, 2014:175). Additionally, the validity of the coding frame involves the extent to which the categories adequately describe the content and concepts related to the research

questions (Schreier, 2014:175). Consequently, if the coding frame requires significant revision, a second round of trial coding rounds must be conducted, meaning that phases 4 and 5 of the QCA must be repeated (Schreier, 2014:175).

In the subsequent sections, the steps for the assessment of the coding frame of the QCA of RL literature will be described.

3.3.2.5.1 Step 1: Exporting trial coding results from ATLAS.ti

The "Code-Document-Analysis" function of ATLAS.ti can be used for quantitative results (i.e. code frequencies) of coding, which can be exported to Excel for analysis. The exported results in Excel include a tabulation of the code categories, document names and corresponding frequency of codes assigned to quotations (passages). Table 3.7 shows the combined results of the two trial coding rounds to assess the coding frame for the QCA of RL literature.

Table 3.7 Trial coding results for the QCA of RL literature

Trial coding 1	**P1**	**P2**	**P3**	**P4**	**P5**	**P6**	**P7**	**P8**	**P9**	**P10**	**TOTALS:**
Pre-receipt RL processes	4	1	6	0	10	3	3	1	1	1	30
Post-receipt RL processes	14	10	10	11	20	2	1	36	12	28	144
RL practices	42	24	27	24	16	17	18	21	25	21	235
Consumer returns	3	2	3	0	0	3	2	1	0	0	14
TOTALS:	63	37	46	35	44	25	24	59	38	50	423
Trial coding 2	**P1**	**P2**	**P3**	**P4**	**P5**	**P6**	**P7**	**P8**	**P9**	**P10**	**TOTALS:**
Pre-receipt RL processes	4	2	6	0	12	3	3	1	1	1	33
Post-receipt RL processes	17	12	12	13	22	3	1	39	15	30	164
RL practices	44	29	29	25	18	18	19	23	26	22	253
Consumer returns	3	2	3	0	0	3	2	1	0	0	14
TOTALS:	68	46	50	38	52	27	25	64	42	53	464

Source: Compiled by the researcher

Due to the comprehensiveness of the coding frame, only the main categories from the coding frame are presented in Table 3.7. The table shows the results of the two trial coding rounds, including code frequencies per document and category, total code frequencies per document and category and combined totals. The assessment of the results will be described in the subsequent steps.

3.3.2.5.2 Step 2: Quantitative analysis of trial coding results

Table 3.7 illustrates minor inconsistencies between the two trial coding rounds of the QCA of RL literature. Particularly, the results showed that more quotations were assigned to the codes in the second trial coding round, which required further examination. These inconsistencies were investigated by reviewing the subcategory codes, for example, comparing the results of "consumer

return request", "gatekeeping", "collection" and "transportation" as codes in the pre-receipt RL processes. Using article "P5" as an example, the results showed that codes in the pre-receipt RL process category were assigned to ten quotations (e.g. sentences and/or paragraphs from the article) in the first trial coding round and twelve quotations in the second trial coding round. In reviewing the subcategory codes, the discrepancies originated from "collection" as a pre-receipt RL process code. Particularly, the collection code was assigned to three quotations in the first coding round and five quotations in the second coding round. Subsequently, these inconsistencies require further investigation, which will be described in the next step.

3.3.2.5.3 Step 3: Qualitative analysis of trial coding results

Following the quantitative comparison of inconsistencies for each code, the qualitative findings between the two trail coding rounds were compared to identify the causes for inconsistencies. Continuing with the example for article P5 and inconsistencies with the pre-receipt RL process code "collection", it was noted that in the first trial coding round the collection code was assigned to a paragraph, but in the second coding round the collection code was only assigned to relevant sentences in the same paragraph. In other words, in the second trial coding the collection code was assigned to three sentences instead of an entire paragraph that also contained irrelevant content.

In terms of other, less frequent, inconsistencies, it was noted that some quotations were missed in the first coding round, which was attributed to the researcher's familiarisation of the coding frame. Subsequently, in the second coding round the researcher was more familiar with the coding frame, resulting in more accurate application of the coding frame.

3.3.2.5.4 Step 4: Assessing outcomes of the trial coding analysis

To address this problem for the main analysis, the researcher determined that the relevancy of the content was more important for accurate findings. Therefore, instead of coding an entire paragraph, only the sentence(s) that specifically refer to the code category will be coded. Evidently, the frequencies of the codes will be higher but the content per code will be more relevant, ensuring the validity of the coding frame.

This can be described as segmentation, ensuring that relevant parts of the text are assigned to the coding frame (Schreier, 2012:139; Schreier, 2014:178). Segmentation can include one word or an entire article, depending on the code category definition (Schreier, 2014:178). The segmentation units can either be formally identified (e.g. end of sentence or paragraph) or thematically identified (e.g. change of topic) (Schreier, 2014:178). Since published articles are formally written with clear separation of sections, paragraphs, sentences and themes, a combination of formal and thematic

segmentation was used to determine aspects of the content relevant to the coding frame. Consequently, analysing the coding frame provided valuable insight into the significance of selecting relevant quotations from the articles for effective analysis.

Since the results of trial coding involved minor inconsistencies in terms of segmentation, the researcher was satisfied that the coding frame (see Appendix A2) can be applied to entire dataset (289 articles). Subsequently, no further analysis of the coding frame was needed, meaning that the main analysis phase for the QCA of RL literature can commence.

3.3.2.6 Phase 6: Main analysis in the QCA of RL literature

Phase 6 represents the main analysis that involves the official coding process in QCA (Selvi, 2019:447), meaning that the finalised coding frame must be applied to all material. The aim of the coding process is to reduce qualitative data and organise large bodies of text into fewer content categories (Klenke, 2016b:103) to effectively answer the research questions (Mayring, 2014:79).

Evidently, phase 6 in the QCA of RL literature involved coding of 289 published articles in the selected sample (see Appendix A.1). The steps of creating a project, adding documents, importing codes, creating code definitions and creating output reports in ATLAS.ti were briefly described in phase 4, testing the coding frame (see section 3.3.2.4). In this phase, the application of ATLAS.ti for the QCA of RL literature will be described in greater detail, with supporting screenshots provided in Appendix B.

Phase 6 of the QCA of RL literature included (1) creating a new project and adding documents in ATLAS.ti, (2) preparing codes for the main analysis of RL literature, (3) coding articles in ATLAS.ti, (4) creating output reports in ATLAS.ti for further analysis and (5) inductive coding on content from coded categories, which will be described in subsequent sections.

3.3.2.6.1 Step 1: Creating a new project and adding documents in ATLAS.ti

ATLAS.ti can assist a researcher to keep track of search terms, keywords, database sources and journals along with the functionality of adding documents and articles from any folder or database (Smit & Scherman, 2021:2). For the main analysis, a new ATLAS.ti project was created and saved as "Main analysis of QCA RL literature".

Next, the 289 articles selected in the sample (see Appendix A.1) were added to the project. The software Mendeley was used to create a bibliography for the 289 sampled articles in the QCA of RL literature. This step ensured that all articles selected in the sample was added to the ATLAS.ti project.

Finally, the “document comment” function of ATLAS.ti was used to provide the bibliographical and in-text citation of each article. Appendix B.1 provides an example of adding files and creating document definitions in ATLAS.ti.

3.3.2.6.2 Step 2: Preparing codes in ATLAS.ti for the main analysis of RL literature

The next step was adding the coding frame (see Appendix A.2) to the main analysis project in ATLAS.ti. The codebook import function in ATLAS.ti was used to import the code frame from an Excel spreadsheet. During the trial coding phase, the older version 7 of ATLAS.ti was used, which excluded the option of importing codes with code definitions. However, version 8 of ATLAS.ti was used for the main coding phase, which included the option to import a codebook with definitions. Subsequently, this not only ensured that all codes included definitions in ATLAS.ti but also reduced the time of manually adding code definitions to each code. Appendix B.2 shows the codebook import function in ATLAS.ti and the example of the Excel spreadsheet with the coding frame, including definitions, which was imported for the main analysis.

Finally, the codes were grouped according to the main categories, namely pre-receipt RL processes, post-receipt RL processes, RL practices and consumer returns, using the code group manager function in ATLAS.ti. Using the group function simplify the interpretation and presentation of findings, which will be discussed in section 3.3.2.7. Appendix B.3 demonstrates the group code function in ATLAS.ti for the grouping of codes into main categories.

3.3.2.6.3 Step 3: Coding articles in ATLAS.ti

With the code preparation completed, the coding process for the QCA of RL literature in ATLAS.ti commenced. The initial coding process started from December 2016 and care was taken that no new articles relevant to the study was omitted from the final sample. It was noted that no new articles relevant to the QCA of RL literature was published in December 2016, therefore, the researcher was confident that the sample was appropriate.

Each article (document) can be opened and read in ATLAS.ti, and the codes can be assigned to the text (sentences, paragraphs or sections) in an article. Coding in ATLAS.ti involves highlighting texts (quotations) and assigning codes, which can be used to collect and link various quotations that share a common characteristic (Smit & Scherman, 2021:2). More specifically, coding of the articles involved (1) selecting the sentence/paragraph of the article, (2) selecting the code (from the code menu) and (3) dragging the code to the highlighted passage (called a quotation). To facilitate the discussion and presentation of findings, the quotation comment function was used to add the in-text citation

(including the page reference) of the relevant article. Appendix B.4 demonstrates the process of coding and using the quotation comment function to add the in-text citation of the article.

After the initial coding process, it was necessary to review the accuracy of the results. At that stage ATLAS.ti excluded an automatic code-function. Instead, the search and code functionality in ATLAS.ti was used, which enables text (or keywords) searches within a single article or across multiple articles (Smit & Scherman, 2021:2). For example, the keyword "collection" was entered in the text search function, which lists extracts (e.g. paragraphs) from all articles that contained the word "collection". Consequently, if a relevant passage excluded the collection code, the functionality in ATLAS.ti enables the assignment of relevant codes, like the collection code, to the text. Evidently, to address potential human error in the coding process, each code name (e.g. collection, transportation and inspection) from the coding frame was entered in the search function of ATLAS.ti to identify if any relevant text was miscoded.

This cross-checking process was performed once all articles were manually coded, which enhanced the reliability and trustworthiness of the findings of the QCA of RL literature. The elements of trustworthiness in the QCA of RL literature will be discussed in section 3.3.3. Appendix B.6 shows an example of utilising the search function in ATLAS.ti to ensure that no quotations were missed during the main coding process.

3.3.2.6.4 Step 4: Exporting results and generating quotation output reports

After the coding process, the results and findings can be explored through the "code-document analysis", "code-manager" and "report" functions in ATLAS.ti. The use of these functions for further analysis will be briefly discussed in subsequent paragraphs.

The code-document analysis function of ATLAS.ti can be used to generate quantitative results from the coding process. Particularly, the codes, code-groups and documents (articles) can be selected, which provides a cross-tabulation of the code frequencies assigned to text in the articles. These results can be exported to Excel, which can be used for further explorations. Appendix B.7 illustrates the code-document analysis function in ATLAS.ti that was used to export coding results to Excel.

Since QCA involves analysis of qualitative data, quotation output reports must be created to explore and analyse qualitative findings. The output report can be generated for a single code, multiple codes, code groups or all codes, which provides all the quotations assigned to the selection. In the code-manager of ATLAS.ti the code (e.g. inspection) and report function can be selected, which then opens a separate window to select output options. The output options include (1) date and users (appropriate

for multiple coders), (2) comments (of selected code), (3) groups (associated to the code), and (4) quotation options (such as type of content, date and users, content and comments).

For the QCA of RL literature the researcher selected the code comment option (which showed the code definition) and quotation options, including (1) content (all coded quotations) and (2) comments (in-text citations). After selecting the output options the report is generated in a document format, which can be saved as a document in Ms Word. An example of a generating a quotation output report, including selecting a code in the code manager, selecting the report function, selecting output options and generating the report in Ms Word, can be viewed in Appendix B.7. Essentially, the process was repeated for each code category from the coding frame, which enabled inductive coding and further analysis, discussed next.

3.3.2.6.5 Step 5: Inductive coding on quotation output reports

According to Leedy and Ormrod (2021:266), if coded material (quotations assigned to codes) in QCA involves complex or lengthy items, the researcher can divide the material into smaller more manageable units that can be separately analysed. Therefore, coded material can further be reduced and analysed through additional deductive and/or inductive coding processes (Mayring, 2014:104).

Since the main analysis process in the QCA of RL literature resulted in large amounts of quotations assigned to deductive codes (from the coding frame in Appendix A.1), additional coding was needed. A new ATLAS.ti project was created for each deductive code/code category and the quotation output report of the code, generated in step 4, was added as a document. This enabled the identification of inductive (new data-driven) codes from content, originally assigned to deductive codes during the initial coding process of the main analysis. Subsequently, instead of recoding the content from 289 articles, only quotations (passages) assigned to original codes were recoded with inductive codes.

As an example, in a new ATLAS.ti project created for the original code “inspection”, the quotations assigned to the inspection code were studied to identify new inductive codes. Following this, the option “add code” was selected to enter a name for the inductive code, which can be added to the selected text. Eventually, with several inductive codes identified, the “add code” option includes a list of all entered inductive codes, which can be selected and added to the text. Since inductive codes are identified while reading the content, the material must be recoded a second or third time, ensuring that the inductive code list gets equally assigned to all material in the project. Appendix B.8 illustrates this example of adding inductive codes in the ATLAS.ti project created for “inspection” as a deductive code.

Once inductive codes were identified and assigned to coded material, inductive code categories were created to group inductive codes. According to Mayring (2014:52), inductive category development can be one of the most common procedures in a QCA, involving step-by-step augmentation of categories while working through the text. Subsequently, inductive codes that share commonalities can be grouped, resulting in the creation of inductive code categories. Eventually, the inductive code categories were standardised across "deductive code" projects for RL processes and RL practices. For example, the inductive code categories for most RL processes included (1) characteristics, (2) activities, (3) facilities and (4) parties.

Essentially, the process of inductive coding ensured that the QCA of RL literature included data-driven content, which can be important for QCA (Schreier, 2014:173). Additionally, inductive coding divided the coded material into manageable units for effective interpretation and presentation of findings, which will be discussed in the next section.

3.3.2.7 Phase 7: Interpreting and presenting the findings of the QCA of RL literature

Phase 7 involved the interpretation and presentation of the findings from the QCA of RL literature. Depending on the aim of a study, all categories in the QCA can form part of the interpretation of findings (Mayring, 2014:81). Interpretation in a QCA can be supported by providing quotations, constructing parallelisms between code categories and elaborating on key elements identified in the analysis, which can be compelling for readers interested in the context of analysed texts (Krippendorf, 2022:93). The findings of a QCA can be presented in a quantitative and qualitative style (Schreier, 2014:180). An overview and application of these styles will be given in subsequent sections.

3.3.2.7.1 Quantitative presentation of QCA findings

Quantification in QCA involves frequency counts, statistics, percentages, charts and graphs (Selvi, 2019:447). Presenting findings of QCA in a quantitative style can involve absolute frequencies, descriptive group comparisons and inferential statistics (Schreier, 2012:242). *Absolute frequencies* involve the identification of codes and categories that occurred most frequently in the content (Mayring, 2014:41; Schreier, 2012:242). This can be done through data matrices (Schreier, 2012:242) or software (like ATLAS.ti) that automatically provide frequency counts (Mayring, 2014:42). Furthermore, frequency counts can be presented in bar charts or transformed into percentages (Schreier, 2012:245).

Descriptive group comparisons can be used to compare the code frequencies of different groups (Schreier, 2012:242). For example, comparing the code frequencies between different articles,

journals or years of publications. Finally, *inferential statistics* in QCA extends descriptive group comparisons, involving t-tests and chi-square tests (Schreier, 2012:248-249). Nevertheless, Mayring (2014:41) indicated that reasons for using quantitative presentation of findings in QCA must be justified.

For the QCA of RL literature, the document-code analysis function in ATLAS.ti was used to identify absolute frequencies of code categories (see Appendix B.6), including frequency counts presented in bar charts and percentages presented in pie charts. The purpose of the quantification of findings was to demonstrate the importance of code categories in literature as well as identify potential gaps in literature. Appendix C contains the quantitative results of the main categories, categories and subcategories from the QCA of RL literature. The bar charts with frequencies and pie charts with percentages were presented in chapters 4 to 6 in the findings of the QCA of RL literature.

3.3.2.7.2 Qualitative presentation of QCA findings

Although quantitative results can be used, the findings of QCA mostly focus on detailed descriptions of the content under analysis (Schreier, 2014:173). Therefore, the presentation of qualitative findings takes precedence over the quantification of code categories, group comparisons and statistics. The presentation of findings in QCA mostly involves categories and/or themes (Graneheim, 2017:32; Selvi, 2019:447), which can be based on the structure of the coding frame (Schreier, 2014:180). Furthermore, ATLAS.ti can be used to categorise codes and identify quotations assigned to specific codes, which can be useful in the write-up of findings (Smit & Scherman, 2021:2). Qualitative findings in QCA can be presented in several styles, including continuous text, text matrices and additional data explorations (Schreier, 2014:180).

Using *continuous text* can be the standard qualitative writing and presentation style, involving a description of the category, summary of the essence of the category and description of concepts underlying the category. Additionally, the description and summary can be illustrated with several quotations from the content (Schreier, 2012:231). *Text matrices* can be appropriate for large coding frameworks and large amounts of coded content and quotations (Schreier, 2012:233). Instead of writing continuously, a text matrix provides an overview of the findings with illustrative quotations. Nevertheless, text matrices must be accompanied by written text, providing more detailed descriptions of the findings (Schreier, 2012:233). Finally, *additional data exploration* can involve (1) exploring patterns in the findings and co-occurrences (relationships) between categories for further analysis, and (2) constructing a typology to summarise and condense findings (Schreier, 2012:239-240).

In this study a combination of these styles was applied to effectively interpret and present the findings of the QCA of RL literature. Firstly, the *structure* of the original *coding frame* (Appendix A.2) was used as a basis for presenting the main categories, which represented the deductive codes of the coding frame. Secondly, due to the large variety of categories and amounts of material (from 289 published articles) *text matrices* or qualitative data tables were used as the main form of presentation. The data tables presented the categories (inductive code categories), subcategories (inductive codes), authors (references) and key quotations (examples to support discussion of findings).

Thirdly, the tables used for presenting the QCA findings were supplemented by a *discussion* and an interpretation of the findings, which culminated into the creation of definitions and conceptual frameworks for each main (deductive code) category. Finally, *data exploration* was used for further analysis, including studying the relationships between categories in terms of shared subcategories and unique subcategories, which resulted in a final conceptual framework and a summary of findings (typology).

Essentially, the result of the QCA of RL literature was a comprehensive and holistic presentation of findings, which included quantitative overviews (frequencies, percentages, bar charts and pie charts), qualitative data tables (text matrices), discussion of findings and further explorations on the relationship of categories with conceptual frameworks and summaries (typology) of findings. The interpretation and presentation of findings for the QCA of RL literature can be viewed in chapter 4 (consumer returns and pre-receipt RL processes), chapter 5 (post-receipt RL processes) and chapter 6 (RL practices). Table 3.8 provides a summary of the phases applied to the QCA of RL literature.

Table 3.8 Summary of the application of phases in the QCA of RL literature

PHASES	SUMMARY OF APPLICATION
Identifying the research objectives and questions for the QCA of RL literature (section 3.5.1)	• Research questions for the QCA of RL literature identified as: ○ What are the types of consumer returns? (SRO-2) ○ What are the pre-receipt RL processes for consumer returns? (SRO-2) ○ What are the post-receipt RL processes for consumer returns? (SRO-3) ○ What are the RL practices to manage consumer returns? (SRO-4)
Selecting materials for the QCA of RL literature (section 3.5.2)	• Unit of analysis identified as scientific peer-reviewed journal articles in RL • Non-probability purposive sampling strategy • Identifying sample material from similar studies • Finding online databases to access local and international journals • Search criteria for sample selection included (1) "returns management or reverse logistics management", "consumer returns", "reverse logistics processes" and "reverse logistics practices" as keywords and (2) publication year range between 2006 – 2016 • Creating publication alters in Google Scholar • Searching online journals for appropriate RL articles • Scanning and identifying relevant/irrelevant RL articles • Downloading and saving relevant RL articles in folders • Exclusion criteria included (1) inaccessible or irrelevant journals, (2) articles with limited or inadequate discussions, (3) quantitative articles with models and equations

PHASES	SUMMARY OF APPLICATION
	that lack qualitative content and (4) RL literature outside the scope of the research questions, unit of analysis and search criteria • Identifying final sample of 82 journals, covering 289 peer-reviewed scientific journal articles in RL, published between 2006 and 2016.
Developing the coding frame for the QCA of RL literature (section 3.5.3)	• Deductive development of code categories and codes • Main categories represented the research questions, including consumer returns, pre-receipt RL processes, post-receipt RL processes and RL practices • Preliminary literature review was used to identify subcategories (or deductive codes) • The coding frame structure included: o Pre-receipt RL processes (CatA) – consumer return request (CatA_Sub1), gatekeeping (CatA_Sub2), collection (CatA_Sub3), transportation (CatA_Sub4) and miscellaneous pre-receipt processes (CatA_Sub4) o Post-receipt RL processes (CatB) – receiving (CatB_Sub1), processing (CatB_Sub2, inspection/sorting (CatB_Sub3), disposition (CatB_Sub4), redistribution (CatB_Sub5) and miscellaneous post-receipt processes (CatB_Sub6) o Consumer return (CatC) – general consumer returns (CatC_Sub1) and miscellaneous return types (CatC_Sub2) o RL practices (CatD) – IT (CatD_Sub1), integration (CatD_Sub2), outsourcing/insourcing (CatD_Sub3), disposition practices (CatD_Sub4), PM (CatD_Sub5), facility/location practices (CatD_Sub6), RC (CatD_Sub7), FM (CatD_Sub8), return avoidance and gatekeeping practices (CatD_Sub9), procedural practices (CatD_Sub10), staff and management practices (CatD_Sub11) and miscellaneous practices (CatD_Sub12) • Code category definitions ranged from (1) self-explanatory descriptions that excluded examples, (2) definitions identified from literature, (3) descriptions/examples of content relevant to the code, and/or (4) descriptions of content irrelevant to the code
Testing the coding frame for the QCA of RL literature (section 3.5.4)	• Intra-coder agreement for trial coding conducted 10 to 14 days apart • ATLAS.ti training in preparation for trial coding • Purposively selected ten articles from the 289 sampled articles based on the comprehensiveness of content and coverage of the coding frame • Preparing for trial coding in ATLAS.ti included (1) creating a project, (2) adding documents, (3) importing codebook and (4) adding code definitions. • First trial coding round conducted in the ATLAS.ti project, named "Trial coding 1" • Second trial coding round conducted in ATLAS.ti project, named "Trial coding 2", two weeks after concluding the first trial coding round
Assessing the coding frame of the QCA of RL literature (section 3.5.5)	• Assessing the results of the trial coding for consistency and validity • Using the "Code-Document Analysis" function in ATLAS.ti to export trial coding results to Excel • Combining the trial coding results in a table for further analysis • Quantitative analysis of trial coding results involved identifying inconsistencies in subcategories (codes) • Qualitative analysis of trial coding involved comparison of coded text to examine inconsistencies in subcategories • The outcome of the trial coding analysis included segmentation, involving strictly coding relevant passages, excluding the assignment of irrelevant content to a code • No additional trial coding rounds or adjustments to the coding frame required
Main analysis in the QCA of RL literature (section 3.5.6)	• Main coding of 289 published articles • Creating a new project, "Main analysis of QCA RL literature" in ATLAS.ti • Adding 289 articles to the ATLAS.ti project • Adding 289 articles to Mendeley for bibliographical details • Using the document comment function to add bibliography details (full reference and in-text citation) of each article • Using the import codebook function in ATLAS.ti to important codes with definition

PHASES	SUMMARY OF APPLICATION
	from Excel • Using the code group function in ATLAS.ti to group codes into main categories • Main coding process for the QCA of RL literature started • Coding involved selecting the text, dragging the relevant code to the text and selecting the quotation comment function to add the in-text citation of the article • Using the "search and code" function of ATLAS.ti to review the accuracy of coding results • Reviewing the text search results and assigning relevant codes to miscoded text • Using "document-code analysis" function in ATLAS.ti to export quantitative results of coding to Excel • Using the code-manager and report functions in ATLAS.ti to generate quotation output reports in Word for qualitative findings • Creating ATLAS.ti projects and adding quotation output reports for each deductive code • Inductive coding on quotations assigned to deductive codes in the initial coding process • Creating inductive code categories to group inductive codes that share commonalities
Interpreting and presenting the findings of the QCA of RL literature (section 3.5.7)	• Holistic interpretation and presentation of findings • Quantitative style of absolute frequencies, using bar charts to present deductive code frequencies and pie charts to present frequency percentages • Using deductive coding frame to structure the presentation of qualitative findings • Qualitative style of text matrices, presenting (inductive code) categories, subcategories (inductive codes), authors and key quotations • Qualitative style of discussing the findings from text matrices, resulting in main category (deductive code) definitions and conceptual frameworks • Qualitative style of data exploration, including studying relationships between main categories (deductive codes) in terms of shared and unique subcategories, creating conceptual frameworks and summary (typology) of findings

Source: Compiled by the researcher

In the next section, the trustworthiness of the QCA of RL literature will be provided.

3.3.3 Trustworthiness of the QCA of RL literature

Various criteria can be used to determine and demonstrate the quality and trustworthiness of QCA. While Krippendorff (2022:93) indicated that quantitative measures of reliability and validity may be less important in QCA, Scheirer (2012:177, 186) indicated that reliability and validity can be useful in QCA. Nevertheless, QCA researchers often adopt and describe standard qualitative criteria of trustworthiness (Krippendorff, 2022:93), including credibility, dependability, conformability and transferability (Elo, Kääriäinen, Kanste, Pölkki, Utriainen & Kyngäs, 2014:1; Graneheim *et al.* 2017:33).

In this study, the standard trustworthiness criteria of qualitative research, and reliability and validity criteria, in terms of application to QCA, will be adopted as the elements of trustworthiness in the QCA of RL literature. These trustworthiness criteria in QCA can be described as follows:

- *Reliability* as a traditional quantitative criterion can be used in assessing the quality of a coding frame (viewed as the research instrument) to produce error-free data (Schreier, 2012:177). Additionally, reliability in QCA can be realised by implementing a systematic step-by-step procedure and demonstrating transparency throughout the implementation of procedures (Schreier, 2012:37).
- *Validity* as a traditional quantitative research criterion can be particularly important in evaluating the quality of QCA. Validity involves the extent that a coding frame (the research instrument) (1) covers all areas of a study's concepts and (2) helps to realise the aims or answer the research questions of the QCA (Schreier, 2012:196).
- *Credibility* as a traditional qualitative research criterion in QCA relates to the selection of appropriate data sources, accurate description of the data sources (Elo *et al.* 2014:2) and sufficiency of data sources in the sample (Graneheim *et al.* 2017:33). Additionally, credibility in QCA associate with accurate descriptions of the analysis, findings and trustworthiness Elo *et al.* 2014:7)
- *Dependability* as a traditional qualitative research criterion relates to the consistency of data over different times and under different circumstances, which can be realised by describing sample selection criteria and main characteristics of a sample (Elo *et al.* 2014:2). Additionally, dependability in QCA associates with the development of categories, decisions about selecting relevant codes for the categories and assigning relevant quotations to codes (Graneheim *et al.* 2017:33).
- *Conformability* as a traditional qualitative research criterion in QCA associates with objectivity and effectively demonstrating accuracy, relevancy and the meaning of data (Elo *et al.* 2014:2), proving that the interpretation of data was not invented by the researcher (Elo *et al.* 2014:6).
- *Transferability* as a traditional qualitative research criterion in QCA involves rich descriptions of the QCA procedures (Graneheim *et al.* 2017:33), which enables replicability or transference of findings to another setting or study (Elo *et al.* 2014:2).

The trustworthiness criteria of qualitative research will be discussed in greater detail section 7.9 (methodology for the interviews with industry expert).

According to Graneheim *et al.* (2017:33), the challenge of QCA involves the establishment of trustworthiness throughout procedures, ensuring a sound method of qualitative data collection and analysis. In this study, adequate preparation, description of QCA procedures and implementation of trustworthiness criteria throughout phases in the QCA of RL literature contributed towards the overall

trustworthiness of the QCA of RL literature. The subsequent sections provide details on realising trustworthiness in the QCA of RL literature through these measures.

3.3.3.1 Trustworthiness in preparation and description of the QCA of RL literature

According to Elo *et al.* (2014:8) the trustworthiness of QCA starts with adequate preparation before QCA procedures can be initiated. Particularly, QCA requires significant skills in data collection, analysis of content, discussion of trustworthiness and presentation of findings (Elo *et al.* 2014:8). For the QCA of RL literature adequate *preparation* involved (1) understanding the importance qualitative research, (2) identifying the philosophical assumptions of the study, (3) describing the approaches of theory development, (4) justifying the adoption of multimethod qualitative research, (5) justifying the selection of QCA as a research method, (6) identifying the characteristics of QCA, and (7) studying the methodology and application of QCA from seminal authors, like Schreier (2012) and Mayring (2014).

Accordingly, to establish trustworthiness in QCA, researchers must strictly follow systematic and transparent phases, while incorporating qualitative research qualities, like flexibility, creativity and iterations, throughout procedures (Selvi, 2019:443). Consequently, researchers employing QCA must be more explicit about the phases in QCA to demonstrate rigour (Krippendorff, 2022:92). Furthermore, the researcher must describe the procedures in adequate detail to persuade readers of the trustworthiness of QCA (Graneheim *et al.* 2017:33). Evidently, the better the documentation and description of phases, the greater the trustworthiness of QCA (Elo *et al.* 2014:8).

As illustrated throughout section 3.3.2, the phases of the QCA of RL literature was systematically applied and adequately described, demonstrating trustworthiness and rigour. Additionally, Schreier (2012:45) explained that the systematic nature of QCA in terms of following the same sequence of steps, regardless of the type of research questions and materials selected, enhances the reliability of QCA. Essentially, the trustworthiness of the QCA of RL literature can be established through adequate preparation and detailed description of procedures. Nevertheless, further elements of trustworthiness can be demonstrated throughout the phase of the QCA of RL literature, which will be described in the next section.

3.3.3.2 Trustworthiness in the phases of the QCA of RL literature

Although trustworthiness of QCA can be realised through preparation and detailed description of procedures, trustworthiness criteria can be applied to every phase of QCA, including selection of material, development, testing and assessment of the coding frame, main analysis, and interpretation

and presentation of findings. The subsequent sections demonstrate the establishment of trustworthiness in the phases of the QCA of RL literature.

3.3.3.2.1 Trustworthiness in selection of materials for the QCA of RL literature

Care and effort must be taken in the collection of suitable material in QCA, which starts by choosing the best method of data collection for answering the research questions (Elo *et al.* 2014:3). The elements of trustworthiness in the selection of materials for the QCA of RL literature included reliability, credibility, dependability and transferability.

Reliability was demonstrated by providing accounts of the relevancy of the sampled material for answering the research questions (Krippendorf, 2022:401). Particularly, in section 3.3.2.2 the justification of the selecting published literature in RL was provided and aligned with the aims of exploring and analysing RL literature for consumer return types, pre-receipt RL processes, post-receipt RL processes and RL practices for the management of consumer returns.

Similarly, *credibility* was realised through the selection of a suitable unit of analysis and adequate description thereof (Elo *et al.* 2014:5). Subsequently, the unit of analysis for the QCA of RL literature was motivated and described in terms of application to the research questions. Additionally, using scientific published literature in RL as the unit for analysis added to credibility of appropriate data sources (see section 3.3.2.2.1).

Moreover, selecting sufficient material added to the credibility (Graneheim *et al.* 2017:33) of the QCA of RL literature, involving the selection of 289 published articles in RL. Nevertheless, the appropriateness of the sample in QCA can depend on the aim, research questions and data saturation (Elo *et al.* 2014:4). Consequently, further trustworthiness in the selection of material was realised through detailed description of the sampling method and characteristics of the sample (Elo *et al.* 2014:8), as evidenced in section 3.3.2.2.2.

Similarly, *dependability* of the QCA of RL literature was realised by adequately describing the selection criteria and characteristics of the sample (Elo *et al.* 2014:4), which included specific keywords and publication parameters and an overview of the journals and publications per year with a detailed references of the sample included in Appendix A.1. Finally, the detailed documentation of selecting materials and sampling procedures ensured *transferability* (Graneheim *et al.* 2017:33) of the QCA of RL literature. Essentially, the trustworthiness of the QCA of RL literature can be established through the realisation of reliability, credibility, dependability and transferability in the selection of materials.

3.3.3.2.2 Trustworthiness in the development, testing and assessment of the coding frame for the QCA of RL literature

According to Klenke (2016b:98) the *development* of a high-quality coding frame can be central to trustworthiness of QCA. The element of trustworthiness in the development of a high-quality coding frame for the QCA included validity. Particularly, the coding frame of the QCA of RL literature can be regarded as *valid* because the categories adequately represented the concepts of the research question (Schreier, 2012:186). For instance, the main categories identified associated with the concepts of consumer returns, pre-receipt RL processes, post-receipt RL processes and RL practices. Furthermore, subcategories related to the concepts were identified from literature, adding to the validity of the coding frame. Finally, the development of the coding frame for the QCA of RL literature can be regarded as trustworthy because detailed descriptions were given in the selection of categories (Elo *et al.* 2014:5), which can be viewed in section 3.3.2.3.

Testing and *assessment* of the coding frame can be combined to determine the trustworthiness of the QCA of RL literature and the coding frame, covering reliability and validity as trustworthiness criteria. Particularly, *reliability* was established through adequate training of ATLAS.ti to test the coding frame (see section 3.3.2.4). Consequently, preparation and pre-testing of the coding frame can be import for trustworthiness in QCA (Elo *et al.* 2014:3). Reliability was further established through the pilot phase and application of intra-coder agreement (Mayring, 2014:111), which involved two trial coding rounds or double coding on the same material at different points of time (Schreier, 2014:179). In this regard, reliability can be translated into stability or consistency, which can be realised through the extent that trial coding results remained fixed over time (Schreier, 2012:178).

Subsequently, reliability in the QCA of RL literature was established through assessment and comparison of the two trial coding rounds, which involved minor inconsistencies that was investigated and mitigated through application of segmentation (see section 3.3.2.5). Moreover, the coding frame for the QCA of RL literature was established as reliable since categories and code definitions were consistently applied to concepts in the text between the two trial coding rounds. For example, in both coding rounds the code “collection” was applied to the same text (e.g. same sentence or paragraph in the same article) at different points of time, demonstrating reliability.

Finally, based on the trial coding rounds, the *validity* of the coding frame for the QCA of RL literature was further demonstrated with using miscellaneous categories. According to Schreier (2012:179), assigning a high number of quotations to residual categories indicates low validity. In the trial coding rounds of the QCA of RL literature, no quotations were assigned to the miscellaneous categories of consumer returns, pre- and post-receipt RL processes and RL practices, which demonstrated the

validity of the coding frame. Likewise, in the main analysis limited quotations were assigned to miscellaneous categories, which further assured validity of the coding framework of the QCA of RL literature.

Essentially, the trustworthiness of the QCA of RL literature can be established through the demonstration of reliability and validity in the development, testing and assessment of the coding frame.

3.3.3.2.3 Trustworthiness in the main analysis, interpretation and presentation of findings for the QCA of RL literature

According to Selvi (2019:450), a clear description of procedures in the *main analysis* can be the most common strategy for establishing trustworthiness in QCA. Clear descriptions of the steps followed in the main analysis of the QCA of RL literature was provided in section 3.3.2.6, enhancing trustworthiness. Additionally, establishing reliability, validity and dependability in the main analysis phase further demonstrated the trustworthiness of the QCA of RL literature.

Particularly, *reliability* of the main analysis was established by using software, like ATLAS.ti (Krippendorff, 2022:217), which enabled careful documentation of coding procedures (Mayring, 2014:116). Likewise, appropriately using ATLAS.ti for the main analysis improved the *validity* (Friese, 2012:267) of the QCA of RL literature. Moreover, Schreier (2012:46) claimed that establishing validity means that the categories and codes closely reflect the data, which was established through inductive coding and category development in the main analysis of the QCA of RL literature (see section 3.3.2.6.5).

Dependability in the main analysis of the QCA of RL literature was established through a reliable and valid code frame and segmentation (i.e. assigning only relevant text to codes), which guided effective selection of quotations (Graneheim *et al.* 2017:33). Additionally, using the "search and code" function in ATLAS.ti to identify any text that was miscoded during the main coding round ensured dependability of assigning appropriate codes to appropriate text.

In terms of the *interpretation* and *presentation of findings*, the trustworthiness of findings can depend on the availability of rich and appropriate data and the extent to which the categories represent the data (Elo *et al.* 2014:7,8). Subsequently, trustworthiness of interpretation and presentation of findings depend on the trustworthiness of other QCA phases, including data collection, development of categories and analysis (Elo *et al.* 2014:8). Accordingly, the interpretation and findings of the QCA of RL literature can be considered trustworthy based on the established trustworthiness of material selection, coding frame development, testing and assessment and the main analysis.

Additionally, trustworthiness of interpretation and presentation of findings for the QCA of RL literature was established through reliability, validity, credibility, conformability and transferability. Specifically, using software, like ATLAS.ti, can add to the *reliability* of the interpretation of QCA, which relates to the ability of returning to well-recorded and well-organised data (Mayring, 2014:116). Likewise, effectively using ATLAS.ti for QCA can increase the *validity* of finding (Friese, 2012:1), indicating that ATLAS.ti collectively helped to achieve reliability and validity of the interpretation and findings of the QCA of RL literature.

Credibility of the findings can be enhanced with the use of figures and tables to explain the categorisation of findings and demonstrate the structure of concepts (Elo *et al.* 2014:7). Evidently, using tables (text matrices) and creating conceptual frameworks for the main categories that demonstrated key categories and subcategories (findings), enhanced the credibility of the findings of the QCA of RL literature. Additionally, *conformability* of the QCA of RL literature was established through the presentation of quotations from literature, demonstrating that the findings reflected the data (literature) (Elo *et al.* 2014:6). Subsequently, accurate description of the analysis coupled with clear demonstration of the relationships between findings and data, allows for objectivity, giving others (e.g. readers or researchers) to draw conclusions about the trustworthiness of findings (Elo *et al.* 2014:7).

Furthermore, *transferability* of the QCA of RL literature was established through systematic, careful, adequate, rich and extensive reporting of findings and clear connections between findings and data (Elo *et al.* 2014:7). Nevertheless, high quality findings can be realised by ensuring that the structure of findings can answer the research questions and achieve the aims of the QCA (Elo *et al.* 2014:6). Accordingly, the findings presented in chapters 4 to 6 clearly answered the research questions and achieved the objectives set for the QCA of RL literature, demonstrating high quality and trustworthy findings.

Essentially, after discussing the main processes, approaches to analysis and presentation of findings, trustworthiness can further be enhanced through discussion of the trustworthiness of QCA based on quality criteria (Elo *et al.* 2014:7). Evidently, concluding the discussion of the QCA of RL literature with an overview of trustworthiness criteria, reemphasised that the QCA of RL literature can be regarded as reliable, valid, credible, dependable, conformable and transferable.

In the next section, the conclusion of chapter 3 will be provided, containing a summary of the discussions in chapter 3.

3.4 CONCLUSION

This chapter consisted of two parts, with the first part focusing on the qualitative research design of this study and the second part focusing on the QCA of RL literature. Particularly, the first part included an overview and justification of *the qualitative research design of this study,* which included discussions of the (1) justification of qualitative research, (2) challenges in qualitative research, (3) research paradigm and assumptions of the study, (4) research approaches for theory development in the study and (4) multimethod qualitative research.

Particularly, *justification of qualitative research* for this study included motivations for qualitative research over quantitative research regarding philosophical paradigm and assumptions, researcher roles, research approaches, sampling and data collection techniques, data analysis and presentation of findings. Additionally, justification was provided regarding the importance of qualitative research in business management and organisational practices.

The *challenges in qualitative research* related to the time, amount of data, budget, data collection and sampling, data analysis and interpretations, and the rigour of findings. Specifically, the challenges in qualitative research involved (1) time-consuming procedures, (2) large volumes of data, (3) budget constraints, (4) lack of uniformity of data collection procedures, (5) motivation requirements of sampling techniques and difficulties of determining sampling sizes, (6) lack of uniformity of qualitative data analysis and requirements for creativity, data reduction, category and code development, coding of data, theme development and unique and valuable conclusions, and (7) difficulties in demonstrating rigour and trustworthiness of procedures and findings.

The *research paradigm* of the study was identified as *pragmatism,* which included a discussion of the different ontology, epistemology, methodology and axiology assumptions of positivists, interpretivists and pragmatists. The philosophical assumptions identified in this study associated with pragmatism and included the (1) ontological assumption that views reality as complex, rich, adaptable and practical, (2) epistemological assumption that views experiences and the researcher's subjective view as sources of knowledge to solve problems and inform practice, (3) methodological assumption that views multimethod qualitative research through a combination of deductive, inductive and abductive reasoning as important for practical outcomes and solutions, and (4) axiological assumption that views ethical and moral principles as important aspects for a value-driven research process. Additionally, the motivations for adopting pragmatism as a research paradigm was discussed and identified as appropriate for this study because of (1) practical problems and research questions aimed at informing practice, (2) deductive, inductive and abductive approaches, (3) multimethod

qualitative research, (4) organisational research, (5) interviewing experts to solve practical problems, and (6) policy formulation and adoption of strategic practices to benefit the society as a whole.

Multimethod qualitative research was identified as the methodological choice of the study, which included a discussion of the differences between mixed-method and multimethod research, motivations for multimethod qualitative research and forms of multimethod mixing in the study. Mixed- and multimethod research can be different in paradigms and assumptions, quantitative and/or qualitative methods of data collection and analysis, and motivation. While mixed method research involves mixed paradigms, qualitative and quantitative methods of data collection and analysis and motivations of demonstrating rigour and testing qualitative theory, multimethod research mostly involves single paradigms, multiple methods of qualitative or quantitative data collection and analysis and motivations of complementarity, development, expansion and triangulation.

Subsequently, multimethod qualitative research was motivated through dimensions of complementarity, development, expansion and triangulation as well as pragmatic characteristics related to practical problem-solving and innovation. Lastly, the forms of multimethod mixing of this study included mixing (or a combination) of paradigms, research approaches, sampling techniques, data collection techniques, data analysis techniques and presentation of findings.

The second part included the methodology and application of *the QCA of RL literature*, which included (1) an overview of QCA, (2) phases in the QCA of RL literature, and (3) trustworthiness of the QCA of RL literature. The *overview of QCA* included a discussion of the differences between QCA and CA (quantitative content analysis) and characteristics of QCA. The overview was concluded with this study's definition of QCA, which described "QCA as a pragmatic, scientific, empirical grounded, systematic and flexible research method that can be part of mixed method or multimethod qualitative research designs, involving (1) step-by-step procedures (2) research question(s), (3) development of categories, (4) large and variety bodies of text, audio or visual material, and (5) time-consuming data coding and analysis processes, which can benefit from appropriate computer software (e.g. qualitative data analysis software, like ATLAS.ti) for effective data collection, analysis and presentation of qualitative findings."

The *phase of the QCA of RL literature* included (1) identifying the research objectives and questions for the QCA of RL literature, (2) selecting materials for the QCA of RL literature, (3) developing the coding frame for the QCA of RL literature, (4) testing the coding frame for the QCA of RL literature, (5) assessing the coding frame of the QCA of RL literature, (6) main analysis in the QCA of RL literature, and (7) interpreting and presenting the findings of the QCA of RL literature. Additionally, most phases included various steps for the effective description and execution of the QCA of RL

literature. Table 3.3 provided an overview of the phases, including descriptions and steps of each phase, and Table 3.8 provided a summary of the application of the phases in the QCA of RL literature. The discussion of the phases was supported by relevant content in Appendices A and B.

Finally, the *trustworthiness criteria of the QCA of RL literature* included reliability, validity, credibility, conformability, dependability and transparency. The trustworthiness of the QCA of RL literature was established with adequate preparation and detailed descriptions of procedures. Additionally, trustworthiness was further established in the phases of the QCA of RL literature, including trustworthiness of (1) material selection that included elements of reliability, credibility, dependability and transferability, (2) development of the coding frame that included the element of validity, (3) testing and assessment of the coding frame that included elements of reliability and validity, (4) main analysis that included elements of reliability, validity and dependability, and (5) interpretation and presentation of findings that included elements of reliability, validity, credibility, conformability and transferability.

In the next three chapters, the findings of the QCA of RL literature will be presented and discussed, including chapter 4 that focus on consumer returns and pre-receipt RL processes, chapter 5 that focus on post-receipt RL literature and chapter 6 that focus on RL practices for the management of consumer returns. Chapter 7 will continue with the research methodology of the study, focusing on the interviews with industry experts.

Chapter 4 – QCA findings of RL literature for consumer return types and pre-receipt RL processes of consumer returns

4.1 INTRODUCTION

The importance of understanding consumer returns and RL processes can be significant to the success of online retailers. According to Nel and Badenhorst (2020:116), online retailers must identify and understand the reasons for *consumer returns*. Additionally, Davidavičienė and Al Majzoub (2021:4) indicated that an understanding of *RL processes* can enable online retailers to understand their return operations and distinguish it from other organisational processes. However, few studies focus on consumer returns and the RL processes of consumer returns in online retailing (see sections 1.2 and 1.3). Therefore, exploring and analysing RL literature for consumer return types and RL processes can be a good starting point in providing online retailers with improved understanding of consumer return types and RL processes that may apply to online retailing.

The QCA of RL literature focused on *types of consumer returns* and the *RL processes* of consumer returns, which starts with a consumer requesting a return and ending with redistribution of returned products for resale. As emphasised in section 1.5, RL processes can be categorised as pre-receipt RL processes and post-receipt RL process. Additionally, this study focused on identifying various *RL practices* to improve the management of consumer returns. Subsequently, the main categories for the QCA of RL literature include types of consumer returns, pre-receipt RL processes, post-receipt RL processes and RL practices. Due to the comprehensiveness of the findings, the main categories were presented in three chapters. Particularly, chapter 4 presents the QCA findings of RL literature for consumer return types and pre-receipt RL processes, chapter 5 presents the QCA findings of RL literature for post-receipt RL processes, and chapter 6 presents the QCA of RL literature for RL practices to manage consumer returns.

In the research methodology section of chapter one (section 1.7, Figure 1.5), the research phases of the study were discussed. Chapter 4 forms part of second research phase of this study, which can be viewed in Figure 4.1.

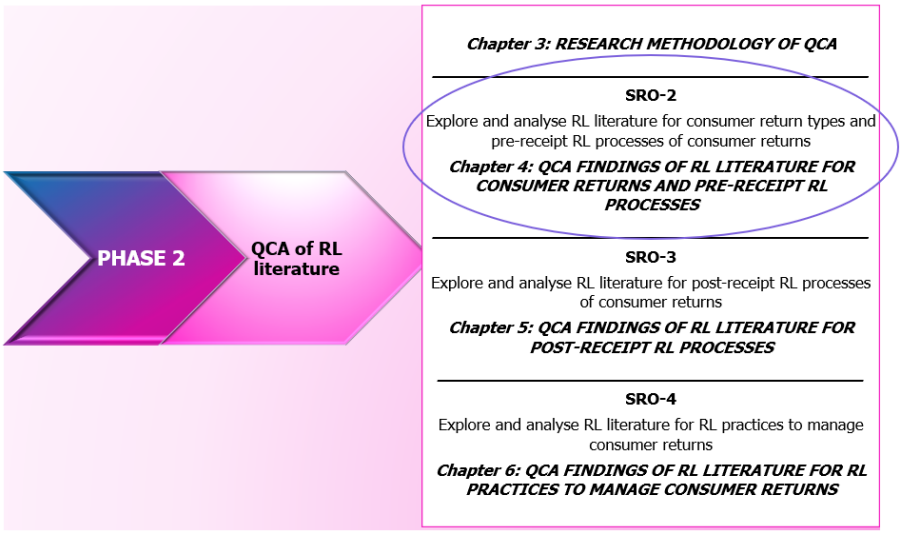


Figure 4.1 QCA of RL literature - Aim of chapter 4
Source: Compiled by the researcher

Figure 4.1 indicates that the aim of this chapter is to achieve the *second* secondary research objective, which is ***to identify and explore RL literature for consumer return types and pre-receipt RL processes of consumer returns (SRO-2)***. The QCA findings of RL literature for consumer returns and pre-receipt processes resulted in the development of conceptual frameworks for consumer return types and pre-receipt RL processes of consumer returns, a typology of the findings and managerial implications, which will be describe in section 4.2. The findings presented in this chapter contributes to the primary objective of the study, which is to *develop a framework for the effective RLM of consumer returns in online retailing.* Therefore, important findings related to consumer return types, pre-receipt RL processes and RLM considerations are identified in this chapter, contributing to the final framework for the effective RLM of consumer returns in online retailing.

Figure 4.2 provides an overview of this chapter.

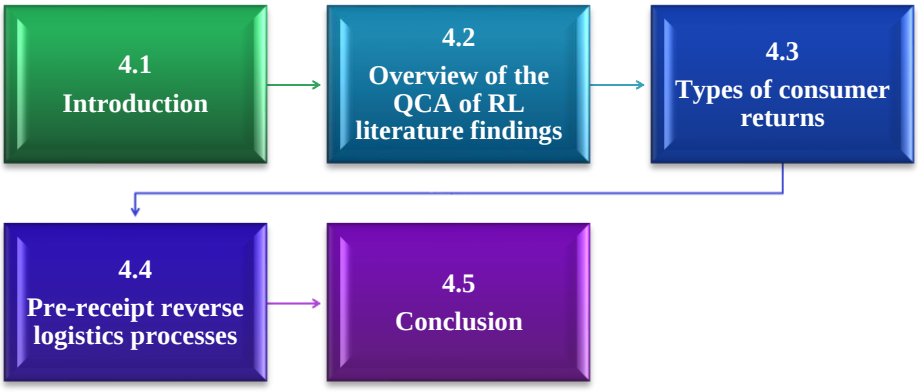


Figure 4.2 Overview of chapter 4
Source: Compiled by the researcher

The introduction (this section) is followed by overviews of the QCA of RL literature findings (section 4.2), where after the types of consumer returns (section 4.3) and the pre-receipt RL processes (section 4.4) will be analysed. Finally, the chapter will conclude with the conclusion (section 4.4).

4.2 OVERVIEW OF THE QCA OF RL LITERATURE FINDINGS

In this section an overview of presenting the QCA of RL literature findings will be given, followed by an overview of the main categories of the QCA of RL literature and a demarcation for consumer returns and RL processes.

4.2.1 Overview of presenting the QCA of RL literature findings

In chapter 3, an overview and application of the QCA of RL literature was provided, including the various phases employed to effectively analyse and explore RL journal articles (hereafter referred to as literature or content) published between 2006 and 2016. Furthermore, it was indicated that the findings of the QCA of RL literature involves a holistic presentation, including quantitative overviews (frequencies, percentages, bar charts and pie charts), qualitative data tables (text matrices), discussion of findings and further explorations on the relationship of categories with conceptual frameworks and summaries (typology) of findings (see section 3.3.2.7). The *quantitative results* of the QCA of RL literature associate with the main categories and (deductive) code categories from the coding frame (see Appendix A.2). The quantitative results provide an overview of the importance of the main categories and code categories in RL literature and identify potential gaps in RL literature. The quantitative results of each category and subcategories can be viewed in Appendix C.

Nevertheless, most of the data obtained from the QCA, will be presented in a *qualitative* manner. The *qualitative data tables* include (1) categories (inductively identified from inductive codes), (2) subcategories (inductive codes identified from quotations assigned to deductive codes) related to the categories, (3) sources that support the subcategories (frequency that the subcategory was coded across literature sources from the QCA), and (4) key quotations (from coded sources) that support the discussion of the findings. Consequently, the findings presented in the qualitative data tables were supplemented with *supporting discussions* and interpretation of findings. Both the data tables and supporting discussions, culminated in *definitions* and *conceptual frameworks* for each code category (i.e. deductive codes from the code framework). Finally, an *overall conceptual framework, summary* (typology) *of findings* and *managerial implications* are provided for the main categories of the QCA of RL literature (i.e. consumer returns, pre-receipt RL processes, post-receipt RL processes and RL practices) aimed at answering the research questions.

In some instances, however, the findings are too comprehensive to include all the information in one table, in which case the tables are divided, presented, and discussed separately in subsections. Therefore, the categories with limited findings will be included in one table, while categories with more comprehensive findings will be presented in several tables.

In the next section, an overview of the main categories of the QCA of RL literature will be provided.

4.2.2 Overview of the main categories of the QCA findings of RL literature

As mentioned in section 4.1, the main categories of the QCA of RL literature related to the secondary objectives (SRO-02 - SRO-04) and included types of consumer returns, pre-receipt RL processes, post-receipt RL processes and RL practices.

Figure 4.3 provides an overview of the distribution of the four main categories of the QCA of RL literature (see Appendix C.1 for code frequencies for the main categories).

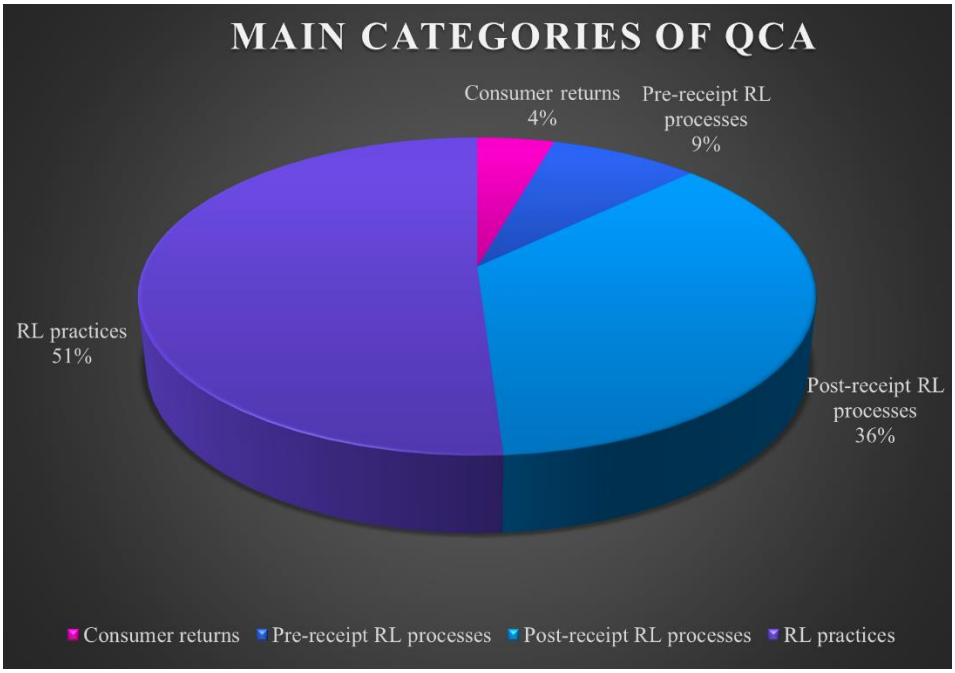


Figure 4.3 Main categories of the QCA of RL literature
Source: Compiled by researcher

Figure 4.3 shows a distribution of the percentages for the main categories of the QCA of RL literature derived from code frequencies (number of quotations assigned to code categories within the main categories see Appendix C.1). The pie chart clearly shows that RL practices (51%) dominate the RL literature. Additionally, post-receipt RL processes (36%) cover RL literature to a moderate extent. Contrastingly, the pre-receipt processes (9%) and types of consumer returns (a%) cover RL literature to a limited extent. While the percentages can be explained in terms of the number of code categories

assigned to each main category, for example, type of consumer returns include one code category, pre-receipt RL processes include four code categories, post-receipt processes include six code categories and practices include 11 code categories, the results emphasise more research can be conducted that focuses on consumer returns and pre-receipt RL processes.

In the next section a demarcation of consumer returns and RL processes are given, providing specific scope of the categories included/excluded from the QCA of RL literature.

4.2.3 Demarcation of consumer returns and RL processes

In section 1.6, the scope of this study was provided, which briefly indicated the type of returns and RL processes included/excluded. In this section, the demarcation of the findings for the QCA of RL literature for consumer returns and RL processes extends the general scope of the study. In section 1.5, an overview was given of the consumer return processes in online retailing, which provided an indication of the different RL processes appropriate for consumer returns in online retailing. Throughout chapter 1 it was mentioned that limited studies focus on RL and consumer returns in online retailing, which meant that general RL literature, containing content that can answer the research questions, was included in the sample for the QCA of RL literature.

Nevertheless, the researcher only included categories and subcategories that may apply to consumer return types and RL processes in online retailing. The following points provides an overview of the categories and subcategories *included* in consumer return types, pre-receipt and post-receipt RL processes, parties and facilities (inductive subcategories in the findings):

- *Types of consumer returns* – Any consumer return types that may be applicable to RL in online retailing, including business-to-consumers (B2C) commercial returns, end-of-use (EoU) returns, warranty returns, service returns and recalls.
- *Pre-receipt RL processes* – Any RL processes before returns arrive at the warehouse/facility that can be applicable to the RL processes of consumer returns in online retailing, including a customer return request, gatekeeping, collection and transportation.
- *Post-receipt RL processes* – Any RL processes after returns arrive at the warehouse/facility that can be applicable to the RL processes of consumer returns in online retailing, including receiving, processing, inspection and sorting, disposition and redistribution.
- *Parties* – Any parties that may be directly/indirectly involved in consumer returns and RL processes of consumer returns in online retailing, including consumers, retailers (i.e. online-only, multi-channel or omni-channel), wholesalers, third-party service providers, third-party buyers, distributors, and suppliers/manufacturers (for return to the vendor disposition option).

- *Facilities/locations* – Any facility/location that may be part of the RL processes of consumer returns in online retailing, including consumer locations, retailer locations (e.g. shops used by multi/omni-channel retailers for receipt of online consumer returns), traditional facilities (e.g. warehouses and distribution centres), any facilities used for RL processes (e.g. centralised return centres, inspection centres and processing centres), recovery facilities (e.g. repair and refurbishment facilities), primary markets and secondary markets.

Although various return types, RL processes, parties and facilities/locations can associate with the RL processes of consumer returns in online retailing, certain types of returns, pre-receipt and post-receipt RL processes, parties and facilities were excluded from the discussions. The following points provides an overview of the categories and subcategories *excluded* from consumer return types, pre-receipt and post-receipt RL processes, parties and facilities/locations:

- *Types of returns* – Any return types that exclude consumer returns, including *distribution returns* (returns between organisations) and *manufacturer returns* (internal returns), were excluded from the QCA of RL literature. However, *end-of-life (EoL)* returns as a consumer return type, was excluded from the QCA of RL literature because it associates with manufacturers and disposition options like remanufacturing and recycling.
- *Pre-receipt RL processes* – Excluded from the pre-receipt RL processes was *acquisition*, which mostly relates to EoL or distribution returns focussed on acquiring products/product parts from customers. Therefore, organisations, like manufacturers, in the SC initiate the return process through acquisition as the first pre-receipt RL process. Furthermore, some content related to the collection process was excluded, including *refuse collection* and *waste management*.
- *Post-receipt RL processes* – Some *disposition options* were excluded from the disposition processes in the QCA of RL literature, including *reconditioning*, *recycling*, *remanufacturing* and *waste management (disposal)*. These options are performed by third parties and manufacturers and involve product parts/materials and waste materials, which excludes consumer product returns in online retailing. Additionally, some exit options were excluded due to limited findings in the QCA of RL literature, namely selling as scrap, destroy and donate.
- *Parties* – Some parties were excluded, including *manufacturers*, *the government* and *non-governmental agencies* since they fall outside the scope of this study. However, as indicated above manufacturers are only included in the "ship to a vendor" exit option. Essentially, manufacturers play a secondary role in the discussion of the findings presented in the QCA of RL literature.

- *Facilities* – Some facilities were excluded, including *remanufacturing facilities*, *recycling facilities* and *waste management facilities*, because the purpose of these facilities is remanufacturing, recycling and handling of waste, which falls outside the scope of this study

In the next section, the QCA findings of RL literature for consumer returns will be discussed and analysed.

4.3 TYPES OF CONSUMER RETURNS

Consumer returns involve the backward flow of products and resources after the sale and after delivery to the customer or the point of consumption (De Araújo *et al*. 2017:346; Gonçalves & Silva, 2016:71; Huscroft *et al.* 2013a:231). *Product* returns in general refer to the physical distribution of used, defective or unused goods from the point of consumption to the point of origin for the purpose of product recovery (De Araújo *et al*. 2017:346; Ye *et al.* 2013:134).

Consumer returns in this study refer to the return of a product purchased by a customer back to a retailer (Chen & Chen, 2015:1; Yang *et al.* 2015:361). In most of the cases, consumer returns are initiated by the consumer due to a variety of reasons such as (i) faulty, poor quality, or damaged goods, (ii) late delivery, (iii) inaccurate description of products online, and (iv) change of mind returns (Asham & Rahman 2021: 3; De Araújo, et al., 2017:348; Shaharudin *et al.* 2015:222). However, consumers are not always responsible for returns, which are deduced from the different types of consumer returns. Therefore, the consumer return types could either be "push consumer return" (returns initiated by consumers or consumer faults/errors), "pull consumer return" (initiated by supply chain organisations), or "push and pull consumer returns" (initiated by the consumer due to organisational errors or policies).

Five types of consumer returns, appropriate for retailing, were identified from the QCA of RL literature, including (1) business-to-consumer (B2C) commercial returns, (2) end-of-use (EoU) returns, (3) warranty returns, (4) service returns and (5) recalls. In the rest of this section, the findings related to these above-mentioned consumer return types will be presented and discussed in subsections. Then the section will be concluded with a conceptual framework for consumer returns.

4.3.1 B2C commercial returns

From the QCA of RL literature findings, B2C commercial returns (hereafter B2C returns) included several categories, namely product condition, consumer-error return reasons, organisational-error return reasons and other reasons and disposition options. Table 4.1 provides an overview of the

findings related to *B2C returns*, including detail on the categories, related subcategories, supporting literature sources and key quotations to support the discussion of the findings.

Table 4.1 Findings related to B2C returns

CATEGORY	SUBCATEGORY	SUPPORTING AUTHORS	KEY QUOTATIONS
Product condition	***New and unused***	De Leeuw *et al.* (2016:715) Genchev (2009:140,) Mazahir *et al.* (2011:93) Piplani and Saraswat, (2012:1424) Ruiz-Benítez *et al.* (2014:54)	• *"A significant number of the returned products are in perfect condition for resale."* (De Leeuw *et al.* 2016:715) • *"[…] untouched or barely used products […]."* (Mazahir *et al.* 2011:93) • *"Commercial returns are usually as good as new, as they have only been lightly used or not used at all."* (Piplani and Saraswat, 2012:1424)
	Defective upon arrival	Genchev (2009:140,146) Jena and Sarmah (2015:822)	• *"Defective […] product was inoperable at first use."* (Genchev 2009:146) • *"[…] failure of new products […]."* (Jena & Sarmah, 2015:822)
Consumer error/fault return reasons (push returns)	***Order errors***	Ghezavati and Nia (2015:3059) Kabir (213:96) Li and Olorunniwo (2008:385) Min and Ko (2008:179) Min et al. (2006:57) Olorunniwo and Li (2011:4) Roy *et al.* (2006:59)	• *"Other reasons stated for customer returns include wrong products ordered."* (Li & Olorunniwo 2008:385) • *"Most products are returned not because they are defective or damaged, but for other reasons such as […] the wrong product was ordered in the first place."* (Olorunniwo & Li, 2011:4)
	False failures	Bernon and Cullen (2007:48) Ruiz-Benítez *et al.* (2014:54) Xu *et al.* (2015:90)	• *"Many customers could not operate the equipment and therefore returned the product as faulty."* (Bernon & Cullen, 2007:48) • *"[…] most product returns are in perfect working order– that is they have no defects. These returned products are commonly referred to as false failure returns and they constitute more than two-thirds of all returns."* (Ruiz-Benítez *et al.* 2014:54)
	Problems experienced with products	Bernon and Cullen (2007:48) Bernon *et al.* (2011:491) Bower and Maxham (2012:114) Gonçalves and Silva (2016:71) Jena and Sarmah (2015:822) Li and Olorunniwo (2008:385)	• *"A major reason for returns was the difficulty that customers experienced with the instructions provided with the products."* (Bernon & Cullen, 2007:48) • *"[…] problems with item descriptions, installation, or instructions; […]."* (Bower & Maxham, 2012:114) • *"[…] customers return the products for several reasons, for example […] the customers are unhappy with the functionality of the product […]."* (Gonçalves & Silva, 2016:71)
	Buyer's remorse/ change of mind	Bernon *et al.* (2011:491) Bower and Maxham (2012:114) Genchev (2009:140) Huscroft *et al.* (2013a:231) Li and Olorunniwo (2008:385) Mollenkopf *et al.* (2007:242) Olorunniwo and Li (2011:4) Piplani and Saraswat (2012:1424) Seo *et al.* (2015:2) Subhashini (2016:9)	• *"[…] variety of reasons including, buyer's remorse […]."* (Bernon *et al.* 2011:491) • *"Marketing-related causes for returns must also be addressed, including […] customers who change their mind after the initial purchase".* (Genchev, 2009:140) • *"[…] consumer-induced returns (e.g., customer changed mind, did not like the product after seeing it, did not like styling)."* (Mollenkopf *et al.* 2007:242) • *"Most products are returned not because they are defective or damaged, but for other reasons such as […] the customers changing their minds […]."* (Olorunniwo & Li, 2011:4) • *"[…] most common reasons for product returns were […] change of mind […] and regret about buying impulsively."* (Seo *et al.* 2015:2)
	Dissatisfaction	Genchev (2009:140) Gonçalves and Silva (2016:71), Jena and Sarmah (2015:822) Lai *et al.* (2013:107, 453) Piplani and Saraswat (2012:1424) Seo *et al.* (2015:2) Subhashini (2016:9) Yang *et al.* (2015:363) Yoo (2014:147)	• *"[…] customer is not satisfied with the product's quality."* (Li *et al.* (2013:453) • *"After receiving and trying the product, the customer may feel that it does not match its expectations, and then decide to return back the product."* (Yang *et al.* (2015:363)
	Unwanted	Cline *et al.* (2015:477) Hsu *et al.* (2009:516-517) Rogers *et al.* (2013:42)	• *"[…] customers decide to return an unwanted item."* Rogers *et al.* (2013:42)
Organisational error return reasons (push and pull returns)	***Wrong delivery***	Bazan *et al.* (2015:307) Genchev (2009:140) Ho *et al.* (2012:29) Jindal and Sangwan (2015:393) Kabir (2013:96) Li and Olorunniwo (2008:385) Mollenkopf *et al.* (2007:217) Olorunniwo and Li (2011:4), Piplani and Saraswat (2012:1424) Selvi and Kayar (2016:16)	• *"Other reasons stated for customer returns include […] shipped to wrong destination (misinformation) […]."* (Li & Olorunniwo, 2008:385) • *"[…] company error (e.g., wrong item/size/colour was shipped) […]."* (Mollenkopf *et al.* 2007:217)

CATEGORY	SUBCATEGORY	SUPPORTING AUTHORS	KEY QUOTATIONS
	Quantity issues	Bernon *et al.* (2011:491), Genchev (2009:140)	• *"[…] variety of reasons including, […] the return of excess quantities of product."* (Bernon *et al.* 2011:491) • *"[…] the incorrect quantity due to vendor error […]."* (Genchev 2009:140)
	Damaged or defective	Bazan *et al.* (2015:307) Genchev (2009:146) Ghezavati and Nia (2015:3059) Gonçalves and Silva (2016:71) Hsu *et al.* (2009:516-517) Huscroft *et al.* (2013a:231), Kabir (2013:96) Li and Olorunniwo (2008:385) Min and Ko (2008:179) Min et al. (2006:57) Mollenkopf *et al.* (2007:217) Olorunniwo and Li (2011:4) Piplani and Saraswat (2012:1424) Selvi and Kayar (2016:16) Shaharudin *et al.* (2015:4 Subhashini (2016:9)	• *"Defective returns are usually initiated by end consumers; the product was inoperable at first use."* (Genchev 2009:146) • *"Other reasons stated for customer returns include […] shipping damage […]."* (Li & Olorunniwo, 2008:385) • *"Typical reasons for product returns may include: defects, in-transit damage […]."* (Min & Ko, 2008:179) • *"The customer returns products either due to the damage of the product, failure of the product […]."* (Subhashini, 2016:9)
	Quality issues	Bower and Maxham (2012:114) Cline *et al.* (2015:477) Ho *et al.* (2012:29) Huscroft *et al.* (2013a:231) Li and Olorunniwo (2008:385) Olorunniwo and Li (2011:4) Rajagopal *et al.* (2015:41) Serrato *et al.* (2007:4290)	• *"[…] some products are often returned because of poor quality […]."* (Ho *et al.* 2012:29) • *"[…] customer normally returns the product shortly after purchase due to poor performance in the product quality […]."* (Rajagopal *et al.* 2015:41)
Other reasons	***Seasonal changes/supply and demand***	Genchev (2009:140) Sharif *et al.* (2012:2517)	• *"The return needs of […] end users […] add a market-related dimension to the mix in that seasonal surges in demand must be accommodated."* (Genchev, 2009:140) • *"[…] mismatches in demand and supply in terms of timing or product quality (B2C commercial returns)."* (Sharif *et al.* 2012:2517)
	Liberal return policies	Bernon and Cullen (2007:48)	• *"A significant number of products that are returned by customers are found to have no problem. The problem is linked to the liberal returns policies that companies offer to customers."* (Bernon & Cullen, 2007:48)
Disposition options	***Direct reuse***	Alshamrani *et al.* (2007:596) Jayaraman *et al.* (2008:411) Ruiz-Benitez *et al.* (2014:55)	• *"Products in their original form returned for […] direct reuse."* (Alshamrani *et al.* 2007:596) • *"[…] the reuse option, […] if a product was returned because the consumer changed their mind about their purchase […]."* (Jayaraman *et al.* 2008:411) • *"[…] such that false-failure returns may be immediately returned to the shelf for resale."* (Ruiz-Benitez *et al.* 2014:55)
	Repair	Alshamrani *et al.* (2007:596) Bernon *et al.* (2011:491)	• *"Products in their original form returned for repair […]."* (Alshamrani *et al.* 2007:596)
	Refurbishment	Bernon *et al.* (2011:491)	• *"If the product is defective or damaged it may undergo repair or refurbishment."*

Source: Compiled by the researcher

Table 4.1 shows that B2C consumer returns associate with a few product conditions, and various reasons/causes and disposition options, which will be explore in the subsequent sections.

4.3.1.1 Product condition of B2C returns

Although B2C returns normally involves new or unused products in perfect working condition, some products might be used and returned by consumers for several reasons, like false failures (see section 4.3.1.2).

Additionally, new products could be in damaged or defective condition due to organisational-related errors, for example, transportation damages and defective condition at first use. Although defective

and damaged products can relate to the condition of products, it forms part of the organisational error reasons for B2C returns.

Finally, the product condition can link to the type of disposition options, discussed in section 4.3.1.3, and explored in depth in section 5.6. Subsequently, product condition can be an important indicator to the reasons for B2C consumer returns and most suitable disposition options.

4.3.1.2 Reasons/causes for B2C returns

The reasons/causes for B2C returns can be categorised as consumer errors, organisational errors and other reasons, which will be described in the subsequent sections.

4.3.1.2.1 Consumer error (push) as reason for B2C returns

Table 4.1 shows that many reasons for returns can be associated with consumer-related errors, including order errors, false failures, problems experienced with products, buyer's remorse or a change in mind, dissatisfaction and unwanted products. Consequently, most B2C returns can be regarded as "push returns" that are initiated and caused by consumers. Each of these consumer error reasons will be discussed below.

Order errors as a consumer error reason involves consumers ordering the wrong products, which can be difficult to avoid. Order errors can be a likely possibility in online retailing since consumers might select incorrect options/products on the shopping site. In terms of *false failure returns,* consumers might perceive a product in a perfect working condition as faulty because of the inability to operate the product correctly. False failure returns mostly include electronic products, showing the importance of including clear instructions and detailed descriptions of products.

Closely related to false failure returns are *problems experienced with the product*. For instance, consumers might misunderstand product instructions and choose to return the item. Alternatively, problems experienced with products can associate with incorrect descriptions or instructions, installation issues or unclear information for use. Consequently, consumers might return the product due to frustrations with the products and dissatisfaction related to the functionality of the product, resulting in a return. From these findings it can be deduced that organisations could also be blamed for problems experienced with products due to inadequate instructions or the user-unfriendliness.

Although *buyer's remorse* and a *change of mind* as return reasons can be regarded as consumer errors, consumers might unintentionally experience regret when making the purchase initially. Consequently, buyer's remorse mostly occurs when consumers buy impulsively only to regret their

purchases later or change their minds after receiving the products (e.g. disliking the product once received). Additionally, a change of mind can be significant in the apparel industry of online returns, where garments are returned due to size, colour and fit issues.

Closely related to buyer's remorse and a change of mind is *dissatisfaction.* Consumers might either be dissatisfied with the functionality of the product or with the quality of the product. Therefore, dissatisfaction can be described as return reasons associated with unmet expectations, which might lead to buyer's remorse and a change of mind. Finally, consumer error return reasons can include *unwanted products*. Although the findings lack a clear description, unwanted products might associate with other return reasons, including order errors, problems with products, buyer's remorse and dissatisfaction.

Essentially, consumer-related B2C returns error can be significant in online retailing industry since consumers order products online without physically touching, feeling, seeing or smelling the products, which can result in order errors, false-failure returns, problems with the products, buyer's remorse, a change of mind, dissatisfaction and unwanted products.

4.3.1.2.2 Organisational errors (push and pull) as reason for B2C returns

Table 4.1 shows that some of the B2C returns can be the result of organisational errors, including wrong delivery, problems with quantity, damaged/defective goods and problems with quality. These B2C return reasons can be described as "push and pull returns", since it is initiated by the consumer but caused by the organisation. Each of these B2C return reasons related to organisational errors are discussed in the following paragraphs.

Wrong deliveries can include products delivered to the wrong destination or wrong products shipped to consumers. Wrong delivery can be associated with shipments to the wrong destination because of misinformation, which might either be errors in providing the correct addresses or errors made by transportation parties (e.g. couriers). If wrong deliveries associate with wrong product shipments, the causes might include picking errors or faults/glitches on the systems. Wrong deliveries are likely in the online retailing since products are delivered to consumer locations (at residences or workplaces). If organisations find that wrong deliveries are common occurrences, they must investigate the reasons behind such errors. Consequently, wrong delivery should be avoided since it can lead to unnecessary returns. Closely related to wrong deliveries are *incorrect quantities,* meaning that the consumer might return excess quantities if they receive more items than what was initially ordered. For example, a consumer orders a pair of shoes but receives two pairs, resulting a return of the extra shoes.

Earlier it was mentioned that *damaged* and *defective* products point to the product's condition as well as reasons for B2C returns. Return reasons for *damaged products* associate with damages during shipment or in-transit damages and packaging problems. Therefore, any handling procedures during delivery can potentially result in damages. Nevertheless, consumers might refuse to accept products with outer packaging damages, believing that the products inside might also be damaged. These findings demonstrate that damaged products, as a reason for B2C returns, can be a likely possibility in online retailing, as products are physically transported to consumer locations.

In contrast, *defective products*, as a B2C return reason, relate to products that are inoperable at first use. Therefore, the defect relates to manufacturing faults, not shipping damages associated with damaged product returns. Closely related to defective products, *quality problems with products*, as a B2C return reason, can be the result of poor manufacturing practices. However, unlike defective products, quality problems associate with poor performance/quality of products in working condition. Additionally, quality problems can contribute to consumer dissatisfaction, which can be regarded as consumer-related errors (see section 4.3.1.2.1). Subsequently, by selling lower quality products, organisations can play a role in consumers returning unwanted products due to dissatisfaction. Although defective products and quality issues originate from manufacturers, these return reasons can be prevalent in online retailing.

Essentially, all the organisational-related errors in B2C returns could be applicable to the RL processes of consumer returns in the online retailing industry.

4.3.1.2.3 Other reasons for B2C returns

Other reasons for returns include seasonal changes or changes in demand/supply and liberal return policies. *Seasonal changes* or *changes* in *demand/supply* as reasons for B2C returns, add a market-related dimension to B2C returns. Furthermore, mismatches in supply and demand in terms of timing or quality can lead to B2C returns. Evidently, organisations must use accurate forecasting techniques to reduce the impact of these B2C return types.

Liberal return policies can cause unnecessary returns of products in new condition without defects/damages. While consumers can abuse liberal return policies, organisations can be blamed for the implementation of liberal return policies. Therefore, liberal return policies can be classified as "push and pull" B2C consumer returns.

4.3.1.3 Disposition options associated with B2C returns

Table 4.1 shows that B2C consumer returns can involve reuse, repair and refurbishment as disposition options, based on the product condition and/or return reasons.

For example, the direct reuse option can be appropriate for products in new, unused or minor-used condition, and the repair or refurbishment options can be appropriate for faulty/damaged/defective products. However, repair and refurbishment options mostly apply to other consumer return types such as EoU returns, warranty returns and product recalls, which will be discussed in subsequent sections. Consequently, repair or refurbishment options only apply to organisational error B2C consumer return reasons, related to damages and defects of new products.

Other examples relate to consumer-related errors, like a change of mind or false-failure returns, which can be appropriate for direct reuse. Evidently, direct reuse relates to consumer error (push) return reasons and repair and refurbishment relates to organisational error (push and pull) return reasons. The disposition options associate with the post-receipt RL process of disposition, which will be explored in section 5.7.

Based on the findings presented in this section, this study will describe B2C consumer returns as follows:

> B2C consumer returns involve consumers returning new/unused/minor used products in good or defective/damaged condition for various reasons. Return reasons can include (1) consumer errors (push returns), involving, order errors, false failure returns, problems with operating the product, buyer's remorse or a change of minds, dissatisfaction and unwanted products, (2) organisational errors (push and pull returns), involving wrong deliveries, inaccurate quantities, defective/damaged products and quality issues, and (3) other reasons, involving seasonal changes, changes in supply and demand and liberal return policies. Depending on the condition and return reasons B2C product returns can include direct reuse, repair or refurbishment as disposition options.

In the next section, EoU returns as a consumer return type will be analysed and discussed.

4.3.2 End-of-use (EoU) consumer returns

From the QCA of RL literature findings, EoU returns included several categories, including the (1) product condition associated with EoU returns, (2) the reasons/causes for EoU returns, (3) types of products associated with EOU returns and (4) disposition options associated with EoU returns. Table 4.2 provides an overview of the findings related to *EoU returns*, including detail on the categories, related subcategories, supporting literature sources and key quotations to support the discussion of the findings.

Table 4.2 Findings related to EoU consumer returns

CATEGORIES	SUBCATEGORIES	SUPPORTING SOURCES	KEY QUOTATIONS
Product condition	• ***Used condition*** • ***Good condition***	Kara and Onut (2010:717) Ponce-cueto *et al.* (2011:111)	• *"[…] consumer can also return the used products […] though the used product is in good condition."* (Jena & Sarmah, 2015:822) • *"End-of-Use Returns. These are used products or components that have been returned after customer use."* (Östlin *et al.* 2008:338) • *"A characteristic of these end-of-use returns is that they are in general not perfect substitutes for new products given their age and condition."* (Reimann, 2016:35)
Reasons/ causes	***Technology (obsolescence)***	Jena and Sarmah (2015:822)	• *"EoU products, […] are usually generated […] by major technological breakthroughs that cause obsolescence […]."* (Gobbi, 2011:770)
	Product exchange programmes	Das and Chowdhury (2012:209) Ghezavati and Nia (2015:3059) Jena and Sarmah (2015:819) Min and Ko (2008:179) Min et al. (2006:57)	• *"[…] most common reasons being product returns […] product exchange programs."* (Bazan *et al.* 2015:307) • *"Customers proactively bring their end-of-used products to the retailers to get a brand new product in exchange of the old one in the primary market at a discounted price."* (Das & Dutta, 2013:724)
	Incentives	Jena and Sarmah (2015:819)	• *Incentives […] offered to customers for returning the products after end-of-use […]."* (Ravi & Shankar, 2015:890)
	Product upgrades	Ghezavati and Nia (2015:3059) Min and Ko (2008:179),	• *"Typical reasons for product returns may include: […] product upgrades […]."* (Min et al. 2006:57) • *Update replacement is one of the major reasons for […] end-of-use categories."* (Toyasaki *et al.* 2013:1217)
Types of products	• ***Electronics*** • ***Mobile phones*** • ***Computers*** • ***Household appliances*** • ***Carpets***	Dixit and Badgaiyan (2016:125)	• *"[…] an end-of-use computer […] and […] Washing machines and tumble dryers constitute another example."* (Alumur *et al.* 2012:67) • *"[…] end-of-use […] for carpet […]."* (Cline *et al.* 2015:469) • *"EoU products […] (e.g. replacement of mobile phones, audio-video devices, liquid crystal display monitors replacing cathode ray tube monitors)."* (Gobbi, 2011:770) • *"[…] collecting end-of-use mobile phones […]."* (Ponce-cueto *et al.* 2011: 108) • *"[…] end-of-use […] electronics […]."* (Khor & Udin, 2012:3) • *"[…] PCs belong to […] end-of-use categories."* (Toyasaki *et al.* 2013:1217)
Disposition/exit options	• ***Reuse*** • ***Secondary markets*** • ***Repair***	None	• *"[…] an end-of-use computer that can be […] sold in secondary markets."* (Alumur *et al.* 2012:67) • *"[…] good conditions and reusing of end-of-use returns."* (Kara & Onut, 2010:717) • *"[….] repair […] of end-of-use products […]."* (Pochampally & Gupta, 2012:1349) • *"[…] end-of-use mobile phones […] and the possibility of sale of them in the second-hand market."* (Ponce-cueto *et al.* 2011: 108)

Source: Compiled by the researcher

Table 4.2 shows that EoU consumer returns associate with a few product conditions, and various reasons/causes, types of products and disposition options, which will be explore in the subsequent paragraphs.

As the name indicates, EoU returns are associated with used products, meaning that consumers used products for some time prior to the return. Despite being in *used condition*, products must be in relatively good condition, which indicates that products must still be usable. Consequently, products in defective condition might be less appropriate for EoU returns. Nevertheless, some findings indicated the repair can be a potential disposition option for EoU returns, which implies that some EoU returns might be in minor defective or damaged conditions.

Several reasons/causes associate with EoU returns, namely technological advancements, incentives, product exchange programmes and product upgrades. These return reasons can be classified as "push

and pull" consumer returns reasons since organisations can initiate EoU returns based on changing consumer preferences. Particularly, *technological advances* can cause a change in consumer preferences, leading to products becoming obsolete. The results of these technology advancements can relate to the other reasons/causes for EoU returns. For instance, organisations can offer *product exchange programmes* and *product upgrades* to address the changes in consumer preferences due to technological advancements. Therefore, organisations allow consumers to exchange used products for newer more technologically advanced ones. Additionally, organisations can make use of incentives to encourage consumers to return their used products. For instance, Apple[9] incentivise consumers to trade-in used devices for discount on new products (Fox, 2023:22). Essentially, EoU return reasons can be driven by organisations, with consumers playing indirect roles by seeking latest products.

In terms of the *type of products*, EoU returns mostly associate with electronic product categories. For example, EoU returns can include mobile phones, computers, computer accessories and household appliances, emphasising return reasons related to technological advances and product upgrades. However, other product categories, like carpets, can be associated with EoU returns, involving product exchange programmes.

Finally, Table 4.2 shows the *disposition options* associated with EoU returns include reuse, repair and/or resale in secondary markets. The disposition option of direct *reuse* normally associates with B2C returns, since the product is normally in a new condition. However, for EoU returns, reuse associate with reselling products on the *secondary markets*, without repairing the product. Therefore, used products in good and non-defective condition can be directly resold in the secondary markets at discounted prices. Alternatively, EoU products in defective condition might need to be *repaired* before resale on the secondary market can be possible.

Based on the findings presented in this section, this study will describe EoU consumer returns as follows:

> EoU consumer returns involve consumers returning used products, in good or defective condition (i.e. electronics, computers and cell phones) due to technological advances, product exchange programmes, incentives and product upgrades. EoU consumer returns can be initiated by organisations based on changing consumer preferences (push and pull returns). Depending on the condition of the product, EoU returns can include product reuse, repair and resale in secondary markets as disposition options.

In the next section, warranty returns as a type of consumer return will be discussed.

[9] Although Apple is a manufacturer, it can be classified as an online retailer, selling products directly to consumers online. See section 1.6 for more details.

4.3.3 Warranty consumer returns

From the QCA of RL literature findings, warranty returns included several categories related to product condition, reasons/causes for returns, types of products and disposition options. Table 4.3 provides an overview of the findings related to *warranty returns*, including detail on the categories, related subcategories, supporting literature sources and key quotations to support the discussion of the findings.

Table 4.3 Findings related to warranty returns

CATEGORIES	SUB-CATEGORIES	SUPPORTING SOURCES	KEY QUOTATIONS
Product condition	• ***Used*** • ***Defective condition***	Jena and Sarmah (2015:822) Ravi (2014:301) Ravi *et al.* (2008:4855) Roy *et al.* (2006:59)	• *"[…] defective, product under warranty […] through retail outlets […]."* (Das & Chowdhury, 2012:209) • *"[…] returned products can include the following: after use […] returned under warranty […]"* (Das & Chowdhury 2012:209) • *"A consumer will […] seek a warranty repair or defect fixation […]."* (Sharma & Singh, 2013:39)
Reasons/ causes	• ***Product failure*** • ***Quality failures*** • ***Warranty claims*** • ***False failure*** • ***Defective***	Kabir (2013:96) Roy *et al.* (2006:59) Shaharudin *et al.* (2015a:8) Sharma and Singh (2013:39)	• *"[…] products failed to meet the quality conformities, consequently warranties applied"* (Chan *et al.* 2012:1320) • *"Consumer can return the used products […] if warranty period is over."* (Jena & Sarmah, 2015:822) • *"Defective products […] entered the supply chain resulting in product returns due to warranty claims."* (Ravi *et al.* 2008:4855) • *"[…] warranty claims with the no-fault found phenomenon."* (Wu, 2014:60)
Types of products	• ***Vehicles*** • ***Computers***	None	• *"[…] usually provide warranty to new vehicles for three years."* (Chan *et al.* 2012:1322) • *"[..] an increasing amount of vehicles returning back due to warranty returns […]."* (Ravi 2014:299) • *"[…] for warranty returns […] PC motherboards and server motherboards […]."* (Shaharudin *et al.* 2015:9a)
Disposition options	• ***Repairs*** • ***Refurbishment***	Chan *et al.* (2012:1320, 1322) Kara and Onut (2010:717) Lambert *et al.* (2011:568) Piplani and Saraswat (2012: 1426) Sharma and Singh (2013:39) Wu (2014:52) Xanthopoulos and Iakovou (2009:1704)	• *"[…] many products under warranty are returned for repair […]"* (Ho *et al.* 2012:29) • *"[…] warranty returns […] refurbished […]."* (Janse *et al.* 2010:510) • *"[…] warranty return usually calls for repair […]."* (Khor & Udin, 2012:7) • *"[…] defective warranty components. […] could possibly be tried for repair […] such that value could be reclaimed from these products […]."* (Ravi 2014:301)

Source: Compiled by the researcher

Table 4.3 shows that warranty returns associate with a few product conditions, reasons/causes, types of products and disposition options, which will be explore in the subsequent paragraphs.

The *product condition* associated with warranty returns include used and/or defective. If the product is in a *used condition*, it means that the consumer used the product for some time but returned it before the warranty expired. Alternatively, the product might be in a *defective condition* and returned as such within the warranty period. However, like B2C returns, warranty returns can associate with false failures, meaning that consumers mistakenly believe that products, in working condition, are defective. Essentially, if a consumer purchase a product with a warranty that becomes defective during use or false failure upon first use, a warranty return will replace B2C returns.

Evidently, warranty *return reasons* can be closely related to B2C return reasons and classified as "push and pull consumer returns". A warranty return refers to the return of products that are under manufacturer warranty over a pre-specified period. If the *product fails* during the warranty period, a consumer can return the product, indicating that *quality failures* can be warranty return reasons (pull returns). Alternatively, if the consumer mistakenly believes that a non-defective product under warranty is defective, the warranty return can be described as a described as a *false failure warranty return* (push return).

Although the product condition and reasons in warranty returns point towards electronic products, only *vehicles* and *computers* as *product types* were identified as product types in the findings. Nevertheless, the findings indicated that the warranty periods can be different for different product categories. For instance, the warranty period for a passenger car might be three years, while the warranty for a laptop computer might be one year. Evidently, warranty return time windows can associate with the type of product and potentially the product quality (higher product quality represents longer warranty period).

Finally, warranty returns associate with the disposition options of *repair* and *refurbishment,* pointing to the used/defective conditions of products (still under warranty). However, a false failure warranty return can exclude the repair or refurbishment disposition options and can be potentially returned to the original consumer or resold in the secondary markets.

Although manufacturers can issue warranties, warranty returns can be appropriate for online retailing since consumers can use the online retailer's platform to return a product under warranty. For instance, Wu (2014:53) mentioned that warranty claims are handled by retailers and often included in the return policies of retailers. For this reason, warranty returns as a consumer return type is included in this study.

Based on the findings presented in this section, this study will describe warranty returns as follows:

> Warranty consumer returns refer to consumers returning used, good condition and/or defective products (e.g. computers and vehicles) under manufacturer warranty. Warranty returns can include various reasons, including product failures, quality failures, warranty claims, defectiveness or false failures ("push and pull" returns). Based on the reasons for warranty returns and the condition of the product, warranty returns can involve repair, refurbishment or other disposition options (such as resell on secondary markets).

In the next section, service returns as a consumer return type will be analysed and discussed.

4.3.4 Service consumer returns

Despite limited findings, service returns were categorised as: (1) product condition associated with service returns, (2) reasons/causes for service returns, (3) types of products associated with service

returns and (4) disposition options related to service returns. Table 4.4 provides an overview of the findings related to *service returns*, including detail on the categories, related subcategories, supporting literature sources and key quotations to support the discussion of the findings.

Table 4.4 Findings related to service returns

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
Product condition	• ***Relatively good condition*** • ***Used***	None	• *"Repair is more efficient for products of relatively good quality."* (Niknejad & Petrovic, 2014:145) • *"[…] repair services, and retrieval process from the used products […]."* (Kim *et al.* 2013:510)
Reasons/ causes	• ***Product failures*** • ***False failures*** • ***Repair service requests***	None	• *"Products are returned for repair mainly due to failure of quality conformity."* (Chan *et al.* 2012:1320) • *"[…] it is often found that returned products do not need any repair service […] the problems are caused by customers who do not fully understand how to operate the products correctly."* (Banomyong *et al.* 2008:40) • *"[…] where customer requests and handling of product/service returns […]."* (Ravi, 2014:2523)
Types of products	• ***Computers*** • ***Mobile phones*** • ***Cameras*** • ***Vehicles***	None	• *"[…] electronic products […] contributes to the growth of return flows requiring repair service."* (Li *et al.* 2016:223) • *"[…] computers, mobile phones, and cameras […] for after-sale repair services."* (Li *et al.* 2016:223) • *"[…] vehicle returns and provide repair service […]."* (Chan *et al.* 2012:1322)
Disposition option	• ***Repair***	Ahsan and Rahman (2016:627) Chan *et al.* (2012:1320) Ghezavati and Nia (2015:3059) Lai *et al.* (2013:107) Shaharudin *et al.* (2015:4)	• *"Service […] return […] calls for repair."* (Khor & Udin, 2012:7) • *"[…] service returns for repair […]."* (Subhashini (2016:9)

Source: Compiled by the researcher

Table 4.4 shows that service returns associate with few product conditions, types of products, reasons/causes, types of products and disposition options, which will be explore in the subsequent paragraphs.

Like that of EoU and warranty returns, the *product condition* associated with service returns include used products in relatively good condition. However, the disposition options and reasons for service returns can point to products that can be in damaged or defective condition. For instance, the *reasons/causes* for service returns can associate with *product failures*, *false failures* and *repair service requests*. Like B2C and warranty returns, service returns can involve false failures, if consumer mistakenly belief products are defective.

Service returns can involve electronics, mobile phones, cameras and vehicles as *product types*, emphasising the possibilities of false failure return reasons. Finally, linking with the reasons of product failures and repair service requests, service returns associate with the *disposition option* of repair. From the findings related to the repair option (presented in section 5.6.3) products can be defective and faulty condition, illustrating that service returns can involve defects.

Although limited findings associate with service returns, consumers might return products to online retailers for repair. Therefore, service returns as a consumer return type is included in this study. Based on the findings of the presented in this section, this study will describe service consumer returns as follows:

> Service consumer returns (mostly "pull" returns) involve consumers returning relatively good quality, used and/or defective products (e.g. computers, cameras, cell phones or vehicles) due to quality failures, inability to operate the product (false failure reasons) or a repair service request, involving repair as disposition option.

In the next section, the final consumer return type will be analysed and discussed.

4.3.5 Recalls in consumer returns

The final return type, *recalls*, includes four categories, namely the (1) product condition related to recalls, (2) reasons/causes for recalls, (3) types of products associated with recalls and (4) disposition options associated with recalls. Table 4.5 provides an overview of the findings related to *product recalls*, including detail on the categories, related subcategories, literature sources and key quotations to support the discussion of the findings.

Table 4.5 Findings related to recalls in consumer returns

CATEGORIES	SUBCATEGORIES	SUPPORTING SOURCES	KEY QUOTATIONS
Product condition	• ***Defective***	None	• *"Defective products may be […] resulting in a pull back of products through the chain (product recalls)."* (Kabir, 2013:96) • *"[…] defective products […] in a product recall."* (Ni *et al.* 2014:310) • *"[…] defect fixation via a product recall."* (Sharma & Singh 2013:39)
Reasons/ causes	• ***Defects*** • ***Quality failures*** • ***Safety issues*** • ***Notifications/ announcements***	Sharma and Singh (2013:39)	• *"For example, products suffered from production defects, which then resulted in product recall."* (Chan *et al.* 2012:1320) • *Recalls and returns differ mainly because of the notification aspects."* (Kabir, 2013:96) • *"[…] a retailer's recall announcement […]."* Ni *et al.* 2014:309) • *"There are elements of both quality (defective products) and product safety involved in a product recall."* (Ni *et al.* 2014:310)
Types of products/ industries	• ***Automobile*** • ***Pharmaceutical / medicine*** • ***Food*** • ***Toys*** • ***Infant/baby products*** • ***Household products*** • ***Outdoors*** • ***Sports***	Narayana *et al.* (2014:393) Roy *et al.* (2006:59)	• *"[…] automobile industry […] including unavoidable product recalls […]."* (Chan *et al.* 2012:1318) • *"[…] product recalls are of growing concern to hospital pharmacies."* (Kumar *et al.* 2009:189) • *"[…] product recalls resulting from safety problems (e.g., food and automobile)."* (Lai *et al.* 2013:107) • *"[…] consumer products, including toys, infant and children's products, household products, outdoor products, and sports and recreation products."* (Ni *et al.* 2014:310) • *"[…] product recall […] the lead-based toys as hazardous substances."* (Sarkis *et al.* 2010:345) • *"Another recall example occurred with a baby stroller and infant formula products."* (Sarkis *et al.* 2010:345)
Disposition options	• ***Repairs***	Sharma and Singh (2013:39)	• *"[…] recalled products […] repairs."* (Ni *et al.* 2014:309)

Source: Compiled by researcher

Regardless of the rich description from Ni *et al.* (2014) on recalls, some examples from industry articles/websites, excluded from the QCA, were included to supplement the discussion of recalls below. Each of the categories and subcategories, presented in Table 4.5 will be discussed in the rest of this section.

4.3.5.1 Product condition and reasons/causes for product recalls

Product recalls as a consumer return type involves products in *defective condition,* which links with the reasons/causes and disposition option of repair (see section 4.3.5.3). However, recalls can be distinguished from other return types in terms of health and safety issues.

Like other consumer return types, *return reasons* of recalls can include product-related problems, like *production defects* and *quality failures*. However, recalls can involve a greater sense of urgency and include a notification or announcement, not present in B2C consumer returns, EoU returns, warranty returns and service returns. Consequently, return reasons in recalls can include *product safety issues*, forcing retailers to notify consumers via special announcements to return unsafe/defective products. Evidently, product recalls are initiated by organisations in the SC and can be regarded as "pull consumer returns".

4.3.5.2 Types of products in product recalls

Table 4.5 shows that various types of products associate with product recalls, including automobile, food, medicines (pharmaceuticals), toys, infant or baby product types, household, outdoors and sports products. Given the return reasons discussed in the previous section, it is easy to identify potential health and safety problems associated with these product types.

For example, in 2018, South Africa experienced a recall of certain cold meat products due to a listeria outbreak, which claimed the deaths of 183 consumers (Mngadi, 2018:1). South African grocery retailers, such as SPAR announced on their website that customers can return cold meat products for a full refund (SPAR, 2019), demonstrating the involvement of retailers and notifications associated with recalls. Another example is the recall of almost one million vehicles from ten top South African car brands for inspection as a precautionary measure because of faulty airbags that could harm or kill vehicle occupants (Rekord, 2021). In addition, in May 2022 Unilever SA recalled Knorr 'Cup-a-Soup Beef and Vegetable Lite' due to mistake in content (Mhamba, 2022) and Shoprite and Checkers recalled a specific batch of canned tuna products owing to possible defects in the cans (Fin24, 2022).

Ni *et al.* (2014:315) mentioned that product types in recalls can be classified by (1) risk of death, illness or injury highly likely, (2) risk of death unlikely but illness or injury likely and (3) risk of illness or injury unlikely but possible. Subsequently, product recalls can be appropriate for any product type that can result in risk of death, illness or injury.

4.3.5.3 Disposition options associated with product recalls

Like warranty returns and service returns, product recalls associate with the *repair* disposition options, emphasising the defective condition of products. However, the repair option can only be appropriate for certain product categories, such as domestics appliances, machinery and electronic equipment (Singhry, 2015:121). If the recalled product is food or medicine, the disposition option might involve destroy (see Kabir 2013:97 and Xie & Breen, 2014:466). However, destroy was excluded from disposition/exit options due to a lack of findings in the QCA of RL literature.

Essentially, findings related to product recalls mostly focus on reasons for recalls and product types associated with recalls, with limited focus on the potential disposition options (recovery or exit options) related to recalls. Therefore, it is possible that other disposition/exit options could be used to treat recalled products. The findings presented in this section indicates that product recalls could be an important consumer return type in the online retailing industry. Furthermore, Ni *et al.* (2014:318) explained that retailers play an important role in product recalls, in that they are not only responsible for announcing the recall and issuing refunds (financial implications) but also due to their proximity to consumers. Based on these reasons, product recalls as a consumer return type will be included in this study, and be described as follows:

> Product recalls are consumer returns, initiated by organisations in the supply chain (pull returns), that entail announcements/notifications to consumers of potential risks of harm, injury, illness or death, related to the use/consumption of consumer goods (e.g. toys, medicine, food, household goods or sports equipment), due to production defects, quality failures, safety and health issues. The consumers are advised to return potentially harmful/hazardous and defective products for a refund or repair.

In the next section, the QCA findings of RL literature for consumer return types will be illustrated in a conceptual framework and concluded with a summary of the findings and important RLM considerations.

4.3.6 Conceptual framework and summary of findings for consumer return types

Clearly, the findings presented section 4.3 shows that various types of consumer returns can occur involving product conditions, return reasons/causes, product types and disposition options. Based on the findings, Figure 4.4, shows a conceptual framework for consumer return types that may occur in online retailing.

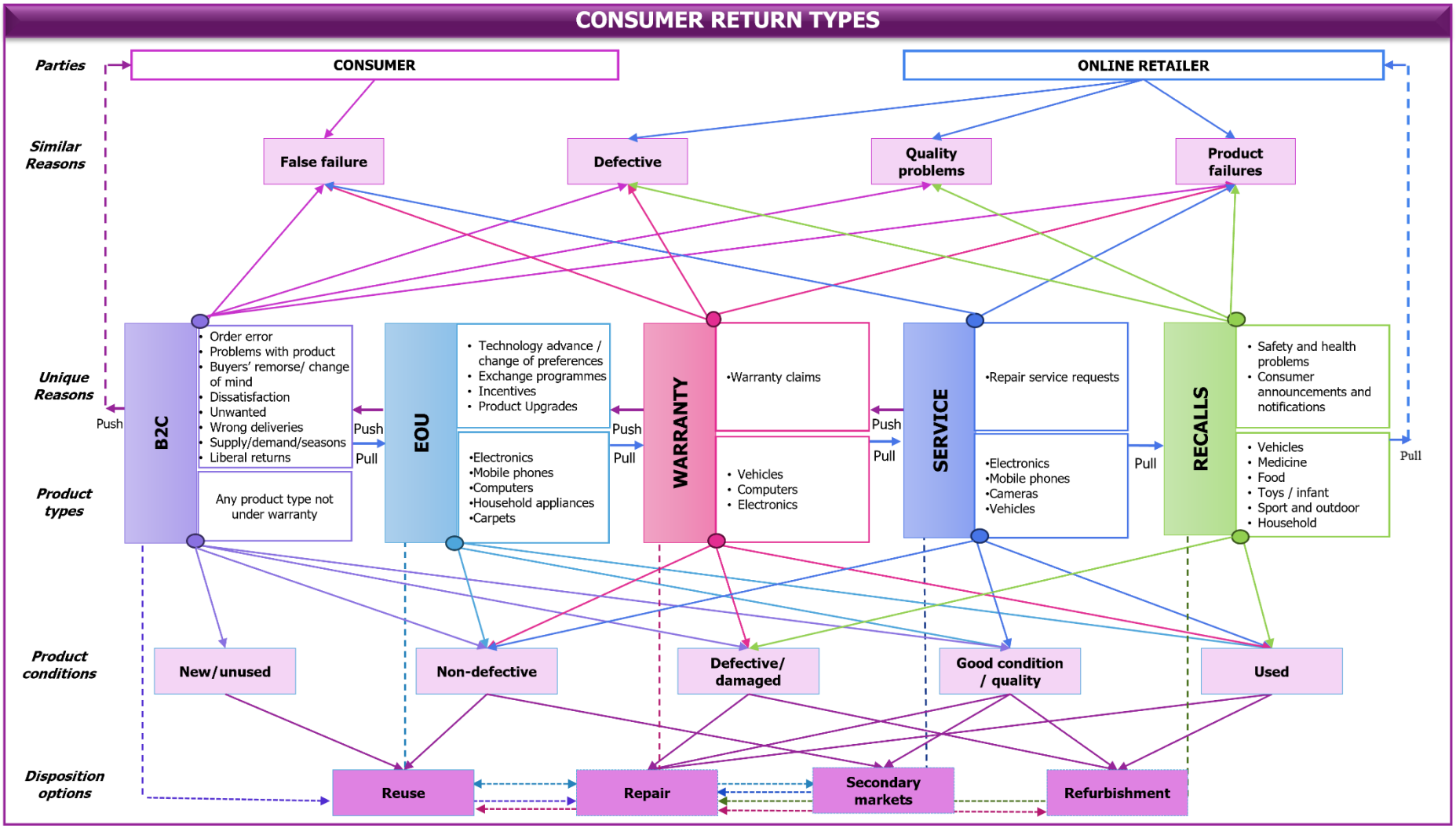


Figure 4.4 Conceptual framework of consumer return types
Source: Compiled by researcher

Figure 4.4 highlights the linkages between the parties, reasons of returns, the main consumer return types, product types, product condition and disposition options. Furthermore, the framework demonstrates the similarities and differences between the reasons for consumer return types.

Based on Figure 4.4 and discussions in section 4.3, Table 4.6 provides a summary of the findings and managerial implications for types of consumer returns that may occur in online retailing.

Table 4.6 Findings and managerial implications for consumer return types

CATEGORIES	KEY FINDINGS	MANAGERIAL IMPLICATIONS
Parties	• Consumers can be directly/indirectly responsible for various return reasons that can be described as push return reasons, including false failures, order errors, problems with products, buyers' remorse, change of mind, dissatisfaction, unwanted products, abuse of liberal return policies, technological change of preferences, warranty claims and repair service requests • Online retailers can be directly/indirectly responsible for various return reasons that can be described as pull return reasons, including defective, quality problems, product failures, liberal return policies, wrong deliveries, exchange programmes, incentive returns, product upgrades, warranty claims, health and safety notifications and announcements	➢ All consumer return types, including B2C, EoU, warranty, service and recall returns can occur in online retailing. ➢ Although some consumer return reasons are unavoidable, online retailers must focus efforts on avoiding unnecessary returns ➢ Online retailers must pay attention to B2C consumer returns to generally reduce returns ➢ Although false failure returns are classified as consumer errors, online retailers can reduce false failures through improved instructions or additional information ➢ Defective products are often associated with consumer returns, which means that online retailers must identify products or product brands that are often returned as defective and change suppliers or discontinue selling these products. ➢ Since EoU returns include organisational initiatives, focus should be placed on RL costs efficiencies, process effectiveness and disposition strategies for effective value recovery ➢ Online retailers must understand and prepare for consumer returns, regardless of their product offering ➢ Online retailers that stock products that can result in health and safety issues must implement strategies to effectively notify consumers and collect products from consumers ➢ Online retailers that stock electronics, cell phones, computers and automobiles must implement focus on implementing effective RL processes to manage consumer returns associated with these product types ➢ Online retailers that mostly experience B2C consumer
Reasons	• Common return reasons can include false failures (consumer errors), defective products, quality problems and product failures (organisational errors) • B2C consumer returns associate with the highest number of reasons • B2C consumer returns involve unique return reasons, including order errors, problems with products, buyers' remorse, change of mind, dissatisfaction, unwanted products, wrong deliveries, supply/demand variations and liberal return policies • EoU consumer returns involve unique return reasons, including technological advance / change of preferences, exchange programmes, incentives and product upgrades • Warranty consumer returns involve warranty claims as a unique reason • Service consumer returns involve request for a repair service as a unique reason • Product recall consumer returns involve unique return reasons, including safety and health problems, consumer announcements and notifications	
Product types	• B2C consumer returns can include any product type not under warranty • EoU returns, warranty returns, and service returns include electronics • Warranty returns, service returns and product recalls can include vehicles • EoU returns and warranty returns can include cell phones • EoU returns uniquely involve carpets • Service returns uniquely involve cameras • Recalls uniquely involve medicine, food, toys, infant products, sports and outdoor products in	

	recalls	returns must prepare to handle products in any condition
Product condition	• Product condition associates with various return types • B2C returns include the greatest variety of product conditions • Only B2C returns can include new/unused products • All consumer return types, except recalls, can include non-defective products (due to false failures) • All consumer return types, except B2C returns, can include and used products • B2C returns, warranty returns and product recalls can include defective/damaged products • B2C, EoU and service returns can include products in relatively good condition	➢ Online retailers must implement reuse strategies to effectively deal with non-defective products ➢ Online retailers must implement recovery strategies to effectively deal with used products ➢ Online retailers must implement disposition strategies, regardless of the consumer return type
Disposition options	• All consumer return types can involve disposition options • The reuse option associates with B2C, EoU and warranty returns and new/unused or non-defective products • The repair option associates with all consumer return types in defective/damaged condition • Secondary markets mostly associate with EoU returns in non-defective and/or good condition • The refurbishment option associates with warranty returns for products in defective/damaged, good and used conditions	➢ Online retailers must implement product repair strategies, regardless of the consumer return type

Source: Compiled by the researcher

Table 4.6 indicates the importance of understanding the various types of consumer returns, including parties responsible for initiating returns, return reasons, types of products, product condition and disposition options. Additionally, several managerial implications associate with consumer return types, which online retailers can consider for the effective RLM of consumer returns. The findings presented in this section will contribute to the final framework for the effective RLM of consumer returns in online retailing.

In the next section, the QCA finding of RL literature for pre-receipt RL processes will be discussed and analysed.

4.4 PRE-RECEIPT RL PROCESSES

In this section, the QCA findings of RL literature for pre-receipt RL processes will be provided. Pre-receipt RL processes start when a consumer notifies a retailer of a return and ends just before the retailer receives the product at a facility. Based on the coding framework of the QCA of RL literature (see Appendix A.2), the pre-receipt RL processes were structured into four main categories, namely customer return request (CRR), gatekeeping, collection and transportation. While return transportation can occur before returns arrive at facilities, this study acknowledges that transportation can be part of post-receipt RL processes, taking place as returned products moves between facilities in the reverse supply chain (RSC).

Figure 4.5 provides an overview of the distribution of the pre-receipt processes based on the results of the QCA of RL literature (see Appendix C.2 for quantitative results).

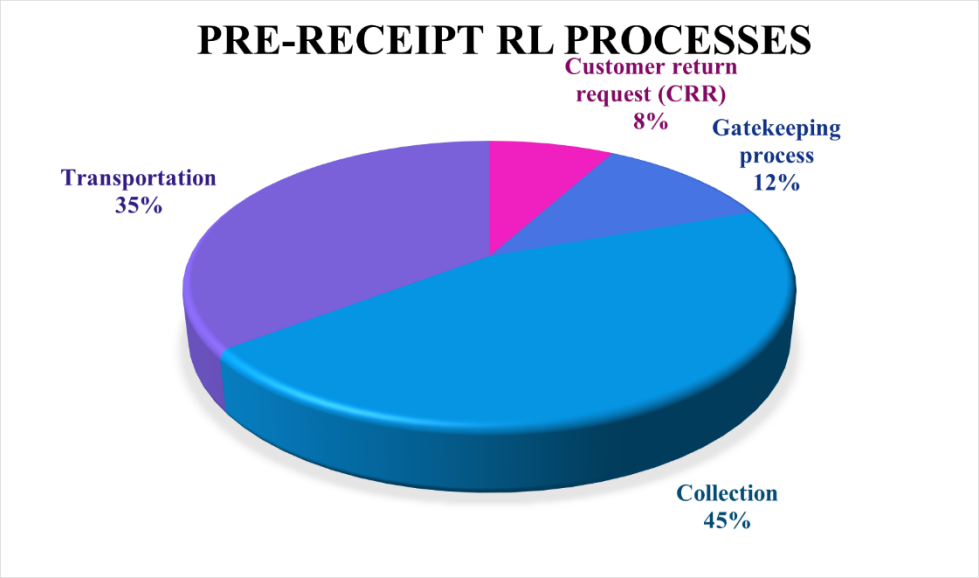


Figure 4.5 Distribution of pre-receipt RL processes
Source: Compiled by researcher

Figure 4.5 shows a distribution for the pre-receipt RL process categories of the QCA of RL literature derived from code frequencies (number of quotations assigned to code categories for the pre-receipt RL processes, see Appendix C.2). The pie chart clearly shows that most content on the pre-receipt RL processes focus on the collection process (45%), followed by transportation (35%). Contrastingly, limited literature on the pre-receipt RL processes focuses on gatekeeping (12%) and CRR processes (8%). Therefore, more research can be conducted on CRR and gatekeeping as pre-receipt RL processes for consumer returns.

The rest of this section will include presentations and discussions of the findings related to CRR, gatekeeping, collection and transportation processes. The section concludes with a conceptual framework and a summary of the findings for pre-receipt RL processes of consumer returns.

4.4.1 Customer return request (CRR) process of consumer returns

Customer return request (CRR) can be viewed as the first part of the RL process of consumer returns, which means that the consumer "asks" a retailer to return a product. As mentioned in section 4.2.1, the pre-receipt RL processes of consumer returns in online retailing include CRR, making it an important process in this study. Despite this importance, limited sources include and discuss CRR as a RL process (see Figure 4.5), erroneously viewing the RL process as starting from gatekeeping or collection. Consequently, some scholars view RL processes in a narrow sense, while others,

including the researcher of this study, view RL processes in a broad sense by regarding all possible processes and activities associated with consumer returns as important.

Regardless of being limited, the findings related to the CRR sufficed for describing CRR and included the following categories: (1) characteristics of CRR, (2) activities in CRR, and the (3) parties involved in CRR. Table 4.7 provides an overview of the findings related to the *CRR process of consumer returns*, including detail on the categories, related subcategories, literature sources and key quotations to support the discussion of the findings.

Table 4.7 Findings related to the CRR process of consumer returns

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
Characteristics	***Starts with the consumer***	Badenhorst (2016:4) Bernon *et al.* (2011:491) Bernon *et al.* (2016:589) Chan *et al.* (2012:1321), Govindan *et al.* (2015:603) Jack *et al.* (2010:230)	• "*The process starts when a consumer returns a product.*" (De Leeuw *et al.* 2016:715)
	Initial RL process	None	• *"The process of "customer return request" is the initial process, where the product is returned by the customer."* (Bernon *et al.* 2011:491)
	Recognition of a product return	de Oliveira *et al.* (2012:1604) Lhafiane et el. (2015a:1827)	• *"The first step is the entry to the reverse logistics system or the recognition of a product return."* (Lambert *et al.* 2011:562)
	Important	None	• *"[…] the processes of "customer return request" […] were highlighted as critical."* (Bernon *et al.* 2011:491) • *"The first step is the recognition of product return, this is very critical to succeed in managing the system."* (Lhafiane *et al.* 2015b:397)
	Relates to return reasons	Genchev (2009:145) Genchev *et al.* (2011:251)	• *"If a customer is not satisfied with the product's quality within a given time, the customer can request a return."* (Li et al. 2013:453)
	Linked to processing	Genchev (2009:145)	• *"[…] following the customers' request for a return. […] advance notice of what product is coming back from the market allows for increased speed in returns processing."* (Genchev *et al.* 2011:251)
	Linked to inspection	None	• *"[…] customers' requests to return product(s) proves invaluable in the inspection process."* (Genchev, 2009:145)
Activities	***Communication***	Genchev (2009:144)	• *"[…] customer originated contact made with the retailer, in order to return a purchased product to the retailer."* (Griffis *et al.* 2012:287)
	Record return reasons	None	• *"[…] complete details of the returned product including the reason for the return […]."* (Genchev *et al.* 2011:251)
	Review request	None	• *"[…] return request has been reviewed. […] customer service representative will contact you."* (Genchev, 2009:144)
	Initial assessment of product condition	None	• *"It is also the point at which an initial assessment is made of a product's condition which will ultimately decide what return processes it will undergo."* (Bernon *et al.* 2011:491)
	Pre-return authorisation or rejection	De Leeuw *et al.* (2016:715)	• *"This final step is followed by clicking the ''submit'' button to register the official return authorization [sic] request."* (Genchev *et al.* 2011:251) • *"The request to return this item has been denied […]."* (Genchev, 2009:144)
Parties	***Consumers***	Griffis *et al.* (2012:287)	• *"[…] the customer decision to return a product where customers initiate returns […]."* (Bernon *et al.* 2016:589)
	Retailer	Griffis *et al.* (2012:287)	• *"When an end customer begins the reverse logistics process, it is usually with a retailer."* (Jack *et al.* 2010:230)

Source: Compiled by the researcher

Table 4.7 shows that the CRR process involves a few characteristics, activities and parties, which will be discussed in the subsequent sections and concluded with a description and conceptual framework.

4.4.1.1 Characteristics of the CRR process

The characteristics of the CRR process include (1) starts with the consumer, (2) initial RL process, (3) recognition of a product return, (4) important, (5) relates to return reasons, (6) linked to processing, and (7) inspection processes (post-receipt processes). The most significant characteristic of the CRR process can be the *consumer starting* the RL process, which confirms that the CRR can be viewed as the first *initial RL process* of consumer returns. Additionally, CRR involves the *recognition* by the retailer of a consumer's intent to *return a product*, demonstrating the importance of establishing effective communication avenues with the consumer.

Additionally, the CRR process can be *important* since consumers provide important information about the condition of the product and the *return reason*, which can be valuable at later stages in the RL process. Subsequently, the CRR process can *link* with the post-receipt RL processes of *processing* and *inspection*, in terms of the information provided by consumers. For example, during a return request the consumer can select the option exchange, which processing staff can use as input for choosing the appropriate processing outcome (e.g. issue credit or ship an exchange). The link between CRR and other RL processes confirms the importance of including CRR as a RL process for consumer returns in online retailing.

4.4.1.2 Activities and parties of the CRR process

The CRR process can include several *activities*, namely (1) communication of the return, (2) record return reasons, (3) initial assessment of product condition, (4) review the request, and (4) pre-return authorisation or rejection. These activities relate to the characteristics of the CRR process, for example, *communication* can be important for the recognition of a product return. Additionally, communication can be important in the other CRR activities of recording return reasons, initial assessment and pre-return authorisation or rejection. In online retailing, the consumer can *record the return reason* on the retailer's website, which provide important information about the condition of the product. Based on the return reason and before receiving a product, the retailer can *review the request* and make an *initial assessment of the product condition,* which can either result in a *pre-return authorisation* or *rejection.* While a pre-return authorisation continues the RL process, a rejection ends the return process, indicating that in some instances RL can be limited to pre-receipt RL processes.

Both the characteristics and activities of the CRR process, clearly demonstrates *the parties* involved in the CRR process. Consequently, *consumers* are involved in logging the return request, communicating with retailers and providing the return reason, and *retailers* are involved in assessing

the return request, communicating the outcome of the assessment to the consumer, and issuing a pre-return authorisation or rejecting the return.

4.4.1.3 Description and conceptual framework of the CRR process.

Based on the findings, presented in section 4.4.1, the CRR process can be an important pre-receipt RL process of consumer returns, and will be described as follows:

> The CCR process of consumer returns is an important process that can be described as the first pre-receipt RL process, starting with a consumer and the recognition of a product return. The CRR process relates to the return reasons and links with the processing and inspection processes. The CRR process involves activities related to information flows, including communication, recording of return reasons, reviewing the request, initial assessment of product condition and pre-return authorisation or rejection, which can be performed by the consumer and retailer.

Figure 4.6 provides a conceptual framework for the CRR process that may apply to consumer returns in online retailing.

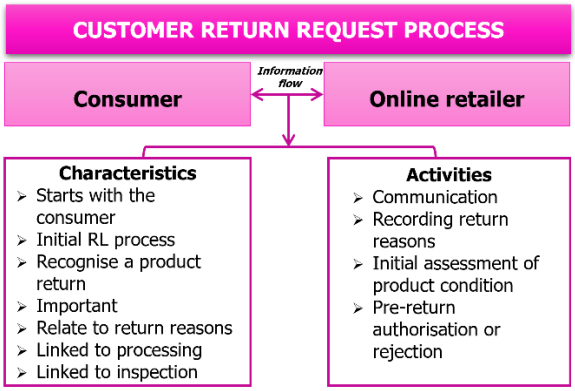


Figure 4.6 Conceptual framework of the CRR process
Source: Compiled by the researcher

Figure 4.6 illustrates consumers and retailers as the main parties in the CRR process. Additionally, the highlights the characteristics and activities of the CRR process and the flow of information between the consumer and retailer, throughout the process.

In the next section, the QCA findings of RL literature for gatekeeping as a pre-receipt RL process of consumer returns, will be analysed and discussed.

4.4.2 Gatekeeping process of consumer returns

The gatekeeping process of consumer returns focus on consumer communication that mostly takes place through the implemented information systems of online retailers (Hjort *et al*. 2019:774). The purpose of the gatekeeping process is screening of a product to identify if the product is acceptable as a return, or not, based on the return policy (Andresen & Istad, 2019:8).

From the QCA of RL literature, the gatekeeping process involve the following categories: (1) characteristics of gatekeeping, (2) activities in gatekeeping, (3) facilities associated with gatekeeping and (4) parties involved in gatekeeping. Table 4.8 provides an overview of the findings related to the *gatekeeping process of consumer returns*, including detail on the categories, related subcategories, supporting literature sources and key quotations to support the discussion of the findings.

Table 4.8 Findings related to the gatekeeping process of consumer returns

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
Characteristics	***Entry point of RL***	Agrawal *et al.* (2015:78) Daaboul *et al.* (2014:3) Jayaraman *et al.* (2008:416) Östlin *et al.* (2008:347)	• *"Gate keeping […] the entry point into the reverse logistics process."* (Agrawal & Choudhary, 2014:19)
	Identify if a product is allowed	Agrawal and Choudhary (2014:19) Agrawal *et al.* (2016d:934) De Leeuw *et al.* (2016:715) Griffis *et al.* (2012:285) Lambert *et al.* (2011:568) Lhafiane et el. (2015a:1831) Shaik and Abdul-Kader (2014:97)	• *"Gate keeping […] is a set of practices […] to identify the products which are allowed into the system."* (Agrawal *et al.* 2015:78) • *"The gatekeeping function determines which products to allow in the reverse logistics system."* (Beh *et al.* 2016:5)
	Based on a return policy	Li and Olorunniwo (2008:384) Olorunniwo and Li (2010:456)	• *"[…] the company verifies whether the consumer is entitled to return the product according to its returns policies."* (De Leeuw *et al.* 2016:715)
	Linked to the collection process	None	• *After […] gate keeping […] the collection agent […]."* (Lhafiane et al. 2015b:399)
	Linked to processing	Griffis *et al.* (2012:287)	• *Processing returns […] possesses the information […] condition of merchandise as provided via return authorization [sic] […]."* (Genchev, 2009:145) • *"[…] getting authorization [sic] and completing the return authorization [sic] forms, and preparing the returned item for processing."* (Stock & Mulki, 2009:41)
	Linked to inspection	None	• *"[…] inspection of the merchandise to confirm the legitimacy of the return (i.e., gatekeeping)."* (Griffis et al. 2012:285)
	Linked to sorting	Lambert *et al.* (2011:562)	• *"Sorting […] of the returned product with the return authorization […] given by gate keeping agent."* (Lhafiane *et al.* 2015b:399)
	Linked to the disposition process	De Leeuw *et al.* (2016:715) Griffis *et al.* (2012:287)	• *"[…] return material authorisation (RMA). […] for returns authorisation and disposition."* (Jayaraman *et al.* 2008:415)
Activities	***Screening of a product return***	Agrawal and Choudhary (2014:19) De Leeuw *et al.* (2016:715) Daaboul *et al.* (2014:3) Östlin *et al.* (2008:347)	• *"Gatekeeping is the screening of defective and unwanted products […]."* (Jayaraman *et al.* 2008:416)
	Make decisions	None	• *"[…] retailer decides whether product must be sent for further processing […]."* (Agrawal et al. 2016a:934) • *"Gate keeping […] based on its knowledge […] takes decision […]."* (Lhafiane *et al.* 2015b:398)
	Returns authorisation	De Leeuw *et al.* (2016:715) Genchev (2009:144) Jayaraman *et al.* (2008:416) Lhafiane et el. (2015a:1831) Olorunniwo and Li (2010:456)	• *"[…] the routing of the return (including the generation of a return material authorization [sic] (RMA) […]."* (Griffis *et al.* 2012:285) • *"Gatekeeping, and is responsible for issuing return authorization [sic] […]."* (Lambert *et al.* 2011:568) • *"[…] retailers accept products back from their customers after issuing a return merchandise authorization [sic] […]."* (Li & Olorunniwo, 2008:384)
	Communication	None	• *"[…] gate keeping's main responsibility is to verify return, […] Then it should communicate the authorization [sic] number […]."* (Lhafiane et al. 2015a:1830) • *"[…] assign the number authorization [sic], notify the customer and inform the distributor […]."* (Lhafiane et al. 2015a:1830)
Facilities/ locations	***Centralised returns centre (CRC)***	Jayaraman *et al.* (2008:416)	• *"[…] returned products are collected then forwarded to a central returns facility, where screening takes place."* (De Leeuw *et al.* 2016:715)
	Processing facilities	None	• *"[…] product returns to the processing facility, […] and completing the return authorization [sic] forms […]."* (Stock & Mulki 2009:41)
	Retail stores	None	• *"[…] screening, in which returned products are screened immediately at […] the physical store of the retailer."* (De Leeuw et al. 2016:715)

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
Parties	***Consumers***	Agrawal, *et al.* (2015:78) De Leeuw *et al.* (2016:715) Genchev (2009:144) Li and Olorunniwo (2008:384)	• *Gatekeeping is the screening of defective and unwanted products at the customer-retailer interface […].”* (Jayaraman *et al.* 2008:416) • *“[…] assign the number authorization, notify the customer […].”* (Lhafiane *et al.* 2015a:1830) • *“[…] when retailers […] accept products back from their customers.”* (Olorunniwo & Li, 2010:456)
	Retailers	Agrawal *et al.* (2016d:934) Jayaraman *et al.* (2008:416) Olorunniwo and Li (2010:456)	• *“Gate keeping […] is a set of practices performed usually by retailers […].”* (Agrawal *et al.* 2015:78) • *“[…] online retailers […] are involved in […] authorizing [sic] the return […].”* (Griffis *et al.* 2012:287) • *“[…] retailers accept products back from their customers after issuing a return merchandise authorization [sic] […].”* (Li & Olorunniwo, 2008:384)
	Third parties	Prakash and Barua (2016a:70)	• *The 3PRL partner has to deal with […] gate keeping […].”* (Prakash & Barua, 2016b:64)
	Suppliers	None	• *“RMA is a request sent to the suppliers from the retailers […].”* (Jayaraman et al. 2008:416)

Source: Compiled by the researcher

Table 4.8 shows that the gatekeeping process involves various characteristics, activities, facilities and parties, which will be discussed in the subsequent sections and concluded with a description and conceptual framework.

4.4.2.1 Characteristics of the gatekeeping process

The characteristics of gatekeeping include (1) the entry point of the RL process, (2) identify if the return is allowed, (3) based on a return policy and (4) links with other RL processes. The *entry point of the RL process* means that the gatekeeping process ultimately allows a product return to enter the RSC. Consequently, gatekeeping can be characterised as a pre-receipt RL process that involves *identifying if the product return is allowed*. While the CRR process involves decisions based on return reasons (see section 4.4.1), the gatekeeping process involves decisions *based on return policies.* For example, a return policy might specify that returns are allowed within 14 days of purchase, where after no returns will be accepted.

Finally, the gatekeeping process can *link with other RL processes,* including collection, processing, inspection, sorting and disposition. Particularly, gatekeeping links with the *collection process*, as acceptance of the product return triggers the collection process. The link between the gatekeeping process and the post-receipt RL processes of processing, inspection, sorting and disposition, depends on the point of gatekeeping. Although gatekeeping takes place before collection, gatekeeping can occur a second time during *processing, inspecting* and *sorting* processes. For example, the product return was allowed based on the return reason and return policy parameters of unopened/unused products, but during processing, inspection or sorting the staff notice that the product was used, which may lead to the rejection of the return. Alternatively, processing, inspection and sorting can confirm the accuracy of return information and condition of the product, which links gatekeeping

with the disposition process. The post-receipt RL processes will be explored in greater detail in chapter 5.

4.4.2.2 Activities and facilities in the gatekeeping process

The gatekeeping process involves a *few activities*, namely (1) screening of a product returns, (2) making decisions, (3) return authorisation, and (4) communication. The *screening of* a *product return* links with the gatekeeping characteristics of identifying if a product return is allowed based on the return policy. Following the screening of a product, the gatekeeper must *make the decision* to accept or reject the return. Accepting the return, triggers the next activity of *return authorisation*, which involves issuing a return merchandise authorisation (RMA) to the consumer. Subsequently, the outcome of the gatekeeping activities must be *communicated* to consumers or other interested parties. The strategies related to decision making in gatekeeping will be explored in chapter 6 as part of the RL practices to manage consumer returns.

As explained in the characteristics (section 4.4.2.1) gatekeeping can take place before return receipt and post receipt during processing, inspection or sorting. Subsequently, the gatekeeping process can involve any facilities used for post-receipt RL processes, including *centralised return centres (CRCs)* and *processing* facilities. Alternatively, initial pre-receipt gatekeeping can be conducted at the facilities through information systems and communication with consumers. Finally, multichannel retailers can use their *stores* to perform gatekeeping activities.

4.4.2.3 Parties involved in the gatekeeping process

The gatekeeping process can involve several parties, including consumers, retailers, third parties and suppliers. These parties can fulfil secondary, active or influential roles in the gatekeeping process. While *consumers* play the secondary role of waiting for the outcome of the gatekeeping process, *retailers* play primary roles of performing the gatekeeping activities, including screening, decision-making, return authorisation and communication. Alternatively, if retailers outsource RL processes, *third parties*, like third party RL (3PRL) providers, can play active roles and perform gatekeeping activities on behalf of the retailers. Finally, *suppliers* can play influential roles in the gatekeeping process. For example, retailers might first request authorisation from suppliers before issuing an RMA for a warranty return.

4.4.2.4 Description and conceptual framework of the gatekeeping process

Based on the findings, presented in section 4.4.2, the gatekeeping process can be an important pre-receipt RL process of consumer returns, and will be described as follows:

> The gatekeeping process of consumer returns can be described as the entry point of the RL process to determine if a product return is allowed based on the return policy. The gatekeeping process links with other RL processes, including collection, processing, inspection, sorting and disposition processes. Gatekeeping can be performed virtually before returns are received and/or physically during processing, inspection and sorting in CRCs, processing facilities or retail stores. The retailer (or its outsourced 3PRL provider) performs the gatekeeping activities of screening, decision making, return authorisation (or RMA) and communicating the outcomes to the consumers. Suppliers may play influential roles by accepting/rejecting RMA requested by retailers.

Figure 4.7 provides a conceptual framework for the gatekeeping process that may apply to consumer returns in online retailing.

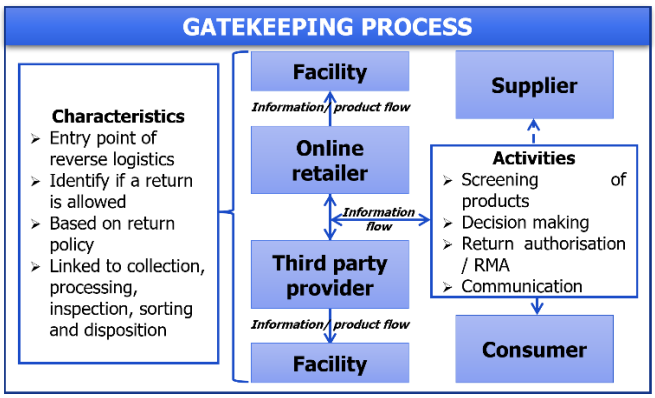


Figure 4.7 Conceptual framework of the gatekeeping process
Source: Compiled by the researcher

Figure 4.7 illustrates the gatekeeping process, with the characteristics of gatekeeping, interfaces between parties and facilities, activities and flows. Information flow takes place throughout gatekeeping, including between facilities, retailers or 3PLs (responsible for activities), suppliers (influencing decisions) and consumers (waiting for outcomes). However, if gatekeeping takes place post-receipt, both information and product flows can occur.

In the next section, the QCA findings of RL literature for collection as a pre-receipt RL process of consumer returns, will be analysed and discussed.

4.4.3 Collection process of consumer returns

Collection as a pre-receipt RL process involves the physical retrieval of product returns from consumers. From the QCA findings of RL literature, the collection process included the following categories: (1) characteristics of collection, (2) activities in collection, (3) collection methods, (4) facilities and locations associated with collection and (5) the parties involved in collection.

Table 4.**9** provides an overview of the findings related to the *collection process*, including detail on the categories, related subcategories, supporting literature sources and key quotations to support the discussion of the findings.

Table 4.9 Findings related to the collection process of consumer returns

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
Characteristics	***Start of RL (product) flow***	Agrawal and Choudhary (2014:15) Aras *et al.* (2008:1224) Das and Dutta (2013:722) Demirel and Gökçen (2008:1199) Dowlatshahi (2010b:4213) Mazahir *et al.* (2011:94) Sasikumar and Kannan (2008a:160) Srivastava and Srivastava (2006:527)	• *"[…] process generally begins with the collection of used products or returned products."* (Chern *et al.* 2014:194) • *"Collection is the first and an important element of the reverse logistics."* (Jindal & Sangwan, 2015:394) • *"The product recovery begins with the collection of retuned products."* (Kannan *et al.* 2016:2)
	Involve costs	Aras *et al.* (2008:1224) Mazahir *et al.* (2011:97) Ravi and Shankar (2015:877) Suyabatmaz *et al.* (2014:78)	• *"The main economic costs of the collection process are […] labor [sic] costs, tools, transportation costs, and storage costs."* (Shi *et al.* 2012:219) • *"[…] collection costs, which is comprised of inventory and transportation costs."* (Mafakheri & Nasiri, 2013:186) • *"[…] major cost associated with collecting a returned product […]."* (Rajagopal *et al.* 2015:42)
	Availability, retrieval, possession and accumulation of products	Bai and Sarkis (2013:307) de Oliveira *et al.* (2012:1604) Lhafiane *et el.* (2015a:1827) Lhafiane *et al.* (2015b:397) Sasikumar and Kannan (2008a:160)	• *"Collection is the process of making returned products available […]."* (Flygansvær *et al.* 2008:9) • *"The collection step permits the retrieval of products […]."* (Lambert *et al.* 2011:562) • *"Product collection refers to […] possession of the products."* (Hong *et al.* 2008:174) • *"Collection simply means the accumulation of the products."* (Beh *et al.* 2016:6) • *"Collection is […] where the products are retrieved and accumulated […]."* (Mazahir *et al.* 2011:94)
	Depend on product type, condition and return reason		• *"[…] consumers may pay a collection fee depending on the type and condition of the equipment."* (de Oliveira *et al.* 2012:1604) • *"Collection […] responsibility may rest upon the company, a third-party, or the customer. The choice depends on many factors: complexity of products, reason for return, and territories involved […]."* (Lambert *et al.* 2011:568)
	Linked to gatekeeping	None	• *After […] gate keeping […] the collection agent […]."* (Lhafiane *et al.* 2015b:399)
	Linked to transportation process	Aras *et al.* (2008:1224) Ayvaz et al. (2015:393) Barker and Zabinsky (2008:255) Dowlatshahi (2010b:4213) Kinobe *et al.* (2015:89) Mafakheri and Nasiri (2013:186) Mutha and Pokharel (2009:337) Shi *et al.* (2012:219) Srivastava and Srivastava (2006:527) Zhou and Zhou (2015:68)	• *"Collection involves […] transportation."* (Lambert *et al.* 2011:568) • *The transportation […] mainly involve collecting used products from consumers […]."* (Hsueh & Lin, 2015:164) • *"[…] transportation […] for collecting returned products."* (Suyabatmaz *et al.* 2014:78)
	Linked to returns processing	None	• *"[…] processing and handling returns […] associated with pickup […]."* (Subhashini 2016:10)
	Linked to inspection processes	Agrawal *et al.* (2015:86) Luitel *et al.* (2014:86) Assavapokee and Wongthatsanekorn (2012:134, 136) Das and Dutta (2013:722) Fattahi and Govindan (2016:6) Ghezavati and Beigi (2016:4) Gu and Tagaras (2014:5157) Jayaraman *et al.* (2008:416) Kannan (2009:399) Konstantaras *et al.* (2010:452) Mazahir *et al.* (2011:100) Pourmohammadi *et al.* (2008:5) Srivastava and Srivastava (2006:528) Suyabatmaz *et al.* (2014:77)	• *"Inspection […] is the next stage which may be carried out either at the […] time of collection itself or afterwards."* (Agrawal & Choudhary, 2014:15) • *"[…] returned products are collected […] and quality inspection operation is performed […]."* (Zandieh & Chensebli, 2016:6)
	Linked to sorting processes	Agrawal and Choudhary (2014:15)	• *"The collector is responsible not only for collecting but also for sorting […]."* (Gu & Tagaras, 2014:5169)

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
		Agrawal *et al.* (2015:86) Agrawal *et al.* (2016b:93) Baker and Zabinsky (2008:252) Daaboul *et al.* (2014:3) de Oliveira *et al.* (2012:1604) Jayaraman *et al.* (2008:416) Kara and Onut (2010:718) Konstantaras *et al.* (2010:452-453) Luitel *et al.* (2014:86) Suyabatmaz *et al.* (2014:77)	• *"[…] Sorting may be carried out either at the point/time of collection itself or afterwards […]."* (Srivastava & Srivastava, 2006:528)
	Linked to disposition processes	Agrawal *et al.*, (2016b:93) Alumur *et al.* (2012:68) Kinobe *et al.* (2015:89) Presley *et al.* (2007:4607) Skinner *et al.* (2008:523)	• *"[…] from the point of collection to the disposition destination."* (Jayaraman *et al.* 2008:411) • *"Collection […] and disposition decision of collected return products […]."* (Prakash & Barua, 2016b:70)
Activities	***Loading vehicles***	None	• *"[…] materials may be loaded onto the delivery vehicle […] for return […]."* (Alshamrani *et al.* 2007:597)
	Handling and storage	None	• *"This process includes logistic aspects of […] handling, and storage."* (Shi *et al.* 2012:219)
	Shipping	None	• *"Returned products are taken back from the customers and shipped […]."* (Lee & Dong, 2009:62)
	Moving products	None	• *"Collection refers to all activities rendering used products available and physically moving them […]."* (Sasikumar & Kannan, 2008a:160)
	Delivery	Agrawal et al. (2016a:934) Agrawal *et al.* (2016c:42) Kim *et al.* (2013:511)	• *"Products […] are collected and delivered to the facilities […]."* (Agrawal *et al.* 2015:78)
Type of collection methods	***Pickup collection methods***	Alumur *et al.* (2012:68) Aras *et al.* (2008:1238) Flygansvær *et al.* (2008:13) Kassem and Chen (2013:57) Toyasaki *et al.* (2013:1219)	• *"A carrier picks up the product at the consumer's address."* (De Leeuw *et al.* 2016:716) • *"Collection involves […] the pick-up of the returned product […]."* (Lambert *et al.* 2011:568) • *"[…] pick-up […] options; firms can ensure that the return package […] will be picked up by a third-party agent […]."* (Mollenkopf *et al.* 2007:241)
	Drop-off collection methods	Alumur *et al.* (2012:68) Chari *et al.* (2016:2) De Leeuw *et al.* (2016:715)	• *"[…] "products" of upstream holders are […] dropped by the consumer […]."* (Alshamsi & Diabat, 2015:590) • *"Drop-Off Collection method […] where people can drop-off […] products."* (Hanafi *et al.* 2008:381)
	Postal-drop collection methods	Hanafi *et al.* (2008:375)	• *"[…] postal-drop options; firms can ensure that the return package [….] can be easily returned via the postal system."* (Mollenkopf *et al.* 2007:241) • *"Postal returns. A number of organisations currently offer free-post return envelopes for high-value consumer goods […]."* (Rahimifard *et al.* 2009:84)
Facilities/ locations	***Physical retail outlets***	Lau and Wang (2009:456) Luitel *et al.* (2014:86) Min and Ko (2008:176) Rahimifard *et al.* (2009:84)	• *"The consumer drops the product at a physical store of the company."* (De Leeuw *et al.* 2016:715) • *"When a consumer returns their product to a retail store […]."* (Rajagopal *et al.* 2015:41) • *"[…] the collection of returned products at […] retail outlets […]."* (Ghezavati & Nia, 2015:3055)
	Collection points	Kara and Onut (2010:718) Lau and Wang (2009:456) Luitel *et al.* (2014:88)	• *The consumer drops the package at a collection […] point."* (De Leeuw *et al.* 2016:715) • *"The collection points are rented from the local stores, retailers, and 24-h convenience shops."* (Li *et al.* 2016:225) • *"[…] initial collection points (ICP) […]. Initially, the customers return their used products to the ICP which are located nearer to them."* (Sasikumar *et al.* 2010:1225)
	Collection facilities	Alshamsi and Diabat (2015:590) Aras *et al.* (2008:1238) Ayvaz et al. (2015:393) Du and Evans (2008:2620) Entezaminia *et al.* (2016:2) Fattahi and Govindan (2016:6) Ghezavati and Beigi (2016:4) Hahler and Fleischmann (2013:3) Jayaraman *et al.* (2008:417) Luitel *et al.* (2014:86) Pishvaee *et al.* (2010:270) Pourmohammadi *et al.* (2008:5) Srivastava and Srivastava (2006:530) Srivastava (2008:540) Subhashini (2016:9) Toyasaki *et al.* (2013:1219) Zandieh and Chensebli (2016:6)	• *"Collection: products are dropped off by individuals and accrue at collection centres."* (Chari *et al.* 2016:2) • *"The function of a collection center [sic] is to collect returned products […]."* (Eskandarpour *et al.* 2014:1396) • *"[…] collected to the collection facilities […]."* (Kim *et al.* 2006:281)
	Warehouses	Konstantaras *et al.* (2010:452)	• *"The goods collected in each retailer are transported to the warehouses."* (Mutha & Pokharel, 2009:337)
	Distribution centres	None	• *"[…] distribution center [sic] is set within the given region to facilitate the*

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
	(DCs)		*activities of collection […].”* (Sheu, 2007:1444) • *“[…] the collection of returned products at designated regional distribution centers [sic] […].”* (Ghezavati & Nia, 2015:3055)
	Inspection facilities	Pishvaee *et al.* (2010:270) Zandieh and Chensebli (2016:6)	• *“[…] returned products are collected from customer zones into […] inspection centers [sic].”* (Ghezavati & Beigi 2016:4)
	Disassembly facilities	None	• *“Returns are collected from customers by disassembly centres.”* (Salema *et al.* 2010:339)
Parties	***Consumers***	Agrawal et al. (2016a:933) Aras *et al.* (2008:1238) Ayvaz et al. (2015:393) Das and Dutta (2012:471) Du and Evans (2008:2620) Ghezavati and Beigi (2016:4) Ghezavati and Nia (2015:3055) Govindan *et al.* (2015:603) Konstantaras *et al.* (2010:452) Lambert *et al.* (2011:562) Lee and Dong (2009:62) Lhafiane *et el.* (2015a:1827) Pishvaee *et al.* (2010:270) Rahimifard *et al.* (2009:84) Rajagopal *et al.* (2015:41) Salema *et al.* (2010:339) Sasikumar *et al.* (2010:1225) Selvi and Kayar (2016:17) Silva *et al.* (2013:379) Srivastava and Srivastava (2006:529-530)	• *“[…] dropped by the consumer at the collection center [sic] […].”* (Alshamsi & Diabat, 2015:590) • *“Collecting returned products from the end customer.”* (Daaboul *et al.* 2014:3) • *“[…] starts with the collection of the used products from customers.”* (Demirel & Gökçen 2008:1199) • *“[…] consumers may pay a collection fee […].”* (de Oliveira *et al.* 2012:1601) • *“Customers usually return the products […] to their nearest collection points.”* (Li *et al.* 2016:225) • *“[…] the customers bring the product to collection/buy-back center [sic] […].”* (Srivastava, 2008:540) • *“[…] collecting the used finished products from end customers.”* (Zhang, 2013:606)
	Retailer	Cardoso *et al.* (2013:438), Das and Chowdhury (2012:210) Das (2012:1454) Jindal and Sangwan, (2015:395) Kumar and Putnam (2008:313) Lau and Wang (2009:456) Li *et al.* (2016:225) Min and Ko (2008:176) Mutha and Pokharel (2009:336, 337) Ruiz-Benítez *et al.* (2014:56) Shi *et al.* (2015:388)	• *“[…] the collector may be a retailer […].”* (Atasu & Cetinkaya, 2006:475) • *“[…] ‘‘retailer collection’’. This collection is performed either by the retailers themselves or by their logistics partners.”* (de Oliveira *et al.* 2012:1597) • *“The primary characteristic of ‘‘retailer collection’’ is that it is managed and financed by or on behalf of the retailers.”* (de Oliveira *et al.* 2012:1597) • *“The retailers […] serve as collection points […].”* (Piplani & Saraswat, 2012:1426) • *“[…] Generally, there are three typical forms and these include […] online retailer collecting […].”* (Yan *et al.* 2012:252)
	Third parties	Atasu and Cetinkaya (2006:475) Gu and Tagaras (2014:5157) Jindal and Sangwan (2015:396) Kannan (2009:399) Kumar and Putnam (2008:313) Mollenkopf *et al.* (2007:241) Prakash and Barua (2016a:70) Shi *et al.* (2012:219) Shi *et al.* (2015:388) Suyabatmaz *et al.* (2014:77) Zhang (2013:606)	• *“[…] returned products are collected, 3PRL provider picks these products from the collection points […].”* (Agarwal *et al.* 2016:5) • *“A carrier picks up the product at the consumer’s address.”* (De Leeuw *et al.* 2016:716) • *“[…] collector could […] pick up the products […].”* (Flygansvær *et al.* 2008:13) • *“Third-party collectors […] or distributors […] may serve as collection centers [sic] […].”* (Giannetti *et al.* 2013:49) • *“[…] third party logistics (3PLs) was […] involved in the […] retrieval (collection) […].”* (Kinobe *et al.* 2015:89) • *“The 3PRL partner has to deal with […] collection […].”* (Prakash & Barua, 2016b:64) • *“[…] Generally, there are three typical forms and these include […] third-party providers (3PL) collecting.”* (Yan *et al.* 2012:252)

Source: Compiled by the researcher

Table 4.**9** shows that the collection process involves various characteristics, activities, methods, facilities/locations and parties, which will be discussed in the subsequent sections and concluded with a description and conceptual framework.

4.4.3.1 Characteristics of the collection processes

The collection process involves various characteristics, including (1) the start of product flow in RL process, (2) involve costs (3) availability, retrieval, possession and accumulation of products of

products, (4) depend on the product types, condition and return reasons, and (5) linked to other RL processes (gatekeeping, transportation, returns processing, inspection, sorting and disposition).

While CRR and gatekeeping processes mostly involve information flows (sections 4.4.1 and 4.4.3), the collection process involves the *start of the product flow*. Therefore, collection can be regarded as the first post-receipt RL process that involves product flow. Additionally, the collection process involves *costs*, relating to the collection activities and parties involved, including transportation, handling, storage (temporary), labour and inventory costs. Furthermore, the collection process involves *availability, retrieval, possession and accumulation of products,* emphasising storage and inventory costs associated with collection.

Like CRR and the gatekeeping process, the collection process can *depend* on certain factors, namely *product types, product condition* and *return reasons,* which can influence party responsibilities. For example, consumers might be responsible to pay collection costs for a non-defective unwanted fridge. Additionally, the collection process can be *linked* to *other* pre-receipt and post-receipt *RL processes*. Collection links with other pre-receipt process in terms of process flows. Consequently, collection takes place before gatekeeping and after transportation, *linking* the collection process with *gatekeeping* and *transportation processes*. However, some sources view transportation as an activity in collection instead of a separate RL process (see Lambert *et al.* 2011:568), which can establish a link between collection and transportation.

Like pre-receipt RL processes, collection can link with post-receipt RL processes in terms of the sequences of processes and activities implemented by retailers. For example, retailers might process returns (e.g. issue a refund) upon collection and parties responsible for collection might perform inspection and sorting, and make disposition decisions at the collection point, *linking* the collection process with *processing, inspection, sorting* and *disposition processes.* Alternatively, viewing transportation as an activity can mean that processing, inspection and sorting processes take place after collection, which can establish a link between collection and any other subsequent process. The links between collection and post-receipt RL processes will be further explored in chapter 5.

4.4.3.2 Activities in the collection process

Collection can involve a few activities, including (1) loading of vehicles, (2) handling and storage of products, (3) product shipping, (4) product movement and (5) product delivery. *Loading of vehicles* can take place at the consumer locations by the collection party. Additionally, returned products are physically *handled* at the point of collection and *stored* in the vehicles during *product movement* from the consumer location to the next destination. Subsequently, these activities emphasise the

characteristics of collection, include product flows, retrieval, possession and accumulation of products, and handling, storage, labour and transportation costs (see section 4.4.3.1).

Finally, collection involves traditional logistics activities, like *product shipment* and *product delivery* but occurs in reverse from the point of consumption (e.g. consumer location) to the point of origin (e.g. online retailer facility). Since collection activities involve transportation, like product movement, in-transit storage and delivery, this study recognises that transportation activities can be part of the collection process. Nevertheless, based on literature, transportation will be regarded as a RL process for consumer returns in online retailing, which will be explore in section 4.4.4.

4.4.3.3 Types of collection

Table 4.**9** shows that three types of collections are possible for consumer returns, including pick-up, drop-off and postal-drop collection methods. Firstly, *pick-up collection* is associated with third parties or carriers collecting products from a customer's location. Since this study focuses on online retailing, pick-up collection can be a likely method used by online retailers for the physical collection of products from consumer locations (residences or workplaces).

Drop-off collection means that the consumer takes the product to a specified location for collection. For example, online retailers might utilise physical collection points, like convenience stores (petrol stations), as a drop-off collection option. In South Africa, Pargo is a click-and-collect service that certain online retailers offer to enable consumers to collect their products at pick-up points (Pargo, 2018), which can also be used for product returns and drop-off collection. Alternatively, online retailers can use their facilities as drop-off collection locations. Similarly, multi/omnichannel retailers can use their bricks-and-mortar stores for drop-off collection of online consumer returns. Subsequently, drop-off collection can be an important option for consumer returns in online retailing.

Finally, *postal collection* can be a possibility in online retailing because of the physical distances between consumers and online retailers. However, owing to a problematic postal service and strong courier market, the use of postal collection will be less appropriate for consumer returns in South Africa. Nevertheless, international online retailers might use of postal collection options for consumers abroad. Additionally, postal collection might be used for specific type of products, like high-value consumer goods, emphasising the collection characteristic labelled as "based on product type".

4.4.3.4 Facilities/locations and parties in the collection process

Several *facilities/locations* can be used for the collection process, which mostly associate with drop-off collection methods and the movement and delivery activities of collection. For instance, *retail stores* and *collection points* associate with the options that multichannel and online-only retailers can use for consumer drop-off collection. From the consumer or drop-off locations products can be moved and delivered to a variety of facilities for post-receipt RL processes, including *collection facilities, warehouses, distribution centres (DCs), inspection centres (facilities)* and *disassembly facilities*. Essentially, consumer and drop-off locations can be regarded as points of origin and facilities as points of destination in the collection process

Similarly, the *parties* in the collection process can be classified by their roles/responsibilities and position point. Particularly, *consumers* can be responsible to "return", "bring" or "drop" the products at facilities/locations, implying that consumers can be responsible for shipping, movement and delivery in the collection process. Therefore, consumers can be viewed as points of origin in the collection process. *Retailers* can be responsible for the collection of products from consumer or drop-off locations and delivery at facilities or they can serve as collection points for drop-off collection. Subsequently, retailers can be viewed as points of collection and destination in the collection process.

Alternatively, *third parties,* including 3PL providers, 3PRL providers, carriers and collectors, can act as intermediaries for retailers and perform pick-up collection from consumer locations or drop-off locations. Additionally, third parties can provide facilities/locations (e.g. collection facilities) in the collection process, meaning that third parties, like retailers, can be regarded as points of collection and destination. Due to the nature of online retailing, the use of third parties for collection from consumer locations can be a likely possibility. Consequently, third parties can be important players in the collection of consumer returns in online retailing.

For example, retailers might first request authorisation from suppliers before issuing an RMA for a warranty return.

4.4.3.5 Description and conceptual framework of the collection process

Based on the findings, presented in section 4.4.3, the collection process can be an important pre-receipt RL process of consumer returns, and will be described as follows:

> The collection process of consumer returns can be described as the start of product flow in the RL process, involving costs, availability, retrieval, possession and accumulation of products. Collection can be based on the type of product, product condition and return reasons and linked to other pre- and post-receipt RL processes.

The collection processes can include various activities, including loading of vehicles and handling, shipping, storage, moving and delivery of returned products through various collection methods, including pick-up, drop-off or postal collection, performed by consumers, retailers and/or outsourced third parties at retail stores, collection points, warehouses, DCs, collection facilities, inspection facilities or disassembly facilities.

Figure 4.8 provides a conceptual framework for the collection process that may apply to consumer returns in online retailing.

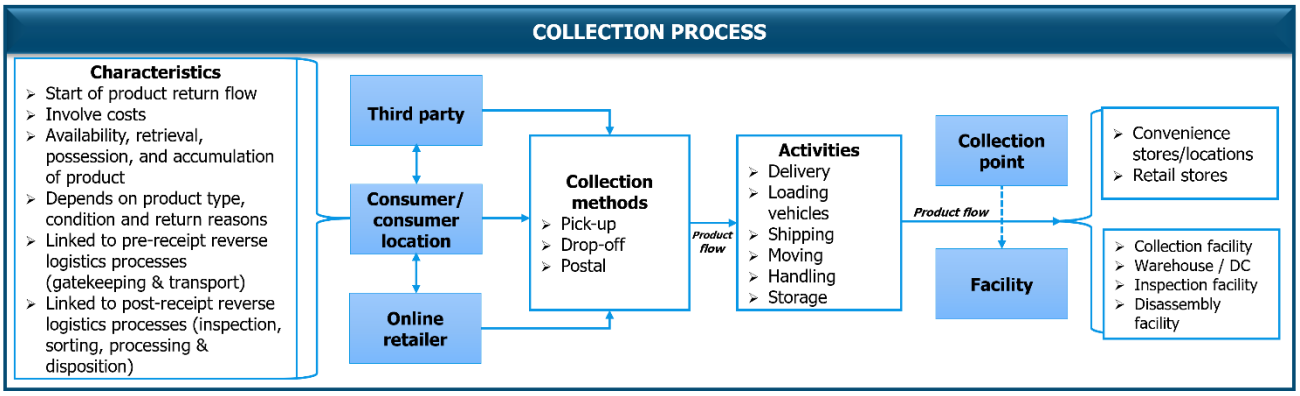


Figure 4.8 Conceptual framework of the collection process
Source: Compiled by the researcher

Figure 4.8 illustrates the (1) various characteristics of collection, (2) link between the main parties, namely consumers, online retailers and third parties, (3) collection methods, (4) activities in collection and (5) the destination/facilities associated with collection. Additionally, the framework shows that a third party or online retailer can collect the product from the consumer for movement to a facility. Alternatively, the consumer can either drop the product at a collection point or at a facility. If the consumer drops a product at the collection point, the online retailer or third party can collect the product from the collection point for transportation to the facility. Consumers, online retailers and third parties can be responsible for the collection activities.

In the next section, the findings related to the transportation of consumer returns will be discussed and analysed.

4.4.4 Transportation process of consumer returns

Transportation is often discussed as a RL process, which involves the physical movement of products between locations. Transportation can be an important RL process of consumer returns in online retailing, due to the physical distances between online retailers and consumers. Although transportation can take place during various stages of the RL process (pre- and post-receipt RL processes), a discussion here is necessary, since transportation can take place before the online retailer receives the returned product. However, it should be noted that the content of this section also applies to the transportation after initial receiving, involving the movement of returned products between facilities for disposition/exit processes.

The categories of transportation, identified from the QCA on RL literature, included the (1) characteristics of transport, (2) the activities in transport, (3) the facilities/locations related to transport and (4) the parties involved in transport. Table 4.10 provides an overview of the findings related to the *transportation process*, including detail on the categories, related subcategories, supporting literature sources and key quotations to support the discussion of the findings.

Table 4.10 Findings related to the transportation process of consumer returns

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
Characteristics	***Important and complex***	None	• "*The role of transportation in RL is essential."* (Dowlatshahi, 2010b:4199) • *"Transportation, […] of returned goods have different characteristics […] in terms of complexity […]."* (Efendigil *et al.* 2008:270)
	Involve product return flows between locations	Agrawal and Choudhary (2014:19) Dowlatshahi (2010b:4202) Lee *et al.* (2012:5620)	• *"[…] flow of products and components from one facility to another."* (Kannan *et al.* 2016:8) • *"Transportation […], in RL process is considered to be the actual movement of goods from one node to another within the RL network."* (Shaik & Abdul-Kader, 2014:97)
	Involve options and decisions	None	• *"Transport was provided […] using […] own fleet […]."* (Bernon & Cullen, 2007:49) • *"Transport […] use of a third-party haulier."* (Bernon & Cullen, 2007:49) • *"As for transportation, four choices […] namely mode choice, equipment choice, fuel choice as well as the intermodal transport have been taken into account."* (Entezaminia *et al.* 2016:2)
	Involve costs	Abraham (2011:223) Agrawal *et al.* (2015:85) Alshamrani *et al.* (2007:596) Alumur *et al.* (2012:72) Aras *et al.* (2008:1224) Banomyong *et al.* (2008:39) Bogataj *et al.* (2013:396) Das and Chowdhury (2012:216) Entezaminia *et al.* (2016:3) Genchev, (2009:146) Hall *et al.* (2013:775) Jayaraman *et al.* (2008: 417) Kara *et al.* (2007:62) Kilic *et al.* (2015:128) Kim *et al.* (2013:511) Kumar *et al.* (2016:4) Lau and Wang (2009:457) Lee *et al.* (2015:9071) Luitel *et al.* (2014:92, 101) Mafakheri and Nasiri (2013:186) Mahmoudzadeh *et al.* (2013:2) Mazahir *et al.* (2011:97) Min et al. (2006:56) Mutha & Pokharel (2009:344) Ordoobadi (2009:841) Pourmohammadi *et al.* (2008:5) Ravi and Shankar (2015:877) Ruiz-Benítez *et al.* (2014:56) Schultmann *et al.* (2006:1040) Selvi and Kayar (2016:26) Shi *et al.* (2012:219) Skinner *et al.* (2008:523) Srivastava and Srivastava (2006:53) Srivastava (2008:542) Suyabatmaz *et al.* (2014:78) Tan and Kumar (2006:345) Tuzkaya *et al.* (2011:4561) Wang *et al.* (2007:351) Yu and Solvang (2016:7)	• *"[…] transportation costs for transporting materials between facilities […]."* (Assavapokee & Wongthatsanekorn, 2012:137) • *"[…] transportation costs may be higher […] because a company-specific system cannot take advantage of economies of scale […]."* (Barker & Zabinsky, 2008:255) • *"[…] transportation costs play an important role in the viability of the entire RL system."* (Dowlatshahi, 2010b:4199) • *"Transportation, […] of returned goods have different characteristics […] in terms […] cost of required operations.*" (Efendigil *et al.* 2008:270) • *"The transportation costs […] mainly involve collecting used products from consumers […]."* (Hsueh & Lin, 2015:164) • *"[…] transportation […] costs depend on the volume of returned products, the transportation mode, and the desired service level."* (Lambert *et al.* 2011:568) • *"A convenient returns policy […] is a costly activity due to additional […] transportation costs […]."* (Wang *et al.* 2007:351) • *"The transportation cost is incurred due to the product-module movement between the facilities."* (Piplani & Saraswat, 2012:1428) • *"Transportation costs for Reverse Logistics per item will generally be higher than for Forward Logistics. […] the reverse shipments tend to be much smaller."* (Rajagopal *et al.* 2015:42) • *"[…] consumer concerns may extend to worries about […] potential costs of transportation […]."* (Seo *et al.* 2015:2)
	Lack economies of scale and distance	None	• *"[…] transportation […] cannot take advantage of economies of scale […]."* (Barker & Zabinsky, 2008:255) • *"[…] return products […] transport […] doesn't contribute to the economic of scale and economic of distance."* (Rajagopal *et al.* 2015:42)
	Require equipment	None	• *"[…] transportation involved in the various types of loading, unloading, and*

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
			handling materials and equipment." (Shi *et al.* 2012:219)
	Require efficient handling		• *"[…] cores not being handled and stored properly during transportation will be damaged […]."* (Sundin & Dunbäck, 2013:6)
	Linked to the collection process	Aras *et al.* (2008:1224) Barker and Zabinsky (2008:255) Mafakheri and Nasiri (2013:186) Ruiz-Benítez *et al.* (2014:56) Suyabatmaz *et al.* (2014:78) Zhou and Zhou (2015:68)	• "*[…] the transportation of collected quantities to treatment facilities."* (Achillas *et al.* 2010:2594) • *The transportation […] mainly involve collecting used products from consumers […]."* (Hsueh & Lin, 2015:164) • *"Collection involves […] transportation."* (Lambert *et al.* 2011:568) • *"The goods collected in each retailer are transported to the warehouses."* (Mutha & Pokharel, 2009:337)
	Linked to the transport process	None	• *"[…] transportation companies […] unloading of returns at […] the returns dock."* (Genchev, 2009:140)
	Linked to processing	De Leeuw *et al.* (2016:718) García-Rodríguez *et al.* (2013:585) Genchev *et al.* (2011:252) Hall *et al.* (2013:777) Lau and Wang (2009:457) Luitel *et al.* (2014:92) Mafakheri and Nasiri (2013:193) Mukhopadhyay and Setaputra (2006:718) Pourmohammadi *et al.* (2008:5) Srivastava (2008:542) Stock and Mulki (2009:41) Subhashini (2016:10) Yu and Solvang (2016:7)	• *"[…] transported […] and then processed […]."* (Barker & Zabinsky, 2008:252) • *"High costs of operation (comprising mainly transportation and reprocessing costs) […] of reverse logistics […]."* (Lau & Wang, 2009:457) • *"[…] for the cost of transportation and processing […]."* (Luitel *et al.* 2014:92) • *"[…] shipping the product returns to the processing facility […] and preparing the returned item for processing […]." (Stock & Mulki, 2009:41)* • *"[…] processed and shipped to their next destination."* (Tuzkaya & Gülsün, 2008:346)
	Linked to the inspection process	None	• *"Products are returned […] and are transported for inspection […]."* (Agrawal *et al.* 2015:86) • *"[…] after transportation […] performing inspection […]."* (Zandieh & Chensebli, 2016:6) • *"[…] transporting the […] used products […] after inspection."* (Gu & Tagaras, 2014:5157)
	Linked to the sorting process	Aras *et al.* (2008:1224) Chari *et al.* (2016:2) Subhashini (2016:2)	• *"[…] returned product is […] transported […] for sorting […]."* (Barker & Zabinsky, 2008:252) • *"The transportation […] in sorting activities […]."* (Hsueh & Lin, 2015:164) • *Some of them are sorted […] and then transported […]."* (Kara & Onut, 2010:718)
	Linked to disposition	Jayaraman *et al.* (2008:411, 417)	• *"[…] products move through a number of organisations […] when being returned for dispositioning."* (Bernon & Cullen, 2007:55) • *"This was through […] transportation and disposition."* (Kinobe *et al.* 2015:89)
	Linked to redistribution	None	• *"[…] transport to distribution centers [sic] […] for redistribution."* (Kongar *et al.* 2015:62)
Activities	***Movement***	Piplani and Saraswat (2012:1428) Rajagopal *et al.* (2015:46), Shaik & Abdul-Kader (2014:97)	• *"Transportation of the reverse logistics process is considered to be the actual movement of goods […]."* (Agrawal & Choudhary, 2014:19) • *"Products that are recovered need to be physically moved from the collection place to the destination where they are sold."* (Kinobe *et al.* 2015:89)
	Shipping	Assavapokee and Wongthatsanekorn (2012:137) Huscroft *et al.* (2013b:317) Kannan *et al.* (2016:8) Olorunniwo and Li (2010:456)	• *"[…] transportation […] and then shipping […]."* (Dowlatshahi, 2010b:4199) • *"[…] shipment of products […] for transportation […]."* (Hall *et al.* 2013:775)
	Transfer products	Chan *et al.* (2012:1321) Ghezavati and Nia (2015:3055) Min and Ko (2008:176)	• *"This transfer time includes […] transporting […]."* (Biehl et al. 2007:448) • *"[…] products are transferred from customers […]."* (Govindan *et al.* 2016:757)
	Loading/ unloading	Biehl et al. (2007:448) Tuzkaya *et al.* (2011:4561)	• *"[…] transportation involved in the various types of loading, unloading, and handling […]."* (Shi *et al.* 2012:219)
	Handling	Alshamrani *et al.* (2007:596) Chan *et al.* (2012:1326) Efendigil *et al.* (2008:270) Hall *et al.* (2013:775) Huscroft *et al.* (2013b:317) Selvi and Kayar (2016:26)	• *"[…] handled […] during transportation […]."* (Sundin & Dunbäck, 2013:6) • *"[…] transportation involved […] handling […]."* (Shi *et al.* 2012:219)
	Storage	Biehl et al. (2007:448) Efendigil *et al.* (2008:270) Kilic *et al.* (2015:128) Tan and Kumar (2006:345)	• *"[…] transportation and storage in reverse supply chain logistics."* (Cline *et al.* 2015:475) • *"[…] stored properly during transportation […]."* (Sundin & Dunbäck, 2013:6)
	Delivery	Alshamrani *et al.* (2007:596)	• *"The ability of any transportation system to return and deliver items […]."* (Dowlatshahi, 2010b:4213)
	Consolidation	None	• *"[…] firms consolidate their return products before transport to the final*

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
			destination." (Rajagopal *et al.* 2015:42)
Facilities/ locations	***Retail stores***	None	• *"[…] retail outlets, the transfer […] of returned products […]." (Min & Ko, 2008:176)*
	Collection facilities	Chan *et al.* (2012:1321) Demirel and Gökçen (2008:1199) Govindan *et al.* (2016:757, 759) Kinobe *et al.* (2015:89) Zandieh and Chensebli (2016:14)	• *"[…] returned products will be transported to collection centers [sic] […]."* (Entezaminia *et al.* 2016:2) • *"[…] shipping returned products […] to the […] collection […] center [sic]."* (Kannan *et al.* 2016:8) • *"[…] shipping returned products […] from the […] collection center [sic] to product refurbishing centers [sic] […]."* (Kannan *et al.* 2016:8)
	CRCs	Baker and Zabinsky (2008:252) Ghezavati and Nia (2015:3055) Sasikumar *et al.* (2010:1225)	• *"[…] transfer and consolidation of returned products at centralized [sic] return center […]."* (Min & Ko, 2008:176) • *"[…] the products from CRC are transported […]."* (Sasikumar *et al.* 2010:1225)
	Warehouses	Abraham (2011:21) El Korchi and Millet (2011:590) Mutha and Pokharel (2009:337)	• *"[…] consumer product […] transported to a warehouse."* (Abraham, 2011:21) • *"The goods collected in each retailer are transported to the warehouses."* (Mutha & Pokharel, 2009:337)
	Processing facilities	Olorunniwo and Li (2010:456) Suyabatmaz et al. (2014:77)	• *"[…] transporting […] from processing facilities […]."* (Assavapokee & Wongthatsanekorn, 2012:137) • *"On collection, the returns are transported to a […] processing facility […]."* (Ruiz-Benítez *et al.* 2014:56) • *"[…] shipped back by a third party logistics provider (3PL) to a returns processing facility."* (Li & Olorunniwo, 2008:384) • *"[…] shipping the product returns to the processing facility* […]." (Stock & Mulki, 2009:41)
	Inspection facilities	None	• *"[…] transportation […] […] inspection centers [sic] and recovery centers [sic] […]."* (Zandieh & Chensebli, 2016:14)
	Disassembly facilities	None	• *"The used products can be transported to disassembly centers [sic]."* (Demirel & Gökçen, 2008:1199)
	Repair facilities	Li *et al.* (2016:225)	• *"[…] product may be transferred to a repair centre […]."* (Chan *et al.* 2012:1321) • *"The 3PL provider immediately transports the returned products to repair facilities."* (Du & Evans, 2008:2620)
	Service centres	None	• *"[…] transportation of faulty parts/ products from the service centre […]."* (Mishra *et al.* 2012:2398)
	Refurbishment facilities	Kannan *et al.* (2016:8)	• *"[…] collection center [sic] to product refurbishing centers [sic] […]."* (Kannan *et al.* 2016:8)
	Recovery facilities	None	• *"[…] transportation […] […] inspection centers [sic] and recovery centers [sic] […]."* (Zandieh & Chensebli, 2016:14)
	DCs	None	• *"[…] transport to distribution centers [sic] […] for redistribution."* (Kongar *et al.* 2015:62)
Parties	***Consumers***	Assavapokee and Wongthatsanekorn (2012:137) Aras *et al.* (2008:1238) Hsueh and Lin (2015:164) Zandieh and Chensebli (2016:14)	• *"[…] transportation costs were the responsibility of the customer […]."* (Dowlatshahi, 2010b:4207) • *"[…] products are transferred from customers […]."* (Govindan *et al.* 2016:757) • *"[…] consumer concerns may extend to worries about […] potential costs of transportation […]."* (Seo *et al.* 2015:2)
	Retailers	Kinobe *et al.* (2015:89)	• *"[…] retail outlets, the transfer […] of returned products […]."* (Min & Ko, 2008:176) • *"The goods collected in each retailer are transported to the warehouses."* (Mutha & Pokharel, 2009:337)
	Third party	Bernon and Cullen (2007:49) Kinobe *et al.* (2015:89) Li and Olorunniwo (2008:384)	• *"[…] transportation […] by the private transportation service provider."* (Assavapokee & Wongthatsanekorn, 2012:137) • *"The 3PL provider immediately transports the returned products […]."* (Du & Evans, 2008:2620) • *"[…] returned products are typically shipped back by a third party logistics provider (3PL) […]."* (Olorunniwo & Li, 2010:456)

Source: Compiled by the researcher

Table 4.10 shows that the transportation process involves various characteristics, activities, facilities/locations and parties, which will be discussed in the subsequent sections and concluded with a description and conceptual framework.

4.4.4.1 Characteristics of the transportation process

The transportation process in RL involves various categories, including (1) important and complex, (2) involve product return flows between locations, options, decisions and costs, (3) lack economies of scale and distance, (4) require equipment and efficient handling and storage, and (5) link with other RL processes.

Transportation can be described as an *important and complex,* emphasising the important role of transportation in the movement of consumer returns in online retailing. Consequently, like the collection process, transportation involves *product return flows between locations.* Additionally, the transportation process can involve *various options and decisions,* which can add to the complexity of return transportation. Particularly, organisations must consider/choose (1) between its own fleet or a third-party fleet, (2) most appropriate mode of transportation, (3) equipment and fuel requirements, and (4) intermodal transportation.

The fuel and equipment requirements as considerations emphasise other characteristics of transportation, including costs and equipment requirements. Consequently, the transportation process *involves costs,* which not only point to the expensiveness of transportation but also its complexity. Transportation costs can be influenced by the types of returned products, transportation modes, return product volumes, service levels and return policies, pointing to a need for strategic and managerial decision-making. Furthermore, higher transportation costs can be the result of a *lack of economies of scale and distance.* In traditional forward logistics (FL), organisations can plan for economies of scale and distance, but in RL the product return volume and locations can be uncertain, demonstrating the importance of implementing appropriate RL practices to effectively manage consumer returns. RL practices that can improve economies of scale in the RL process will be explored in chapter 6.

Furthermore, the considerations related to equipment requirements indicate that transportation requires equipment indicated that transport *requires equipment*, which associates with loading, unloading and materials handling equipment. Additionally, transportation can cause product damages, demonstrating the requirement of *efficient handling* and *storage* of returned products.

Transportation can link with the collection process and most other post-receipt RL processes, including processing, inspection, sorting, disposition and redistribution. The *link* between the transportation process and the *collection process* relates to overlapping activities, facilities and parties (see sections 4.4.3.2 and 4.4.4.2). Additionally, the link between transportation and the *receiving process* relates to the arrival of the transport vehicle at the facility for receiving. The link

with other post-receipt RL processes mostly shows that transportation can take place at various stages in the RL process. For example, returned products can be transported to a facility for *processing*, *sorting* and *inspection* and then shipped to the next facility or location for *disposition*. Finally, transportation can link with the *redistribution process*, through the transportation of recovered/return products to facilities for redistribution to the markets. Subsequently, the link between the transportation process and other RL processes not only emphasise the importance and complexity of transportation but also the high cost associated with transportation.

4.4.4.2 Activities in the transportation process

The activities of transportation include (1) product movement, (2) shipping, (3) product transfer, (4) loading/unloading, (5) handling, (6) storage, (7) delivery and (8) consolidation, which not only demonstrate the purpose of transportation but also the characteristics of transportation. For example, the activities of *loading/unloading*, *handling* and *storage* show the need for equipment and handling and storage efficiency. Additionally, *movement, transfer, shipment and delivery of products* demonstrate that transportation involves product flows between facilities/locations.

Subsequently, most activities in transportation correspond to the collection process, emphasising that transportation and collection processes are often viewed as one RL process (see section 4.4.3). However, since transportation can take place at various stages in RL and regarded as an important and complex process, transportation must be viewed as a separate RL process for the movement of consumer returns. Additionally, the transportation process can include *consolidation* as an additional activity not mentioned in the collection process. Nevertheless, the consolidation activity of combining various products in larger shipments mostly relates to post-receipt RL transportation. Consolidation demonstrates that organisations can achieve some economies of scale for return transportation, implying that initial transportation from the consumer location to the facility can be costlier.

4.4.4.3 Facilities/locations in the transportation process

As emphasised in sections 4.4.4.1 and 4.4.4.2, transportation involves the movement of returned products between facilities/locations, demonstrating that transportation can take place pre- and post-receipt. The facilities associated with transportation can be classified as first-, second- and third-tier facilities.

First-tier facilities/locations are closest to the consumer and represent the facilities that receive product returns directly from consumer locations, which can be viewed as destination points for pre-

receipt RL processes. First-tier facilities/locations can include *retail stores, collection facilities, CRCs, warehouses, processing, inspection, disassembly, repair facilities and service centres,* which confirms that the collection process can involve these facilities/locations (see section 4.4.3.4).

Nevertheless, some of the first-tier facilities can be *second-tier* facilities, including warehouses and repair facilities that receive returned products from other facilities/locations (e.g. retail stores and collection facilities). This finding shows that the network and facility location strategies of the organisation can influence the order and type of facilities utilised for product returns. Other second-tier facilities can include refurbishment facilities and recovery facilities, which emphasise the links between transportation and the disposition process (see section 4.4.4.1).

Similarly, a *third-tier* facility can involve *DCs* responsible for redistributing returned/recovered products to the markets, emphasising the link between transportation and the redistribution process. Consequently, returned products can be transported from second-tier facilities to DCs, which concludes the transportation process and initiates the redistribution process as the final post-receipt RL process (see section 5.7).

Essentially, transportation can take place from point-of-origin (first consumer location) to the point-of-recovery (online retailer or third-party locations) and, finally, to the point-of-redistribution (final location before redistribution to markets).

4.4.4.4 Parties in the transportation process

Table 4.10 shows that transportation includes the same parties as the collection process, namely consumers, retailers and third parties.

Consumers can be regarded as the parties-of-origin for transportation from consumer locations to facilities. Additionally, consumers might be responsible for transportation costs, reemphasising that service levels and return policies can influence transportation costs (see section 4.4.4.1). Evidently, online retailers with stricter return policies can charge shipping costs and online retailers with higher service levels with lenient return policies can offer free returns.

Subsequently, *retailers* might be responsible for transportation costs and considering the factors that influence transportation decisions (such as type of transportation, outsourcing decisions and service levels). Apart from retailers that as location points in transportation, literature lacks clear indication of the roles of retailers. Nevertheless, if retailers insource the transportation process might be

responsible for the activities of shipping, product transfer, loading/unloading, handling, storage, delivery and consolidation (see section 4.4.4.2).

Finally, *third parties* can be involved in the transportation process if retailers outsource return transportation to 3PL providers. Subsequently, 3PL providers (such as couriers) might be responsible for the physical transportation of returned products between locations (e.g. between consumers and retailers) and transportation activities (described in the preceding paragraph).

4.4.4.5 Description and conceptual framework of the transportation process

Based on the findings, presented in section 4.4.4, the transportation process can be an important pre- and post-receipt RL process of consumer returns, and will be described as follows:

> The transportation process can be described as important and complex, involving product flows between locations in the RL process, options, decisions and costs. The transportation process of consumer returns requires equipment and efficient handling and storage, lack economies of scale and distance and links with other pre- and post-receipt RL processes. Transportation includes various product flow activities, including the movement, shipment, transfer, loading/unloading, handling, storage, delivery and consolidation of returned products from the point-of-origin (consumer) to a point-of-recovery (online retailer/third parties, first-tier and second-tier facilities) and/or point-of-redistribution (third-tier facilities).

Figure 4.9 provides a conceptual framework for the transportation process that may apply to consumer returns in online retailing.

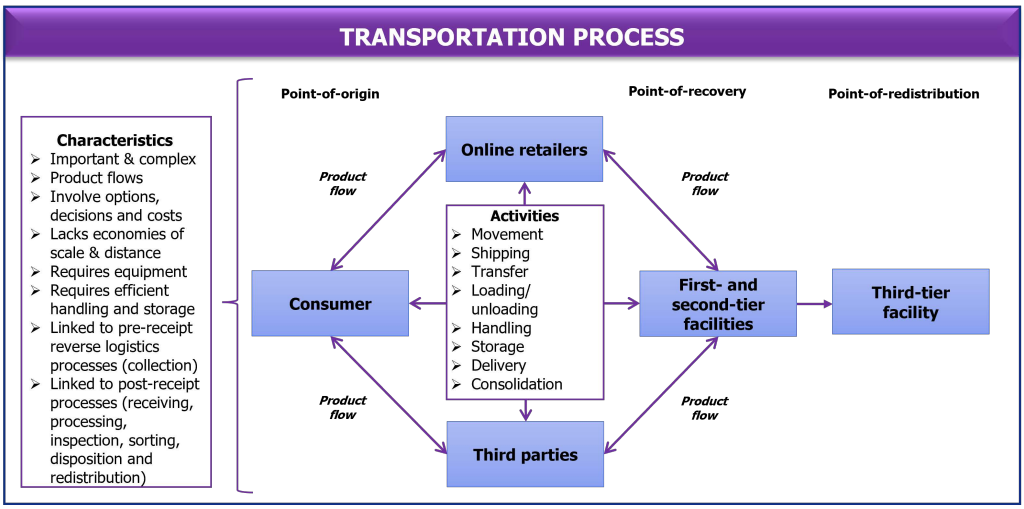


Figure 4.9 Conceptual framework of the transportation process in product returns
Source: Compiled by the researcher

Figure 4.9 provides a basic overview of the transportation process of consumer returns, indicating that transportation can take place at every stage in the RL process and involves product flows between consumers, online retailers and/or third parties, and first-, second- and third-tier facilities. Additionally, the framework illustrates the various characteristics and activities of transportation and emphasises the movement of returned products starting with a point-of-origin to a point-of-recovery and ending at a point-of-redistribution.

In the next section, the QCA findings of RL literature for pre-receipt RL processes of consumer returns will be illustrated in a conceptual framework and concluded with a summary of the findings and important RLM considerations.

4.4.5 Conceptual framework and summary of findings for the pre-receipt RL processes of consumer returns

Clearly, the findings presented section 4.4 shows that all pre-receipt RL processes identified in the QCA findings of RL literature, including CRR, gatekeeping, collection and transportation, can apply to consumer returns in online retailing. Based on the findings, Figure 4.10, shows a conceptual framework for pre-receipt RL process of consumer returns that may occur in online retailing. Particularly, the framework highlights the linkages between the pre-receipt RL processes with shared and unique characteristics and activities. Furthermore, the framework demonstrates the parties and facilities involved or associated with the pre-receipt RL processes.

Based on Figure 4.10 and the discussions given in section 4.4, Table 4.11 provides a summary of the findings and managerial implications for pre-receipt RL processes of consumer returns in online retailing.

Table 4.11 Findings and managerial implications of the pre-receipt RL processes

CATEGORIES	KEY FINDINGS	MANAGERIAL IMPLICATIONS
Shared characteristics	• CRR, gatekeeping and collection processes can be regarded as the start of RL flows • CRR and transportation processes can be important RL processes • CRR and collection processes relate to return reasons • All the pre-receipt RL processes, except CRR, can be linked • All the pre-receipt RL processes can be linked to post-receipt RL processes • Collection and transportation processes involve costs and product flows	➢ All the pre-receipt RL processes (CRR, gatekeeping, collection and transportation) can be applicable to consumer returns in online retailing ➢ All pre-receipt RL processes must be considered for the management of consumer returns ➢ Online retailers must pay attention to CRR and transportation processes ➢ Online retailers must consider return reasons for effective CRR and collection processes ➢ Online retailers must consider the links between pre-receipt and pro-receipt RL process to manage consumer returns effectively ➢ Online retailers must develop cost strategies to manage the collection and transportation processes of consumer returns effectively
Unique characteristics	• The CRR process can be the initial RL process, starting with consumers and recognising a product return • The gatekeeping process involves identifying if a product return can be allowed based on the return policy • The collection process in RL involves availability, retrieval, possession and accumulation of a returned product and depends on the product type and condition • The transportation process in RL can be complexed, involving decisions and options, lacking economies of scale and distance, and requiring equipment and efficient handling and storage	➢ Online retailers must focus on consumers in the CRR process and develop a service strategy for RL ➢ Online retailers must develop an appropriate return policy and base gatekeeping as a pre-receipt RL process on the return policy ➢ Focus must be placed on the availability, retrieval and accumulation of product returns for effective collection ➢ Online retailers must consider the product type and condition for effective collection in RL ➢ Online retailers must implement practices to understand the transportation of product returns ➢ Attention must be given to effective decision-making and consideration of various options for the effective implementation of the transportation process of consumer returns ➢ Online retailers must develop strategies to attain economies of scale and distance (such as outsourcing)

CATEGORIES	KEY FINDINGS	MANAGERIAL IMPLICATIONS
		➢ Online retailers must allocate sufficient resources for the effective transportation of consumer returns.
Unique activities	• The CRR process includes recording of the return reason and initial assessment of product condition • The gatekeeping process includes screening of products and decisions on accepting or rejective a product return • The collection process in RL excludes unique activities but involves different methods of collection, including pick-up, drop-off and postal collection • The transportation process in RL includes product transfer and consolidation	➢ For an effective CRR process, online retailers must implement systems that effectively capture return reasons and assess product condition before receipt ➢ For an effective gatekeeping process, online retailers must implement practices for effective screening of product returns and decision-making on accepting/rejective a product return ➢ Online retailers must consider the appropriate collection methods, including pick-up, drop-off and postal, developing strategies for effective collection processes of consumer returns ➢ Consolidation and transfer of products can be important activities for effective transportation of consumer returns
Shared activities	• The CRR and gatekeeping processes includes communication and return authorisation activities • The collection and transportation processes in RL involve handling, loading/unloading, shipping, delivery, movement and storage activities	➢ Online retailers must develop communication and return authorisation strategies for effective CRR and gatekeeping processes ➢ Online retailers must implement appropriate practices for handling, loading/unloading, shipping, delivery, movement and storage activities for effective collection and transportation processes in RL
Parties/facilities	• Consumers can perform communication, handling, shipping and movement activities • Online retailers can perform any activities in the pre-receipt RL processes • Third parties can perform handling, loading/unloading, shipping, delivery, movement and storage activities on behalf of online retailers • Pre-receipt RL processes of consumer returns relate to several facilities, including RL specific facilities, traditional FL facilities and recovery facilities that can be owned by online retailers or third parties • The facilities link pre-receipt and post-receipt RL processes	➢ Online retailers must establish appropriate communication channels with consumers ➢ Online retailers must consider insourcing or outsourcing of collection and transportation activities, ensuring the most effective implementation of handling, loading/unloading, shipping, delivery, movement and storage activities ➢ Facilities and location strategies must be considered for the effective implementation of pre-receipt RL processes
Process flows	• The pre-receipt RL processes include information and product flows • Information flow takes place between the CRR and gatekeeping processes • Product flow takes place in the collection and transportation processes of consumer returns	➢ Online retailers must pay attention to information flows for effective CRR and collection processes ➢ Online retailers must pay attention to product flows for effective collection and transportation processes of consumer returns

Source: Compiled by the researcher

Table 4.11, provides a detailed understanding of the RL processes before returned products arrive at facilities. Additionally, several managerial implications must be considered by online retailers for the effective RLM of consumer returns. Essentially, the findings presented in this section will contribute to the framework for the RLM of consumer returns in online retailing, presented in chapter 9.

In the next section, the conclusion of chapter 4 will be given.

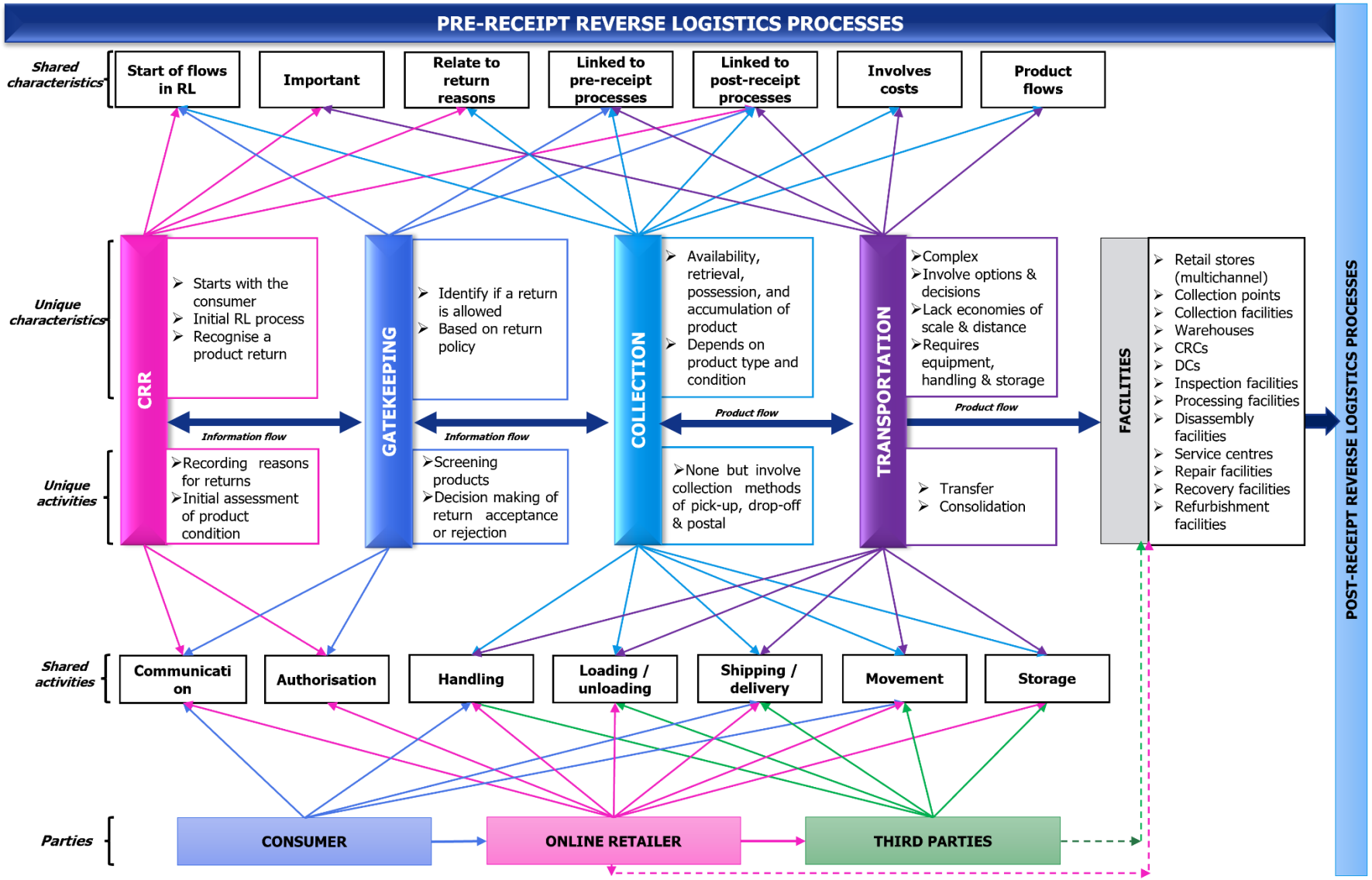


Figure 4.10 Conceptual framework for pre-receipt RL processes of consumer returns
Source: Compiled by researcher

4.4 CONCLUSION

This chapter addressed the second secondary research objective of ***identifying and exploring RL literature for consumer return types and pre-receipt RL processes of consumer returns (SRO-2)***. Especially, the objective was achieved through the QCA findings of RL literature for consumer return types and pre-receipt RL processes of consumer returns, which included the development of conceptual frameworks, typology (summaries) of the findings and managerial implications for online retailers. Additionally, the findings in this chapter contributed to the primary objective of the study, which was to *develop a framework for the effective RLM of consumer returns in online retailing*.

The chapter started with the introduction (section 4), which was followed by an overview of the QCA of RL literature findings (section 4.2), where after the types of consumer returns (section 4.3) and the pre-receipt RL processes (section 4.4) was discussed and analysed. The overview of the QCA of RL literature findings included an overview of presenting the findings, an overview of the main categories of the QCA of RL literature, including consumer return types, pre-receipt and post-receipt RL processes and RL practices, and demarcation of consumer return types and RL processes.

The QCA findings of RL literature was presented as follows: (1) qualitative data tables, with overviews of the categories, subcategories, sources and key quotations, (2) discussion and interpretation of the findings presented in the qualitative data tables, (3) description and/or conceptual frameworks for each category, (4) final conceptual framework and summary of findings in text tables for the main categories.

The *types of consumer returns* identified from the QCA of RL literature included B2C consumer returns, EoU returns, warranty returns, service returns and recalls. The main findings showed that online retailers must focus on (1) reducing unnecessary returns, especially for B2C returns, (2) understanding of and preparing for consumer returns, (3) product type and condition for all consumer return types, and (4) implementing appropriate reuse, recovery and reselling strategies.

The *pre-receipt RL processes* included a CRR, gatekeeping, collection and transportation processes. The main findings showed that (1) all the pre-receipt RL processes can be applicable to consumer returns in online retailing, (2) all the pre-receipt RL processes must be considered for managing consumer returns in online retailing, (3) appropriate strategies and practices must be developed and implemented for each pre-receipt RL process based on shared and unique characteristics and activities, (4) online retailers must focus on effective communication with consumers, and (5) online

retailers must consider facility, location and insourcing/outsourcing strategies for the pre-receipt RL processes of consumer returns.

In the next chapter (five), the QCA findings of RL literature for *post-receipt* RL processes of consumer returns will be presented, discussed and analysed.

Chapter 5 - QCA findings of RL literature for post-receipt RL processes of consumer returns

5.1 INTRODUCTION

In this chapter, the QCA findings of RL literature continues, focusing on the post-receipt RL processes of consumer returns. In chapter 4, an overview was given on the presentation of the QCA of RL literature findings, main categories and demarcation of RL processes, which applies to chapter 5 (see section 4.2). While chapter 4 focused on the QCA findings of RL literature for consumer return types and pre-receipt RL processes, chapter 5 focuses on the QCA findings of RL literature for post-receipt RL processes. Chapter 6 will conclude the QCA of RL literature by focusing on the RL practices to manage consumer returns.

As indicated in section 1.5.1, the post-receipt RL processes involve all processes at and within the facilities, ranging from receiving at facilities to redistribution from facilities to consumers/markets. In the research methodology section of chapter one (section 1.7, Figure 1.5), the phases of the study were discussed. Chapter 5 forms part of second research phase of this study, which can be viewed in Figure 5.1.

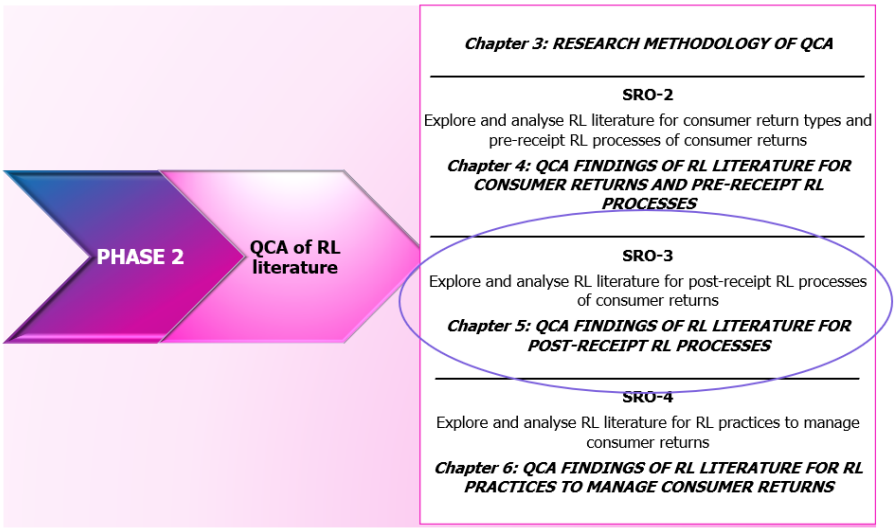


Figure 5.1 QCA of RL literature - Aim of chapter 5
Source: Compiled by the researcher

Figure 5.1 indicates that the aim of this chapter is to achieve the *third* secondary research objective, which is ***to identify and explore RL literature for post-receipt RL processes of consumer returns (SRO-3)***. The QCA findings of RL literature for the post-receipt RL processes resulted in the

development of a conceptual framework for post-receipt RL processes of consumer returns, a typology of the findings and managerial implications. The findings presented in this chapter contributes to the primary objective of the study, which is to *develop a framework for the effective RLM of consumer returns in online retailing.* Therefore, important findings related to post-receipt RL processes and RLM considerations are identified in this chapter, contributing to the final framework for the effective RLM of consumer returns in online retailing.

Figure 5.2 provides an overview of chapter 5.

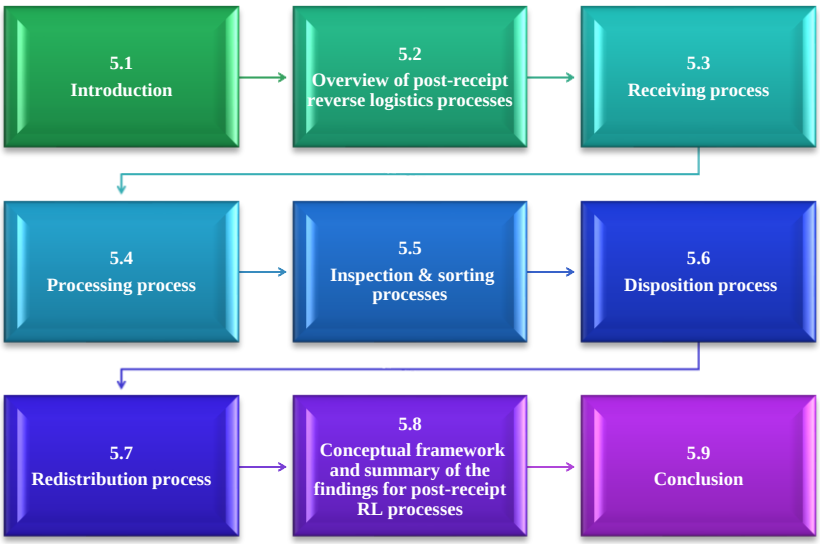


Figure 5.2 Overview of chapter 5
Source: Compiled by the researcher

Figure 5.2 provides an overview of chapter 5, starting with the introduction (section 5.1), followed by an overview of post-receipt RL processes (section 5.2), where after the post-receipt RL processes are discussed and analysed, including the receiving process (section 5.3), processing process (section 5.4), inspection and sorting processes (section 5.5), disposition processes (section 5.6) and redistribution process (section 5.7). Finally, the chapter will conclude with a conceptual framework and summary of findings for the post-receipt RL processes of consumer returns (section 5.8) and the conclusion (section 5.9).

In the next section, an overview of the post-receipt RL process is given.

5.2 OVERVIEW OF POST-RECEIPT RL PROCESSES

In this section, an overview of the post-receipt RL processes of consumer returns will be provided. Figure 4.3 (in chapter 4) demonstrated that the post-receipt RL processes covered 36% of the QCA findings of RL literature. The post-receipt RL processes start when a product return arrives at the facility and ends with the redistribution of returned/recovered products to the markets. Based on the coding framework of the QCA of RL literature (see Appendix A.2), the post-receipt RL processes

were structured into five main categories, namely receiving, processing, inspection and sorting, disposition and redistribution processes.

Figure 5.3 provides an overview of the distribution of the post-receipt RL processes based on the results of the QCA of RL literature (see Appendix C.3 for quantitative results).

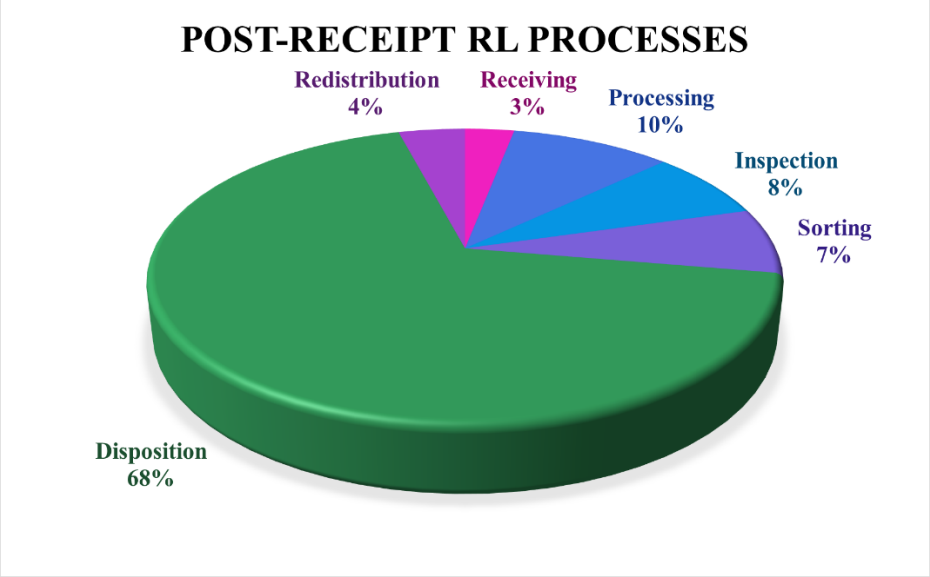


Figure 5.3 Distribution of post-receipt RL processes
Source: Compiled by the researcher

Figure 5.3 shows a distribution for the post-receipt RL process main categories of the QCA of RL literature derived from code frequencies (number of quotations assigned to code categories for the post-receipt RL processes, see Appendix C.3). The pie chart clearly shows that most content on the post-receipt RL processes focus on the disposition process (68%), while the rest of the post-receipt processes represent 32% of the content, including processing (10%), inspection (8%), sorting (7%), redistribution (4%) and receiving (3%). These results imply that disposition can be regarded as the most important post-receipt RL process, but that RL literature might be saturated with discussions of disposition processes. Contrastingly, receiving and redistribution might be less important post-receipt RL processes, but more research can be conducted on initial and final post-receipt RL processes.

In the subsequent sections, the qualitative findings for each post-receipt RL process will be provided based on the sequential order that RL literature discuss/mention these processes, including receiving, processing, inspection and sorting, disposition and redistribution processes.

5.3 RECEIVING PROCESS OF CONSUMER RETURNS

Receiving consumer returns can be the first post-receipt RL process, taking place after collection and transportation from consumers and involving all the activities related to the delivery of returned products to facilities. Despite being limited, the findings related to the receiving process sufficed for

describing the process. The categories of the receiving process, identified from the QCA on RL literature, included the (1) characteristics of receiving, (2) activities in receiving, (3) facilities and areas of receiving and (4) parties in receiving.

Table 5.1 provides an overview of the findings related to the *receiving process of consumer returns* including detail on the categories, related subcategories, sources to support the subcategories and key quotations to support the discussion of the findings.

Table 5.1 Findings related to the receiving process of consumer returns

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
Characteristics	***Arrival***	Asdecker (2015:3)	• *"[…] at the receiving dock when shipments arrive […]."* (Jayaraman *et al.* 2008:419)
	Inbound flow	Li and Olorunniwo (2008:382)	• *"[…] receiving a returned product from a customer […] "inbound"."* (Hall *et al.* 2013:770)
	Labour intensive	De Leeuw *et al.* (2016:723)	• *"Receiving is a labor [sic] intensive process."* (Hsu *et al.* 2009:527)
	Involves technology	None	• *"Checking at the receiving dock will then be done by readers installed around the entrance that can automatically scan the RFID tags."* (Jayaraman *et al.* 2008:417-148)
	Involves documentation	Beh *et al.* (2016:12) Gobbi (2011:782)	• *"[…] receiving […] to check the […] shipment against what appears in the documentation […]."* (Jayaraman *et al.* 2008:419) • *"[…] documentation is […] used for […] the receiving returns process […]."* (Genchev *et al.* 2011:262)
	Linked to gatekeeping	Gobbi (2011:782)	• *"[…] receipt of the return […] to confirm the legitimacy of the return (i.e., gatekeeping)."* (Griffis *et al.* 2012:285)
	Linked to collection and transportation	Atasu and Cetinkaya (2006:475)	• *"[…] collector could either receive goods at a collection site […]."* (Flygansvær *et al.* 2008:13) • *"[…] transportation companies […] unloading of returns at […] the returns dock."* (Genchev, 2009:140)
	Linked to processing	Atasu and Cetinkaya (2006:477) Ferguson and Toktay (2006:356) Griffis *et al.* (2012:285) Mukhopadhyay and Setaputra (2006:718)	• *"[…] start processing immediately upon arrival […]."* (Ferguson *et al.* 2011:774) • *"[…] for returns processing and the returns receiving […]."* (Genchev, 2009:141) • *"[…] receiving returns […] and […] streamline returns processing."* (Genchev *et al.* 2011:262)
	Linked to inspection	Genchev (2009:142) Genchev *et al.* (2011:262) Hsu *et al.* (2009:527) Mollenkopf *et al.* (2007:224)	• *"[…] inspection upon receiving a returned item […]."* (De Leeuw *et al.* 2016:723) • *"[…] they should undergo a detailed inspection […] from the time they are received […]."* (García-Rodríguez *et al.* 2013:588) • *"[…] receipt of the return […] and inspection of the merchandise […]."* (Griffis *et al.* 2012:285)
	Linked to sorting	Li and Olorunniwo (2008:382) Shaik and Abdul-Kader (2014:97) Zuluaga *et al.* (2016:2)	• *"[…] sorting […] upon receiving a returned item […]."* (De Leeuw *et al.* 2016:723) • *"A preliminary sorting first occurs upon reception of the returned product […]."* (Lambert *et al.* 2011:568-570)
	Linked to disposition	Janse *et al.* (2010:511)	• *"[…] receiving the return […] and […] determining disposition […]."* (Griffis *et al.* 2012:287) • *"[…] receive […] incoming merchandise and then […] disposition of that item."* (Hsu *et al.* 2009:527)
	Linked to redistribution	None	• *"[…] receives […] products back […] and takes care of redistribution."* (Janse *et al.* 2010:510)
Activities/ processes	***Administration and registration***	None	• *"Every return must be registered at the point of entry in the returns facility […]."* (Genchev, 2009:145) • *"The receiving is organized [sic] into several steps: […] updating of bookkeeping registers, updating of documentation […]."* (Gobbi, 2011:782)
	Dispatching /distribution	None	• *"The receiving […] steps: […] dispatching to the process areas or preliminary depot."* (Gobbi 2011:782) • *"Receiving — includes […] distribution of product returns […]."* (Stock and Mulki 2009:41)
	Verification of information	None	• *"[…] verifying the documentation accompanying each product […]."* (Beh *et al.* 2016:12) • *"Receiving returns – Verify if returned merchandise matches returns claimed by the customer* (Genchev *et al.* 2011:253) • *"[…] receipt of the return (with verification […] of the merchandise […]."* (Griffis *et al.* 2012:285) • *"[…] at the receiving dock when shipments arrive […] check the number of cases in the shipment against what appears in the documentation."* (Jayaraman *et al.* 2008:419)

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
	Identification	None	• *"The receiving is organized [sic] into several steps […] material identification […]."* (Gobbi, 2011:782)
	Unloading	Jayaraman *et al.* (2008:420)	• *"At the assigned receiving dock, the returned products are physically unloaded […]."* (Genchev, 2009:145) • *"The receiving is […] movement to the unloading areas […]."* (Gobbi, 2011:782) • *"Receiving — includes unloading […]."* (Stock & Mulki 2009:41)
	Scanning	None	• *"The first activity that occurs at the receiving dock […] is now typically done by scanning the barcode labels on the cases."* (Jayaraman *et al.* 2008:419)
	Movement of products	None	• *"[…] receiving […] and movement to the unloading areas […]."* (Gobbi, 2011:782)
	Handling	None	• *"[…] receiving and handling methods […]."* (Lambert *et al.* 2011:570)
	Organising/staging and arranging pallets/products	None	• *At the assigned receiving dock, the returned products are […] organized [sic] […]."* (Genchev, 2009:145) • *"[…] the pallets are arranged […] in the receiving area […]."* (Genchev, 2009:145) • *"[…] the pallets are […] staged in the receiving area […]."* (Genchev, 2009:145)
Facility/area	***Collection facilities***	None	• *"[…] receiving […] from customers at collection centers [sic] […]."* (Ene & Öztürk, 2015:286)
	Processing facilities	None	• *"[…] returns arriving at the processing site."* (Asdecker 2015:3) • *"Receiving—includes […] product returns to processing centers [sic]."* (Stock & Mulki, 2009:41)
	Warehouses	Genchev *et al.* (2011:252) Lambert *et al.* (2011:570) Stock and Mulki (2009:41)	• *"[…] warehousing facilities must be capable of […] receiving returned products […]."* (Dowlatshahi, 2012:1271) • *"[…] the receiving dock […] at the warehouse […]."* (Jayaraman *et al.* 2008:419)
	Returns facilities	None	• *"Every return must be registered at the point of entry in the returns facility […]."* (Genchev, 2009:145)
	DCs	Rajagopal *et al.* (2015:46)	• *"[…] receiving location, which often is a […] distribution center [sic] […]."* (Genchev *et al.* 2011:252) • *"A […] distribution center [sic] […] receives returns from the primary market stores […]."* (Zuluaga *et al.* 2016:2)
	Receiving docks/gates	Genchev *et al.* (2011:252)	• *"[…] returns receiving gate […]."* (Genchev, 2009:141) • *"At the assigned receiving dock […]."* (Genchev, 2009:145) • *"The first activity that occurs at the receiving dock when shipments arrive […]."* (Jayaraman *et al.* 2008:419)
Parties	***Consumers***	None	• *"[…] receiving […] from customers […]."* (Ene & Öztürk, 2015:286)
	Retailer	Cardoso *et al.* (2013:445) Stock and Mulki (2009:43)	• *"[…] online retailers […] are involved in […] receiving the return […]."* (Griffis *et al.* 2012:287) • *"[…] retailer is often responsible for receiving […]."* (Ni *et al.* 2014:312)
	Staff	None	• *"[…] receiving returns […] should help returns managers and inspectors […]."* (Genchev *et al.* 2011:252)
	Third-party collectors and transporters	None	• *"[…] the collector starts receiving the returns […]."* (Atasu & Cetinkaya, 2006:475) • *"[…] collector could […] receive goods at a collection site […]."* (Flygansvær *et al.* 2008:13) • *"[…] transportation companies […] unloading of returns at […] the returns dock."* (Genchev, 2009:140)

Source: Compiled by the researcher

Table 5.1 shows that the receiving process involves a few characteristics, activities, facilities/locations and parties, which will be discussed in the subsequent sections and concluded with a description and conceptual framework.

5.3.1 Characteristics of the receiving process

The receiving process in RL involves a few characteristics, which can be classified as general, involvement and linked with characteristics. The *general characteristics* of receiving include arrival, inbound flow and labour intensiveness. Specifically, as the first post-receipt RL process, receiving represents the *arrival* of returned products at the facility, which can be described as the *inbound flows* of product returns. The *labour intensiveness* of receiving can link with various receiving activities that require physical and manual labour, for example, unloading, moving, handling and

organising (see section 5.3.2). Similarly, the *involvement* characteristics of technology and documentation can relate to the receiving activities. For example, receiving can involve the use of *technology,* like scanning devices for scanning of returned products. Additionally, the *documentation* in receiving involves invoices, which can be used to check the quantity of returned products and verify the accuracy of return information captured during gatekeeping.

Finally, the *linked with characteristics* of the receiving process include links with the *pre-receipt RL processes* of gatekeeping, collection and transportation and *post-receipt RL processes* of processing, inspection, sorting and disposition. Relating to the documentation (involvement) characteristic, receiving can *link* with *gatekeeping* in terms of identifying the legitimacy of the return information provided by consumers during the gatekeeping processes. Additionally, receiving can link with the *collection* and *transportation processes* in terms of parties and facilities/locations. For example, a third-party collector collects a product from the consumer and performs receiving at the collection facility (see section 5.3.2) and a third-party transporter unloads vehicles at the receiving dock, emphasising the general characteristic of inbound flows.

Furthermore, the receiving process can link with the *processing process* by checking the legitimacy of product returns, which can be important during returns processing. For example, an illegitimate product return (e.g. opened game disk) can be noted at receiving, which can help avoid issuing a refund for a fraudulent return (also see section 5.4). Subsequently, the receiving process can link with *inspection* and *sorting processes* in terms of performing preliminary inspection and sorting activities at the receiving gate. For instance, preliminary visual inspection can be performed to identify if the product return is legitimate, and preliminary sorting can be performed by sorting and organising returned products before movement into the facility, emphasising the labour intensiveness of receiving.

Similarly, receiving links with the *disposition process* through pre-disposition decisions (initial decisions about what to do with the returned product). Nevertheless, the receiving process can link with the disposition process in terms of disposition taking place after receipt at the facility. This might apply to receipt at recovery facilities, like repair or refurbishment facilities, which perform disposition activities (see section 5.6). Finally, receiving can link with the *redistribution process* if the receiving party takes care of the redistribution of return products.

5.3.2 Activities, facilities and parties in the receiving process

Receiving involves *activities* related to administrative processes and physical handling of returned products, which can be classified as information flow and product flow activities. Particularly,

information flow activities in receiving involves administration and registration, verification, identification and scanning. Therefore, before entering the facility, returned products must be (1) identified and scanned, (2) recorded and registered (administration), and (3) verified with accompanying documentation and information provided by the consumer. The *product flow* activities of receiving involve unloading from the vehicle, handling, movement, organising/ staging and arranging of products or pallets and dispatching/distribution into the facility, reemphasising the receiving characteristics of labour intensiveness and link with sorting.

The *facilities* in the receiving process mostly refer to first-tier facilities (facilities used at the start of the RL process), which indicates that the focus of the receiving process in RL literature is mostly on the initial receipt of the product return. The initial first-tier facilities used for receiving activities include collection facilities, processing facilities, warehouses, return facilities and DCs. Therefore, retailers can either use forward logistics facilities, like *warehouses* and *DCs*, or use RL process facilities, like *collection, processing* and *return facilities*, for receiving operations. Furthermore, the receiving process takes place at the *receiving docks* and *gates* at the entry of facilities, which represents allocated areas at the facilities used for receiving activities.

The *parties* include consumers, retailers, staff, distributors and third parties that are indirectly or directly involved in the receiving process. *Consumers* can be indirectly involved in the receiving process since the information provided by the consumer during gatekeeping is verified at receiving. Additionally, the consumer can be the supplier of the product return required for the receiving process. *Retailers* that insource RL can be directly involved in the receiving activities of consumer returns. Subsequently, the *staff* of the retailers can directly perform receiving activities or may indirectly benefit from receiving activities. For example, RL managers and inspection staff can benefit from the receiving activities of pre-disposition decisions and verification of information for efficient inspection and disposition processes, emphasising the links between receiving and the inspection and disposition processes.

Alternatively, retailers can outsource RL activities to *third-party collectors* that can perform all receiving activities on their behalf. Finally, *third-party transporters* can be responsible for transporting returned products from consumers and unload returned products at the receiving dock, emphasising the link between the receiving and transportation process of consumer returns.

5.3.3 Description and conceptual framework of the receiving process of consumer returns

Based on the findings presented in section 5.3, receiving can be an important post-receipt RL process of consumer returns, and will be described as follows:

The receiving process of consumer returns can be described as the arrival and inbound flow of returned products, which can be labour intensive. Receiving involves technology and documentation and links with other pre- and post-receipt RL processes. The receiving process involves the (1) information flow activities of administration, registration, verification, product identification and scanning, and (2) product flow activities of unloading, handling, movement, organising/staging and arranging products/pallets, and distribution/dispatch, which can be performed by the staff of online retailers or other third parties at the receiving gate and dock of various first-tier FL facilities (such as warehouses and DCs) or RL facilities (such as collection, processing and return facilities).

Figure 5.4 provides a conceptual framework for the receiving process in RL that that may apply to consumer returns in online retailing.

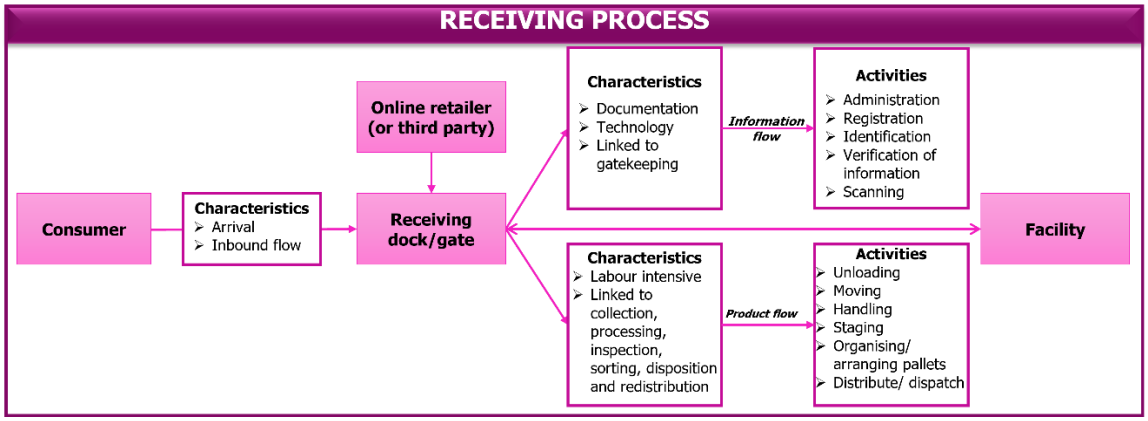


Figure 5.4 Conceptual framework of the receiving process
Source: Compiled by the researcher

Figure 5.4 provides a basic overview of the receiving process, illustrating the parties, area/facility, flows, characteristics and activities. Specifically, the framework demonstrates the consumer returning a product to the online retailer, whereafter the arrival and inbound flow (general characteristics) at the receiving gate and dock of the facility take place. Additionally, third parties can be involved in the process by being responsible for bringing the products from consumers and either perform all receiving activities or some (e.g. unloading). Furthermore, the framework shows two types of flow, namely information flow and product flow, each associated with distinct characteristics and activities. Once these activities/processes are completed, the products are dispatched into different areas of the facility.

In the next section, the return processing process as a post-receipt RL process is analysed.

5.4 PROCESSING PROCESS OF CONSUMER RETURNS

The processing process of consumer returns often takes place after receiving in the facility and involves credits/refunds or exchanges. The categories of processing, identified from the QCA on RL literature, included the (1) characteristics of processing, (2) activities in processing, (3) facilities/areas used for processing, and (4) parties involved in processing. Due to vastness of content related to the processing, separate tables were created for each of the categories associated with

processing. This format will also apply to presentation of the findings for inspection, sorting and disposition processes.

5.4.1 Characteristics of the processing process of consumer returns

In this section, the findings related to the characteristics of the processing process will be presented and discussed. Table 5.2 provides an overview of the findings related to the *characteristics of the processing process of consumer returns*, including detail on the characteristics, supporting sources for the characteristics and quotations from the literature.

Table 5.2 Findings related to the characteristics of the processing process of consumer returns

CHARACTERISTICS	SUPPORTING SOURCES	KEY QUOTATION
Internal process	None	• *"[…] focuses on the internal process of […] processing […]."* (Hall *et al.* 2013:777) • *"[…] total cost of internal processing."* (Serrato *et al.* 2007:4304)
Challenging and complex	Bernon *et al.* (2016:593) Mollenkopf *et al.* (2007:241)	• *"[…] processing rules and procedures makes this the most challenging process related to returns."* (Genchev *et al.* 2011:253) • *"[…] complex returns processing since there could be multiple reasons for product returns."* (Stock & Mulki 2009:49) • *"[…] costs of […] processing […] are too complex and substantial to ignore."* (Zikopoulos & Tagaras 2015:442)
Uncertainty/variability	Sasikumar *et al.* (2010:1224)	• *"[…] increasing processing cost due to the variance in condition […]."* (Ferguson & Toktay 2006:356) • *"[…] highly variable processing times."* (Jayaraman, 2006:983)
Time-consuming	Hall *et al.* (2013:775) Genchev (2009:145) Genchev *et al.* (2011:252) Srivastava (2008:542) Srivastava and Srivastava (2006:532)	• *"[…] the time taken up by […] processing returns."* (Bernon & Cullen (2007:54) • *"[…] highly variable processing times."* (Sasikumar *et al.* 2010:1224) • *"[…] total returns processing time."* (Stock & Mulki, 2009:43) • *"[…] determine the disposition mode up-front thereby minimising […] processing time […]."* (Jayaraman *et al.* 2008:417)
Requires financial and infrastructural resources	Prakash and Barua (2016b:64) Sasikumar and Kannan (2008b:234)	• *"[…] capital investments focused upon increased returns processing […]."* (Griffis *et al.* 2012:291) • *"[…] resource investment to build up operational capabilities in returns processing […]."* (Griffis *et al.* 2012:283) • *"[…] requires a specialized infrastructure […] for the processing of returns […]."* (Ko & Evans, 2007:347) • *"[…] dedicated equipment for the processing of returns."* (Kannan *et al.* 2009:28)
Requires IT	Li and Olorunniwo (2008:384) Govindan *et al.* (2016:758) Li and Olorunniwo (2008:384) Kannan *et al.* (2009:28) Ko and Evans (2007:347) Sasikumar and Kannan (2008b:234) Morgan *et al.* (2016:295)	• *"[…] information technology as an enabler for return processing […]."* (Bokade & Raut, 2013:42) • *RFID assisting with the integration of returned goods processing […]."* (Jayaraman *et al.* 2008:424) • *"IT use in […] the returns processing operations."* (Olorunniwo & Li, 2010:458) • *"[…] return needs […] advance IT and tracking system […] for the processing of returns […]."* (Prakash & Barua, 2016b:64) • *"[…] technology and skills for processing returns […]."* (Srivastava, 2008:548)
Requires skills/ trained staff	Srivastava (2008:548)	• *"[…] processing station where qualified personnel […]."* (Asdecker 2015:3) • *"[…] training […] focused upon increased returns processing speed […]."* (Griffis *et al.* 2012:291) • *"[…] processing of returns and trained manpower […]."* (De Leeuw *et al.* 2016:718) • *"[…] level of technology and skills for processing returns[…]."* (Prakash & Barua 2016b:64)
Require accuracy	Genchev (2009:145) Morgan *et al.* (2016:295) Zikopoulos and Tagaras (2015:442)	• *"[…] number one priority remains […] accurate processing […]."* (Genchev *et al.* 2011:250)
Requires speed	Genchev *et al.* (2011:250, 251) Morgan *et al.* (2016:295) Mollenkopf *et al.* (2007:241) Genchev (2009:145)	• *"Processing speed […] in terms of the speed at which a customer receives a credit for their returned purchase […]."* (Bernon *et al.* 2016:595) • *"[…] quick returns processing is important […]."* (De Leeuw *et al.* 2016:718) • *"[…] speed is essential to returns processing."* (De Leeuw *et al.* 2016:723) • *"[…] faster returns processing is correlated with customer retention […]."* (Griffis *et al.* 2012:291) • *"[…] timely processing returns that do occur, customer service will improve."* (Hall *et al.* 2013:777)
Requires economies of scale	None	• *"[…] importance of […] achieving economies of scale in processing […]."* (De Leeuw *et al.* 2016:718)
Involves costs	Atasu and Cetinkaya (2006:477) Bernon *et al.* (2011:491) Badenhorst (2013:3) Chen and Chen (2015:3)	• *"Returns can be prohibitively expensive […] due to the high processing costs […]."* (Janakiraman *et al.* 2016:226) • *"This involves average processing costs […]."* (Asdecker 2015:9) • *"[…] processing cash costs and inflows at each stage of the reverse logistics*

CHARACTERISTICS	SUPPORTING SOURCES	KEY QUOTATION
	De Leeuw *et al.* (2016:711;725) García-Rodríguez *et al.* (2013:585) Govindan *et al.* (2016:758) Jayaraman *et al.* (2008:415;422) Mollenkopf *et al.* (2007:241) Serrato *et al.* (2007:4304) Piplani and Saraswat (2012:1428) Zikopoulos and Tagaras (2015:442) Srivastava and Srivastava (2006:532) Lau and Wang (2009:457) Mafakheri and Nasiri (2013:193) Pourmohammadi *et al.* (2008:5)	*process."* (Wilcox *et al.* 2011:86) • *"[…] cost of returns processing for online retailers."* (Griffis *et al.* 2012:292) • *"[…] increasing processing cost due to the variance in condition […]."* (Ferguson and Toktay 2006:356) • *"The processing cost involves the cost incurred while processing and handling returns […]."* (Subhashini, 2016:10) • *"RL costs comprise fixed and running costs of […] processing […]."* (Srivastava, 2008:542) • *"[…] the cost of transportation and processing […]."* (Luitel *et al.* 2014:92) • *"[…] costs of processing these returns on a per item basis is generally higher for online-only retailers compared to conventional multi-channel retailers."* (De Leeuw *et al.* 2016:711)
Involves customer service and accounts	Asdecker (2015:3) Griffis *et al.* (2012:291)	• *"[…] prompt and accurate service to customers by assigning additional resources for processing."* (Genchev, 2009:145) • *"[…] establishing RL customer service levels can be greatly beneficial […] for optimized [sic] processing times."* (Hall *et al.* 2013:776) • *"[…] processing key accounts' product returns […]."* (Genchev *et al.* 2011:253, 256) • *"[…] processing of returns and updating of customer accounts […]."* (Mollenkopf *et al.* 2007:241)
Influenced by product type, condition, quantity, carrier service levels, channel type and return policies	Piplani and Saraswat (2012:1428) Stock and Mulki (2009:43)	• *"[…] speed is essential to returns processing of fashion items because they are time-sensitive products."* (De Leeuw *et al.* 2016:725) • *Processing returns […] regarding quantity and condition of merchandise […]."* (Genchev 2009:145) • *"[…] the product is defective […] can impact […] returns processing time."* (Hall *et al.* 2013:775) • *"[…] carriers can affect return processing time […]."* (Genchev *et al.* 2011:252) • *"[…] processing costs […] are directly proportional to the amount of used products […]."* (Yu & Solvang, 2016:7) • *"Online retailers, lacking these pre-existing facilities […] potentially increasing the return processing costs."* (Griffis *et al.* 2012:283) • *"[…] processing strategy triggered by the return policy […]."* (Bahn and Boyd 2014:415)
Linked to CRR	Genchev (2009:145)	• *"[…] following the customers' request for a return. […] advance notice of what product is coming back from the market allows for increased speed in returns processing."* (Genchev *et al.* 2011:251)
Linked to gatekeeping	Griffis *et al.* (2012:287)	• *Processing returns […] possesses the information […] condition of merchandise as provided via return authorization [sic] […]."* (Genchev, 2009:145) • *"[…] completing the return authorization forms, and preparing the returned item for processing."* (Stock & Mulki 2009:41)
Linked to collection	None	• *"[…] processing and handling returns […] associated with pickup […]."* (Subhashini, 2016:10)
Linked to transportation	Mukhopadhyay and Setaputra (2006:718) Stock and Mulki (2009:41) García-Rodríguez *et al.* (2013:585) Srivastava (2008:542) Mafakheri and Nasiri (2013:193) Pourmohammadi *et al.* (2008:5) Subhashini (2016:10) Tuzkaya and Gülsün (2008:346) Yu and Solvang (2016:7)	• *"[…] economies of scale in processing and transportation […]."* (De Leeuw *et al.* 2016:718) • *High costs of operation (comprising mainly transportation and reprocessing costs) […] of reverse logistics […]."* (Lau & Wang, 2009:457) • *"[…] for the cost of transportation and processing […]."* (Luitel *et al.* 2014:92)
Linked to receiving	Atasu and Cetinkaya (2006:477) Ferguson and Toktay (2006:356) Genchev (2009:141, 147) Genchev *et al.* (2011:262) Mukhopadhyay and Setaputra (2006:718)	• *"[…] processing these returns, including […] receiving the return […]."* (Griffis *et al.* 2012:285) • *"[…] start processing immediately upon arrival […]."* (Ferguson *et al.* 2011:774)
Linked to inspection	None	• *"[…] inspected returns […] are moved to the disposition stage of returns processing."* (Genchev 2009:146) • *"[…] they should undergo a detailed inspection when being processed […]."* (García-Rodríguez *et al.* 2013:588)
Linked to sorting	Agrawal and Choudhary (2014:15) Baker and Zabinsky (2008:252) Achillas *et al.* (2010:2594) Shaik and Abdul-Kader (2014:97) Srivastava and Srivastava (2006:528) Tuzkaya and Gülsün (2008:346)	• *"[…] sort […] activity prepares the efficient processing of incoming items."* (Asdecker, 2015:3) • *"[…] initial sorting and by making decisions on processing […]."* (Stock & Mulki 2009:53) • *"[…] are sorted, processed and then shipped […]."* (Jayaraman *et al.* 2008:416)
Linked to disposition	Agrawal *et al.* (2015:78) Ferguson *et al.* (2011:777) Genchev (2009:146) Genchev *et al.* (2011:251, 255) Jayaraman *et al.* (2008:417) Piplani and Saraswat (2012:1428) Prahinski and Kocabasoglu (2006:422)	• *"[…] next step is to disposition them for further processing."* (Agrawal *et al.* 2016c:42) • *"[…] returns handling as it has a direct impact on administrative, processing, and disposition […]."* (Asdecker, 2015:11) • *"[…] processing […] and subsequent product disposition."* (Beh *et al.* 2016:19) • *"[…] processing these returns […] and […] determining disposition […]."* (Griffis *et al.* 2012:287) • *"Processing may include finished product reuse, refurbishment and […] recovery*

CHARACTERISTICS	SUPPORTING SOURCES	KEY QUOTATION
	Srivastava (2008:548) Srivastava and Srivastava (2006:528, 530) Suyabatmaz *et al.* 2014:75)	*[…].”* (Baker & Zabinsky, 2008:252) • *“[…] carry out further processing and recovery […].”* (Shaharudin *et al.* 2015:4)
Linked to redistribution	None	• *“[…] returned goods for processing and re-distribution […].”* (Jayaraman *et al.* 2008:420) • *“[…] getting those products out of […] processing, […] and getting them shipped.”* (Hall *et al.* 2013:777)

Source: Compiled by the researcher

Table 5.2 shows that the processing process can involve various characteristics, which can be classified as (1) general characteristics, (2) requirement characteristics, (3) involvement characteristics, (4) influenced by characteristics and (5) linked with characteristics. These characteristics will be briefly discussed in the subsequent paragraphs.

The *general characteristics* of the processing process include (1) internal process, (2) challenging/complex, (3) uncertain/variable, and (3) time-consuming. Processing can be viewed as an internal, complex/challenging, uncertain and time-consuming process. Processing as an *internal process* implies that retailers (original seller of the returned product) mostly perform processing in-house. Furthermore, processing can be a *challenging* and *complex* post-receipt RL process, which relates to other characteristics, including return policies (containing rules and procedures), various conditions of returned products and processing costs (see subsequent discussions). Similarly, the *uncertainty/variability* of the processing process can be attributed to different product condition, various return reasons, and inconsistent processing times. This uncertainty and complexity of the processing process emphasise that returns processing can be *time-consuming*, indicating that strategies (e.g. pre-disposition decisions) must be implemented to reduce processing times.

The *requirement characteristics* of the processing process include financial and infrastructural resources, technology, trained staff, accuracy, speed and economies of scale. The processing process *requires financial and infrastructural resources*, like capital investments and dedicated equipment, to enhance return process efficiency. Similarly, *information technology (IT)* can be important for effective execution of processing activities, including information sharing and tracking (see section 5.4.2). The requirement of *trained staff* demonstrates the complexity of the processing process and the requirements of resources, accuracy and speed. *Accuracy* and *speed* can be important processing requirements since consumers are concerned with receiving accurate and speedy refunds, credits or replacements after returning their products. Lastly, the *economies of scale* requirement of the processing process might associate with the resource requirements. For example, retailers that lack economies of scale (due to lower return volumes), might be less likely to assign appropriate resources for returns processing efficiencies.

The *involvement* characteristics of the processing process include costs, customer service and

accounts. Linking with the resource, staff training and economies of scale requirements, the *costs* of the processing process involve fixed costs (e.g. facilities and assets), variable costs (e.g. labour) and cash flows (e.g. refunds), which indicates that processing can be an expensive process. Additionally, *customer service* and *accounts* emphasise the importance of speed and accuracy of refunds/credits and costs of processing. Therefore, online retailers can benefit from implementing appropriate consumer service and financial management strategies in the processing process of consumer returns.

The *influenced by characteristics* of the processing process include product type, condition and quantity, carrier service levels, channel type and return policies. Particularly, processing efficiency process can be *influenced* by *product type, condition and carrier service levels*. For instance, fashion items can be time-sensitive due to seasonal/demand changes, which requires speedy and efficient processing. Similarly, a returned product in defective condition, might need inspection before refunds can be issued, impacting processing lead-time. Additionally, carriers can affect processing speed through pick-up schedules/times of collecting and transporting returned products to a facility, which might impact customer service levels and speed of refunds or product exchanges.

Furthermore, processing efficiency and costs can be *impacted* by *quantity* and *channel type.* Specifically, higher returned product quantities mean greater processing efficiencies but higher processing costs, indicating that a cost-benefit analysis might be important for the processing process. Similarly, for the channel types online retailing can involve longer processing times and higher processing costs than traditional retailing since returned products must first be transported to facilities for processing. Lastly, the *return policy* can impact the processing activities, for example, the return policy might specify that no exchanges are allowed on certain products and as result only refunds/credits can be issued if such products are returned.

Finally, the *linked with characteristics* of the processing process include links with all RL processes, including the *pre-receipt RL processes* of CRR, gatekeeping, collection and transportation and *post-receipt RL processes* of receiving, inspection, sorting, disposition and redistribution. Particularly, Processing links with the *CRR process* by using the information provided by consumers during return request as inputs in selecting applicable processing activities. Similarly, *gatekeeping* plays a role in identifying the condition of the returned product, which can be important for accurate return processing. Additionally, the link between processing and *collection* can involve the possibility of processing returns at return pickup, for example, issuing an instant credit. The link between *transportation* and processing relates to their shared characteristics of economies of scale and costs (see section 4.4.4).

The link between processing and the *receiving* process associates with the sequence of RL processes,

demonstrating that products must first be received at a facility before processing can be conducted. Similarly, processing can link with the *inspection* and *sorting* in terms of the sequence of RL processes implemented by organisations. For example, some retailers might first require full inspection and sorting before a refund or exchange can be issued. Alternatively, if processing takes place during product recovery, inspection and sorting processes can take place before processing, which links processing and *disposition*. Additionally, processing and disposition can link through the processing activity of pre-disposition decisions. Lastly, the link between processing and *redistribution* can relate to product exchanges or through redistribution of products to new markets/consumers.

Essentially, the characteristics demonstrates that processing involves information flows (e.g. technology requirements), product flows (e.g. links with sorting, inspection, collection and transportation) and cash flows (e.g. customer accounts and processing costs). In the next section the activities of the processing process will be presented and discussed.

5.4.2 Activities of the processing process of consumer returns

In this section an overview of the activities in the processing process is given. Table 5.3 provides an overview of the findings related to the *activities of processing*, including detail on the characteristics, supporting sources for the characteristics and quotations from the literature.

Table 5.3 Findings related to the activities of the processing process of consumer returns

ACTIVITIES	SUPPORTING SOURCES	KEY QUOTATIONS
Credit/refund authorisation	None	• *"[…] to the buyer's account including credit authorization [sic] […]."* (Genchev *et al.* 2011:255) • *"[…] processing these returns, including […] authorizing [sic] the refund […]."* (Griffis *et al.* 2012:287)
Cross-verification of return authorisation	None	• *"The next task is to undertake a cross-verification of the returned item with the return authorization [sic] given at gatekeeping."* (Shaik & Abdul-Kader 2014:97) • *"[…] activities are involved in processing […] including authorizing the return, […] verifying and […] authorizing [sic] the refund […]."* (Griffis *et al.* 2012:287)
Recordkeeping	None	• *"Recording the length of time required to handle charge backs […]."* (Genchev *et al.* 2011:256) • *"Expedite […] procedures for charge backs, record […] them […]."* (Genchev *et al.* 2011:256)
Information sharing and communication	None	• *"[…] charge backs […] communicate them internally and externally […]."* (Genchev et al. 2011:255) • *"[…] returns processing via effective information sharing […]."* (Morgan *et al.* 2016:295)
Data entry/capture	None	• *"[…] needing special information systems for tracking/capturing data, […] for the processing of returns […]."* (Ko & Evans 2007:347) • *"The electronic profiles usually include product specifications and the reason for the return […] in returns processing."* (Genchev *et al.* 2011:251) • *"Processing — consists of activities such as data entry […]."* (Stock & Mulki (2009:41)
Tracking	Ko and Evans (2007:347) Prakash and Barua (2016b:64) Sasikumar and Kannan (2008b:234)	• *"[…] information systems for tracking […] the processing of returns."* (Kannan *et al.* 2009:28)
Issue credits/refunds	Griffis *et al.* (2012:285, 287) Skinner *et al.* (2008:524) Hall *et al.* (2013:769) Stock and Mulki (2009:41)	• *"Customers may be refunded at this stage […]."* (Asdecker 2015:3) • *"Processing […] in terms of the speed at which a customer receives a credit […]."* (Bernon *et al.* 2016:595) • *"This process involves the charge back to the buyer's account including credit […]."* (Genchev *et al.* 2011:255)

ACTIVITIES	SUPPORTING SOURCES	KEY QUOTATIONS
		• *"[…] a monetary credit may be issued to the customer."* (Lambert *et al.* 2011:573)
Claims settlements and verification of accurate fund transfers	None	• *"This process involves […] potential claim settlements with customers."* (Genchev *et al.* 2011:255) • *"Check whether post-crediting transfer of funds was accurately charged back […]."* (Genchev *et al.* 2011:256)
Product exchange	None	• *"[…] difficulties in processing product exchanges […]."* (De Leeuw *et al.* 2016:722) • *"If an exchanged product is sent back to the customer, it must be the same model or of equivalent quality, performance, and functionality."* (Lambert *et al.* 2011:573)
Handling	Subhashini (2016:10)	• *"[…] facilities are dedicated to return handling and processing […]."* (Min & Ko, 2008:179) • *"[…] the costs of returns handling and processing […]."* (Zikopoulos and Tagaras 2015:442)
Restocking	None	• *"[…] processing of returns may lead to […] restocking […]."* (De Leeuw *et al.* 2016:725) • *"Once the […] processing is done, the products are returned to the customers or kept in stock."* (Lambert *et al.* 2011:576)
Pre-disposition decisions	Ferguson *et al.* (2011:777) Griffis *et al.* (2012:287) Hall *et al.* (2013:775) Rogers *et al.* (2012:115)	• *"The task of deciding what will be done with processed returns is known as assigning disposition."* (Genchev, 2009:146) • *"[…] crediting and/or disposition options are also registered […] for increased speed in returns processing."* (Genchev *et al.* 2011:251) • *"Processing involves activities where treatment options such as repair, reuse, remanufacturing, upgrade, and repackaging of the returned product are envisaged."* (Lambert *et al.* 2011:570)

Source: Compiled by the researcher

Table 5.3 shows various activities of processing, which can be classified as information, cash and product flow activities. Particularly, *information flow activities*, include credit and refund authorisation, recordkeeping, cross-verification of return authorisation, information sharing and communication, data entry/capturing and tracking, which emphasise the importance of IT in processing (see section 5.4.1). For instance, IT can be important for *cross-verification of return authorisation* captured during gatekeeping (see section 4.4.2) and internal (between departments) and external (with consumers and carriers) *information-sharing and communication* about *credit/refund authorisation*.

Additionally, credit/refund authorisation can relate to the retailer's return policy. For example, the return policy specifies that unused/unopened returned products can be refunded and based on this condition a credit or refund can be authorised, emphasising the characteristic of the impact of return policies on processing. Lastly, IT can be important for *recordkeeping*, *data entry* and *data capturing*, relating to update of accounts (after issuing refunds) and stock/inventory levels (after restocking), and *tracking* to ensure visibility in the process.

The *cash flow activities* of processing involve issuing credits/refunds, settling claims and verifying accuracy of fund transfers. *Issuing a refund or credit* can be viewed as the main purposive of consumer return processing, linking with various processing characteristics (section 5.4.1) and information flow activities. Particularly, issuing refunds/credits links with the processing characteristics of high processing costs, customer service and accounts and return policy, as well as the information flows processing activities of credit/refund authorisation, information sharing and communication, recordkeeping and data entry/capturing of information. Additionally, *claim settlements* and *verification of accurate transfers* relates to the processing characteristic of "requiring

accuracy" since retailers must ensure that consumers receive the correct refunds.

The *product flow activities* involve product exchanges, handling and restocking. Like issuing refunds/credits, *product exchanges* can be a main activity of processing, representing an alternative outcome of shipping (or redistributing) a replacement product back to the original consumer. However, product exchanges can be more complexed than credits/refunds since (1) the characteristics of the returned/exchanged product must be similar (i.e. the same brand/model or colour), (2) additional transportation must be organised, and (3) the replacement product might be out of stock. Essentially, product exchanges emphasise the links between processing, transportation and/or redistribution (see section 5.4.1). Product returns *handling* demonstrate that returned products are physically handled during the processing process, which adds handling costs to overall return processing costs. The *restock* activity demonstrates the link between processing and disposition processes since returned products in new/unused can be reused (disposition option).

Finally, the *pre-disposition decision* activity can involve both *information* and *product flows* since preliminary disposition decisions can be recorded on the system and products can be dispositioned after processing, reemphasising the restocking activity and links between the processing and disposition processes.

In the next section, the facilities used for processing returns will be discussed.

5.4.3 Facilities and areas used for the processing process

The third category in processing involves the facilities and areas used for processing. Table 5.4 provides an overview of the findings related to the *facilities and areas used for the processing process of consumer returns*, including details on the facilities, sources to support the mentioned facilities and key quotations to support the discussion of the findings.

Table 5.4 Findings related to the facilities used for the processing process of consumer returns

FACILITIES/AREA	SUPPORTING SOURCES	KEY QUOTATIONS
Centralised Return Centres (CRCs)	Rogers *et al.* (2012:108) Tuzkaya and Gülsün (2008:346)	• *"[…] centralized [sic] returns centers for achieving economies of scale in processing […] for minimizing [sic] […] costs."* (De Leeuw *et al.* 2016:718) • *"[…] establish distinct returns facilities, potentially increasing the return processing costs […]."* (Griffis *et al.* 2012:283) • *"Centralized [sic] return centers [sic] are dedicated to return […] processing."* (Min *et al.* 2006:58)
Collection facilities	Govindan *et al.* (2016:758) Yu and Solvang (2016:4)	• *"[…] processing may be […] carried out […] at collection centers [sic] […]."* (Srivastava & Srivastava, 2006:528)
Processing facilities	Stock and Mulki (2009:41)	• *"[…] processing product exchanges in their online processing facilities ."* (De Leeuw *et al.* 2016:722) • *'[…] processing facility is devoted to […] processing […]."* (Ruiz-Benítez *et al.* 2014:56)
Retail stores	Bernon *et al.* (2016:596)	• *"[…] retail space utilised […] by store personnel processing returns."* (Bernon & Cullen, 2007:54)
Warehouses	None	• *"RFID assisting with the integration of returned goods processing in the warehouse […]."* (Jayaraman *et al.* 2008:424) • *"[…] retailers indicated that they used […] their warehouse space for returns processing, suggesting that they combined forward and reverse logistics in the same*

FACILITIES/AREA	SUPPORTING SOURCES	KEY QUOTATIONS
		area." (Stock & Mulki (2009:41) • *"The processing cost involves […] handling charges at the warehouse […]."* (Subhashini 2016:10)
Distribution Centres (DCs)	None	• *"[…] product to a returns DC for processing and customer credit."* (Bernon *et al.* 2016:596) • *"[…] distribution center [sic] […] for returns processing […]."* (Genchev 2009:141)
Repair facilities	None	• *"Repair facilities are dedicated to return […] processing […]."* (Min & Ko 2008:179)
Service centres	None	• *"[…] processing […] returns […] at service centres."* (Piplani & Saraswat 2012:1428)
Processing stations	Stock and Mulki (2009:50)	• *"At the third stage, returns are transported to a processing station […]."* (Asdecker, 2015:3)

Source: Compiled by researcher

Table 5.4 shows that the facilities used for processing can be categorised as RL process facilities, traditional FL facilities, recovery facilities, stores and processing areas.

The *RL process facilities*, like *CRCs* (used exclusively for returns), *collection facilities* (used for collecting and processing of returns) and *processing facilities* (used for processing activities), emphasises the characteristics of processing (section 5.4.1) in terms of resource requirements (such as specialised infrastructure) as well as costs associated with the processing of returns (e.g. maintenance costs). Additionally, CRCs can contribute to the economies of scale requirement for realising processing efficiency, and collection facilities emphasise the link between processing and collection processes. Moreover, processing facilities can be used in online retailing, emphasising the importance of returns processing in the RL processes of consumer returns in online retailing.

The *traditional FL facilities/locations* used for processing include *stores*, *warehouses* and *DCs*. Using *retail stores* for processing, emphasise the characteristic related to the influence of the channel type on processing (section 5.4.1). While online retailers must use facilities for returns processing, multi/omnichannel retailers can use their stores. When using *warehouses* for returns processing, organisations can use existing infrastructure and technology (such as RFID) for both FL process and RL processes, emphasising the IT requirement characteristic. Similarly, *DCs* that can traditionally be used for distributing products to the market can perform returns processing before redistributing products back to original consumers for product exchanges as an activity in processing (section 5.4.2).

Finally, *repair facilities* and *service centres* as product recovery facilities[10] can perform processing activities, which emphasise the characteristic of the links between processing and disposition processes (section 5.4.1) and the processing activity of pre-disposition decisions (section 5.4.2). In the next section, the parties involved in the processing of product returns are discussed.

[10] Product recovery facilities is used as a collective name for dedicated facilities that perform disposition options or recovery operations, including repair/service facilities, refurbishment facilities, disassembly facilities and other facilities excluded from this study (such as remanufacturing and recycling facilities).

5.4.4 Parties associated with the processing process of consumer returns

Several parties can be involved in the processing process of consumer returns, which will be identified and discussed in this section. Table 5.5 provides an overview of the findings related to the *parties involved in the processing process of consumer returns*, including detail on the parties, sources to support the parties in processing and key quotations from the literature, followed by a discussion.

Table 5.5 Findings related to the parties in the processing process of consumer returns

PARTIES	SUPPORTING SOURCES	KEY QUOTATIONS
Consumers	Asdecker (2015:3) Genchev *et al.* (2011:255;251) Lambert *et al.* (2011:573) Mollenkopf *et al.* (2007:241)	• *"[…] customer […] receive a credit or exchange."* (Bernon *et al.* 2016:589) • *"[…] processing these returns, including […] the refund for the customer."* (Griffis *et al.* 2012:287) • *"[…] focus their attention on prompt and accurate service to customers by assigning additional resources for processing."* (Genchev 2009:145) • *"[…] understand what each customer is willing to accept in terms of timeliness, […] for […] processing times."* (Hall *et al.* 2013:776) • *"[…] timely processing returns that do occur, customer service will improve."* (Hall *et al.* 2013:777)
Retailers	Bernon and Cullen (2007:54) Chen and Chen (2015:3) Rogers *et al.* (2012:115)	• *"Retailer manages […] processing product returns using a third party […]."* (Ahsan & Rahman, 2016:611) • *"[…] retailers indicated that they used […] their warehouse space for returns processing […]."* (Stock & Mulki, 2009:41) • "*Returns can be prohibitively expensive for retailers due to the high processing costs […]."* (Janakiraman *et al.* 2016:226) • *"[…] costs of processing these returns […] is generally higher for online-only retailers compared to conventional multi-channel retailers […]."* (De Leeuw *et al.* 2016:711) • *"[…] online retailers […] are involved in processing these returns, including […] authorizing [sic] the refund for the customer."* (Griffis *et al.* 2012:287) • *"[…] retailer is often responsible for […] administering the refunds, exchanges or repairs."* (Ni *et al.* 2014:312) • *"[…] retailers have the most complex returns processing since there could be multiple reasons for product returns."* (Stock & Mulki 2009:49) • *Retailers can […] making decisions on processing […]."* (Stock & Mulki, 2009:53)
Wholesalers	None	• *"[…] include […] wholesalers […] in the processing of returns."* (Genchev *et al.* 2011:243) • *"[…] wholesalers use less […] of their existing warehouse space for processing returns."* (Stock & Mulki, 2009:41) • *"[…] wholesalers […] assessing total returns processing time."* (Stock & Mulki, 2009:43)
Departmental functions/ staff	None	• *"[…] processing […] which is often sent to customer service."* (Asdecker, 2015:3) • *"Senior distribution center [sic] management, corporate customer service, and sales team involvement become mandatory in processing […]."* (Genchev *et al.* 2011:253) • *"[…] processing station where qualified personnel open each item […]."* (Asdecker, 2015:3) • *"[…] store personnel processing returns."* (Bernon & Cullen, 2007:54) • *"Returns processing is executed […] returns inspectors have a guaranteed workday load."* (Genchev, 2009:140) • *"[…] managers can […] plan for […] processing […]."* (Hall *et al.* 2013:776)
Third parties	Stock and Mulki (2009:34) Genchev *et al.* (2011:243)	• *"[…] processing product returns using a third party […]."* (Ahsan & Rahman, 2016:611) • *"[…] 3PLs have also become important players in reverse logistics since […] return operations require […] infrastructure […] for the processing of returns."* (Ko & Evans, 2007:347) • *"[…] carriers can affect return processing time […]."* (Genchev *et al.* 2011:252) • *"[…] steps performed jointly by the […] transportation service provider […]."* (Griffis *et al.* 2012:285) • *"The 3PRL partner has to deal with […] activities like […] processing."* (Prakash & Barua 2016b:64)

Source: Compiled by the researcher

Table 5.5 shows that the parties involved in processing include consumers, retailers, wholesalers, departmental functions and staff/employees, and third parties.

The role of *consumers* in the processing process relates to the activities of receiving credits/refunds or product exchanges, demonstrating that consumers can be opportunistic players in RL. Additionally, as mentioned in the characteristics of processing (section 5.4.1), efficient and speedy

processing can improve consumer service levels, which will benefit the consumers of product returns.

In contrast, *retailers* play significant roles in the processing of returns, including (1) choosing third parties to perform processing (outsourcing decisions), (2) using facilities (such as warehouses) and processing stations or stores for processing activities, (3) carrying processing costs, and (4) performing processing activities (such as issuing credits/refunds or product exchanges). Alternatively, if *wholesalers* sell directly to consumers, they might perform similar roles as retailers in the processing process of consumer returns.

Additionally, retailers' *departmental functions* and *staff* can be involved in the processing process of consumer returns. Particularly, the *customer service department/function* can be directly involved in processing process by communicating to consumers regarding the outcomes/status of their refunds/product exchanges, emphasising the characteristic of customer service in processing (section 5.4.1). Additionally, *management* and the *sales team* can be involved in the processing of consumer returns, which emphasise the importance of internal information sharing and communication as processing activities (section 5.4.2). Oher staff involved in processing can include *processing staff* and *store staff*, which emphasise the use of facilities in online retailing and stores in traditional retailing for returns processing. Lastly, *inspectors* can be the recipients of returned products after processing, emphasising the link between processing and inspection processes.

Finally, various *third parties* can be involved in the processing process of consumer returns, including third-party transport providers/carriers, 3PL providers or 3PRL providers. *Third-party transport providers/carriers* can be responsible for transporting product returns from consumers for processing and/or product exchanges back to consumers, emphasising the links between processing and transportation and redistribution processes (section 5.4.1). Additionally, carriers associate with the processing characteristic labelled as "influenced by carrier service levels", which impact processing speed.

Alternatively, *3PL* or *3PRL providers* can be responsible for performing all processing activities on behalf of retailers. Retailers can benefit from using 3P(R)L providers to take advantage of economies of scales and access specialised resources for returns processing, emphasising the economies of scale, financial and infrastructural resources, IT and skilled/trained staff requirements as processing characteristics (section 5.4.1). The next section concludes the processing process of consumer returns with a description and conceptual framework.

5.4.5 Description and conceptual framework of the processing process of consumer returns

Based on the findings presented in section 5.4, processing can be an important post-receipt RL process of consumer returns, and will be described as follows:

> The processing process of consumer returns can be described as an internal, challenging/complex, uncertain/variable, and time-consuming RL process, which (1) requires financial and infrastructural resources, technology, trained staff, accuracy, speed and economies of scale, (2) involves costs, customer service and accounts, (3) can be influenced by product type, condition and quantity, carrier service levels, channel type and return policies, and (4) can be linked with other pre- and post-receipt RL processes. The activities of the processing process involve (1) information flow activities, including credit and refund authorisation, recordkeeping, cross-verification of return authorisation, information sharing and communication, data entry/capturing, tracking and pre-disposition decisions, (2) cash flow activities, including issuing credits/refunds, settling claims and verifying accuracy of fund transfers, and (3) product flow activities, including product exchanges, handling, restocking and pre-disposition decisions, which can benefit consumers and be performed by departments/staff of the online retailer and/or 3P(R)L providers in RL-specific facilities (CRCs, collection facilities and processing facilities), traditional FL facilities (DCs and warehouses) or recovery facilities (repair facilities or service centres).

Figure 5.5 provides a conceptual framework of the processing process in RL process that may apply to consumer returns in online retailing. Particularly, the framework provides a basic overview of the processing process of consumer returns, illustrating characteristics unrelated to flows, the main parties involved in returns processing, including consumers, online retailers (also representing department/staff) and third parties, and the processing station in the facility (representing any type of facility that can be used for processing). Finally, the framework demonstrates the cash, information and product flows in the processing process with corresponding activities and characteristics related to these flows.

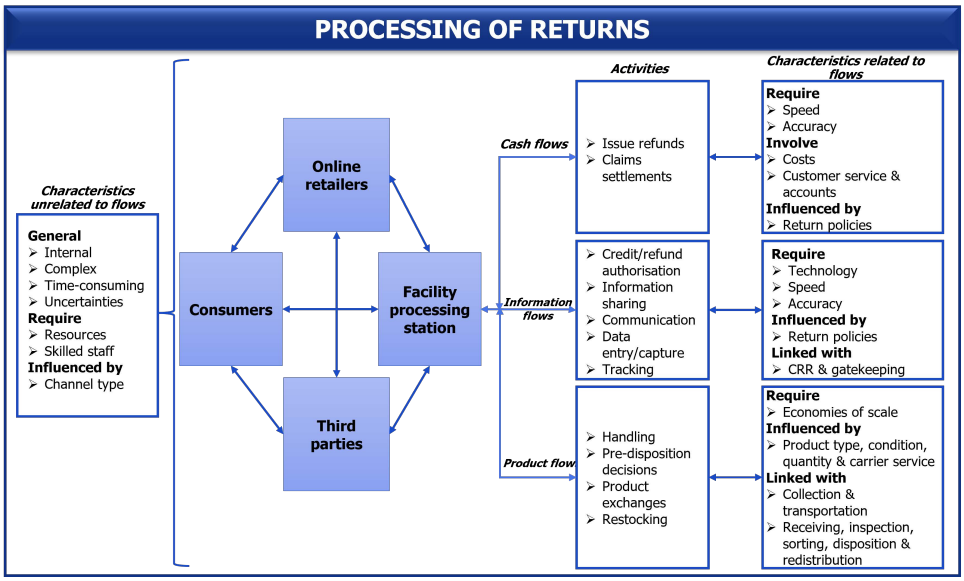


Figure 5.5 Conceptual framework of the processing process
Source: Compiled by the researcher

In the next section, inspection and sorting as post-receipt RL processes are discussed and analysed.

5.5 INSPECTION AND SORTING PROCESSES OF CONSUMER RETURNS

In this section, inspection and sorting as post-receipt RL processes of consumer returns will be discussed. From the QCA findings of RL literature it was noted that inspection and sorting processes are discussed either as different processes or as one RL process (e.g. inspection/sorting process), often sharing the same characteristics, activities, facilities and parties. This observation is confirmed by El Korchi and Millet (2011:591) who stated that inspection and sorting processes are often linked in the RL process.

However, inspection and sorting processes can include unique characteristics, activities and facilities, which means that they can be regarded as distinct processes in RL. Consequently, these processes are discussed separately in the subsequent sections, starting with the inspection process of consumer returns in section 5.5.1, followed by the sorting process of consumer returns in section 5.5.2. While each process will be described separately, the large overlaps between the parties, facilities, characteristics and activities, warrants a single conceptual framework, which will be presented in section 5.5.3.

5.5.1 Inspection process of consumer returns

In this section, the findings and interpretation of the findings related to the inspection process of consumer returns will be presented and discussed. The categories identified from the QCA of RL literature, included the (1) characteristics of inspection, (2) activities in inspection, (3) facilities used for inspection and (4) parties involved in the inspection process, which will be presented and discussed in subsequent sections, and concluded with a description.

5.5.1.1 Characteristics of the inspection process of consumer returns

The inspection process of consumer returns can involve various characteristics that will be identified and discussed in this section. Table 5.6 provides an overview of the findings related to the *characteristics of the inspection process* of consumer returns, including detail on the characteristics, supporting sources for the characteristics and quotations from the literature.

Table 5.6 Findings related to the characteristics of the inspection process of consumer returns

CHARACTERISTICS	SUPPORTING SOURCES	KEY QUOTATIONS
Important	None	• *"An important component of the reverse logistics process is to accurately evaluate each product returned in order to determine the most optimal disposition option."* (Stock & Mulki, 2009:34) • *"[…] inspection procedure is in effect is an important issue […]."* (Zikopoulos & Tagaras, 2015:437)
Complex	None	• *"[…] inspection […] is innovative and difficult to set up […]."* (El Korchi & Millet, 2011:594) • *"[…] returns inspection is the most complicated function performed at the facility."* (Genchev, 2009:142)
Labour intensive	Narayana *et al.* (2014:395)	• *"[…] inspection […] is labor [sic] intensive […]."* (De Leeuw *et al.* 2016:723)

CHARACTERISTICS	SUPPORTING SOURCES	KEY QUOTATIONS
		• *"[…] based on manual inspection […]."* (Toyasaki *et al.* 2013:1215) • *"Manpower […] for inspection […]."* (Srivastava & Srivastava 2006:529)
Time-consuming	None	• *"[…] inspection […] takes time and all products have to be thoroughly inspected."* (De Leeuw *et al.* 2016:723) • *The inspection […] process requires some […] time."* (Tuzkaya *et al.* 2011:4547)
Requires skilled staff	None	• *"Manpower is skilled for inspection […]."* (Srivastava & Srivastava, 2006:529)
Involves costs	El-Sayed *et al.* (2010:424) Toyasaki *et al.* (2013:1219)	• *"Expected inspection cost […]."* (Lee *et al.* 2012:5619) • *"[…] these include […] inspection and sorting costs […]."* (Kumar *et al.* 2016:4)
Influenced by product and return type, product quality, channel type and return policy	Alshamrani *et al.* (2007:596) Chan *et al.* (2012:1323) El Korchi and Millet (2011:590) Kongar *et al.* (2015:57) Suyabatmaz *et al.* (2014:77) Das and Dutta (2013:722) Prahinski and Kocabasoglu (2006:421) Srivastava and Srivastava (2006:530) Kannan *et al.* (2016:5) Min and Ko (2008:179) Ni *et al.* (2014:312) Niknejad & Petrovic, 2014:143) Suyabatmaz *et al.* (2014:75) Zandieh and Chensebli (2016:6)	• *"[…] consumer electronics or domestic appliances need […] inspection […]."* (Ruiz-Benítez *et al.* 2014:55) • *In the apparel sector, […] most returned products, after a quick visual inspection, can be put back on the shelf and sold again as new products."* (Ruiz-Benítez *et al.* 2014:55) • *"[…] inspection of returns can be handled at the retail level such that false-failure returns may be immediately returned to the shelf for resale."* (Ruiz-Benítez *et al.* 2014:55) • *"[…] all returned products are inspected […] based on their quality."* (Eskandarpour *et al.* 2014:1396) • *"Good quality products require less number of processes in terms of inspection […]."* (Pokharel & Mutha, 2009:176) • *"In the e-tail environment […] the physical inspection of the product necessary to assess appropriateness generally must be delayed until receipt of the goods."* (Mollenkopf *et al.* 2007:224) • *"The quality of retrieved products is also uncertain. They need to be inspected […]."* (Mazahir *et al.* 2011:94) • *"[…] inspecting […] and […] recording any discrepancies with the […] return policy […]."* (Beh *et al.* 2016:12) • *"[…] inspector assigns a disposition code for the return according to predetermined policy […]."* (Genchev, 2009:142)
Linked to CRR and gatekeeping processes	None	• *"[…] customers' requests to return product(s) proves invaluable in the inspection process."* (Genchev, 2009:145) • *"[…] inspection process. The information on […] customer RA request is detailed on a screen."* (Genchev, 2009:145) • *"[…] inspection of the merchandise to confirm the legitimacy of the return (i.e., gatekeeping)."* (Griffis *et al.* 2012:285)
Linked to the collection process	Srivastava and Srivastava (2006:528) Pourmohammadi *et al.* (2008:5) Alumur *et al.* (2012:68) Assavapokee and Wongthatsanekorn (2012:134, 136) Das and Dutta (2013:722) Fattahi and Govindan (2016:6) Kannan (2009:399) Konstantaras *et al.* (2010:452) Mazahir *et al.* (2011:100) Suyabatmaz *et al.* (2014:77) Gu and Tagaras (2014:5157)	• *"Inspection […] is the next stage which may be carried out either at the […] time of collection itself or afterwards."* (Agrawal & Choudhary, 2014:15) • *"[…] returned products are collected […] and quality inspection operation is performed […]."* (Zandieh & Chensebli, 2016:6) • *Products […] are collected and delivered to the facilities for inspection […]."* (Agrawal *et al.* 2015:86) • *"[…] returned products are collected […] and after inspection […]."* (Ghezavati & Beigi, 2016:4)
Linked to the transportation process	Zandieh and Chensebli (2016:6) Suyabatmaz *et al.* (2014:77)	• *"Products are returned […] and are transported for inspection […]."* (Agrawal *et al.* 2015:86) • *"[…] inspection process, where item […] is delivered and […] shipped […]."* (Alamri, 2011:238) • *"[…] transporting the […] used products […] after inspection."* (Gu & Tagaras, 2014:5157)
Linked to the receiving process	García-Rodríguez *et al.* (2013:588) Griffis *et al.* (2012:285) Genchev *et al.* (2011:262) Hsu *et al.* (2009:527)	• *"[…] inspection upon receiving a returned item […]."* (De Leeuw *et al.* 2016:723) • *"[…] in the receiving area, the inspectors tackle the first pallet in line […]."* (Genchev, 2009:142) • *"[…] inspection of the product necessary to assess appropriateness generally must be delayed until receipt of the goods."* (Mollenkopf *et al.* 2007:224)
Linked to processing	Genchev (2009:146)	• *"[…] inspected returns […] are moved to the disposition stage of returns processing."* (García-Rodríguez *et al.* 2013:588) • *"[…] they should undergo a detailed inspection when being processed […]."* (García-Rodríguez *et al.* 2013:588)
Linked to the sorting process	Selvi and Kayar (2016:17) Srivastava and Srivastava (2006:528) Suyabatmaz *et al.* (2014:77) Ruiz-Benítez *et al.* (2014:61) Toyasaki *et al.* (2013:1215) Agrawal et al. (2016a:934) El-Sayed *et al.* (2010:424) Kumar *et al.* (2016:4) Luitel *et al.* (2014:86) Mazahir *et al.* (2011:100) Narayana *et al.* (2014:395)	• *"Inspection/ Sorting is the next stage which may be carried out […]."* (Agrawal & Choudhary, 2014:15) • *"[…] a separate inspection of each item is required for sorting the products."* (Agrawal *et al.* 2015:78) • *"[…] for overall operations such as […] sorting and inspection […]."* (Kongar *et al.* 2015:57) • *"Product inspection is linked to product sorting."* (El Korchi & Millet, 2011:591) • *"[…] processes are performed simultaneously and in parallel to inspection and sorting."* (Konstantaras et al. 2010:452) • *"Inspection […] may encompass […] sorting […]."* (Sasikumar & Kannan, 2008a:160)

CHARACTERISTICS	SUPPORTING SOURCES	KEY QUOTATIONS
	Prakash and Barua (2016b:64)	
Linked to the disposition process/ exit options	Kannan *et al.* (2016:5) Alumur *et al.* (2012:72) Das and Dutta (2012:467) Mazahir *et al.* (2011:100) Pokharel and Mutha (2009:179) Suyabatmaz *et al.* (2014:77) Konstantaras *et al.* (2010:452) Lee *et al.* (2012:5619) Ruiz-Benítez *et al.* (2014:61) Salema *et al.* (2010:339)	• *"[…] inspection process, where item […] is delivered to a primary market and the rest […] are shipped to a secondary market."* (Alamri, 2011:238) • *"[…] used products to the remanufacturer after inspection."* (Gu & Tagaras, 2014:5157) • *"[…] the goods must […] have a certificate of inspection […] and must be destined for direct re-use […] or recovery […]."* (De Oliveira *et al.* 2012:1601) • *"[…] inspection is […] performed […] and related disposition options have to be accounted for […]."* (Genchev, 2009:142) • *"[…] each retailer uses its own systems and processes, inspection and disposition […]."* (Ni *et al.* 2014:312) • *"Product recovery practices on […] inspection […] of reusable parts and their reuse in repairing, refurbishing, or remanufacturing […]."* (Lai *et al.* 2013:110) • *An objective of inspection and disposition is to determine […] an appropriate product recovery strategy."* (Prahinski & Kocabasoglu, 2006:421)

Source: Compiled by the researcher

Table 5.6 shows that the characteristics of the inspection process can be classified as general, requirement and involve characteristics, influenced by characteristics and linked with characteristics. Particularly, the *general characteristics* of the inspection process include (1) important, (2) complex, (3) labour intensive, and (4) time-consuming. The *importance* and *complexity* of inspection stems from the need to determine the quality and condition of the returned product and make the correct disposition decisions (see section 5.5.1.2). Additionally, inspection can be *labour intensive* and *time-consuming* since manual labour is needed to thoroughly inspect each returned product. Consequently, the *requirement characteristic* of the inspection process includes the need for *skilled staff* to effectively perform inspection activities. Moreover, the *involve characteristic* of costs indicates that inspection can be expensive, involving cash outflows in the RL process.

The *influenced by characteristics* of the inspection process include product and return type, product quality, channel type and return policy. Particularly, the *product and return type* and *product quality* can influence the type of inspection activities and degree of inspection needed. For example, unwanted (B2C return) clothes in new condition require quick visual inspections, and defective electronic products require more intensive inspection that can involve product disassembly and testing activities (see section 5.5.1.2). Additionally, the *channel type* can influence the place and time of inspection. For example, multi/omnichannel retailers can use their stores for immediate inspection, but online-only retailers must wait for products to arrive at their facilities, impacting inspection lead time. Furthermore, the return type and quality of the product can be uncertain in online retailing, which can add to the complexity and time-consuming characteristics of inspection. Lastly, the influence of the *return policy* on inspection relate to the activities of verification of information (e.g. ensuring that the return reason given by consumers align with the policy) and disposition decisions (e.g. return policy stipulates that only defective parts of electronic products can be repaired).

Finally, the *linked with characteristics* of the inspection process involve links with all the *pre-receipt RL processes*, including CRR, gatekeeping, collection and transportation, and most *post-receipt RL*

processes, including receiving, processing, inspection, sorting and disposition. The links with pre- and post-receipt RL processes can either relate to information flows or product flows. In terms of information flows, the CRR process plays an important role in the inspection process since consumers provide information regarding the reason for return/condition of the product (see section 4.4.1), which can impact inspection activities. Similarly, the returns merchandise authorisation (RMA) provided during *gatekeeping* is verified during inspection to identify the legitimacy of the product returns (see sections 4.4.2 and 5.5.1.2). Moreover, inspection links with *processing* in terms of providing important information regarding the validity of refund/credit based on inspection outcomes.

Regarding product flows, the link between *collection* and inspection relates to the place or time of inspection. Specifically, inspection can either take place at collection (e.g. the driver visually inspects the product at pickup) or after collection within the facility (performed by official inspectors). Likewise, inspection can link with transportation through the sequence of RL activities, either occurring before transportation to facilities or after transportation in facilities. The link between inspection to *receiving* also showed that inspection can either take place at the time of receipt (such as at the receiving dock) or after receipt (within the facility). As mentioned in the introduction of section 5.5, inspection and sorting can be viewed as one process or can be intricately linked in terms of shared characteristics, activities, facilities and parties, which will be explored in section 5.5.2.

The final product flow link involves a three-fold link between inspection and the *disposition* process. Specifically, inspection can either take place before disposition to identify product quality or at the time of product recovery (e.g. during repairs). Additionally, inspection can link with disposition in terms of the shared activity of disposition decisions. Essentially, all the links with other RL processes and characteristics show that various degrees of inspection can take place at multiple stages in the RL process, emphasising the importance of the inspection process.

In the next section, the findings related to the inspection activities will be discussed.

5.5.1.2 Activities of the inspection process of consumer returns

In this section, the activities of the inspection process will be explored. Table 5.7 provides an overview of the findings related to the *activities of the inspection process of consumer returns*, including details on the activities, supporting sources of the inspection activities and key quotations to support the discussion of the findings.

Table 5.7 Findings related to the activities of the inspection process of consumer returns

ACTIVITIES	SUPPORTING SOURCES	KEY QUOTATIONS
Verification of information	None	• *"The verification process is centered [sic] on comparing this data to the physical condition of the product."* (Genchev, 2009:145) • *"[…] with verification and inspection of the merchandise to confirm the legitimacy of the return […]."* (Griffis *et al.* 2012:285)
Product evaluation and assessment	Agrawal *et al.* (2015:78) Beh *et al.* (2016:12) Genchev (2009:142) Mazahir *et al.* (2011:100) Rogers *et al.* (2012:108) Zikopoulos and Tagaras (2015:436) Suyabatmaz *et al.* (2014:75) Selvi and Kayar (2016:17) Srivastava and Srivastava (2006:530)	• *"[…] the goods […] need to be evaluated […] for their condition […]."* (Jayaraman *et al.* 2008:416) • *"[…] inspection of the product necessary to assess appropriateness […]."* (Mollenkopf *et al.* 2007:224) • *"During the inspection […] employees must determine functionality […] requirements."* (Prahinski & Kocabasoglu, 2006:422) • *"Inspection […] denotes those operations that determine whether a given product is in fact reusable and to what extent."* (Sasikumar & Kannan, 2008a:160) • *"[…] evaluate each product returned in order to determine the most optimal disposition option."* (Stock & Mulki, 2009:34)
Determine disposition/ exit options	Prahinski and Kocabasoglu (2006:421-422) Rogers *et al.* (2012:108) Sasikumar *et al.* (2010:1228) Stock and Mulki (2009:34) Subhashini (2016:9) Suyabatmaz *et al.* (2014:75) Toyasaki *et al.* (2013:1219) Alumur *et al.* (2012:68) Chan *et al.* (2012:1323) Eskandarpour *et al.* (2014:1396) Jayaraman *et al.* (2008:416) Piplani and Saraswat (2012:1426) Ruiz-Benítez *et al.* (2014:55) Zandieh and Chensebli (2016:2) Genchev (2009:145) Sasikumar and Kannan (2008a:160) Orboobadi (2009:834)	• *"Inspection […] for determining the action which recovers the most value from the returned product, and products are disposition accordingly."* (Agrawal *et al.* 2015:86) • *Based on the test results, it is decided whether they are eligible […] for reuse, redistribution, and/ or proper disposal."* (Kongar *et al.* 2015:59) • *"[…] inspecting the condition and […] assigning […] predisposition codes for returns […]."* (Beh *et al.* 2016:12) • *"[…] inspection […] determines the appropriate route that the return should take."* (Niknejad & Petrovic, 2014:143)
Product classification	Zandieh and Chensebli (2016:6) Srivastava and Srivastava (2006:530) Zikopoulos and Tagaras (2015:436) Ayvaz and Bolat (2014:35) Eskandarpour *et al.* (2014:1396)	• *"The inspecting process is mainly used to classify collected items or work-in-process items into reusable items or non-reusable items (out-of-date or severely broken units)."* (Assavapokee & Wongthatsanekorn, 2012:134) • *"[…] inspecting collected products and classifying them into predefined categories […]."* (Assavapokee & Wongthatsanekorn, 2012: 136) • *"[…] the returns are inspected and classified into three groups: scraps, disposal, and reusable parts."* (Tuzkaya & Gülsün, 2008:340) • *"[…] returned products are to be inspected for their quality and then they are segregated in two categories."* (Kannan *et al.* 2016:5) • *"[…] inspection […] result in splitting the flow of used products according to distinct reuse (and disposal) options."* (Sasikumar & Kannan, 2008a:160)
Grading	None	• *"[…] needs for […] grading of return products, addressing uncertainty of return products […]."* (Ayvaz *et al.* 2015:319) • *"Inspection denotes all operations determining whether a given product is in fact re-usable and also grading it."* (Srivastava & Srivastava, 2006:530)
Disassembly	Sasikumar and Kannan (2008a:160) Gu and Tagaras (2014:5155)	• *"The inspected products can be disassembled into components."* (Alumur *et al.* 2012:68) • *"[…] the inspectors […] disassemble it and begin the […] inspection process."* (Genchev, 2009:145) • *"[…] assessing the condition and quality of the product […] begins with the product disassembly."* (Khor & Udin, 2013:74) • *"[…] inspection, disassembly, […] and testing to ensure it meets the desired product standards."* (Östlin *et al.* 2008:336) • *"After disassembly and inspection operations […]."* (Salema *et al.* 2010:339) • *"[…] for establishing returns classifications procedures; complete disassembly […] and visual inspection are […] employed in practice for used products quality evaluation."* (Zikopoulos & Tagaras, 2015:436)
Testing of products	Kongar *et al.* (2015:59) Suyabatmaz *et al.* (2014:75) Zikopoulos and Tagaras (2015:436) Östlin *et al.* (2008:336) Ponce-Cueto *et al.* (2011:108) Toyasaki *et al.* (2013:1219) Zandieh and Chensebli (2016:2)	• *"[…] testing returned product, that can identify the type of activities […] considered."* (Dhib *et al.* 2016:376) • *"[…] needs for testing […] of return products, addressing uncertainty of return products […]."* (Ayvaz *et al.* 2015:319) • *"Those parties would first do testing and inspection on the returned vehicle. If the vehicle is in good condition […]."* (Chan *et al.* 2012:1323) • *"[…] testing […] including electrical and visual inspection of the device and its components."* (Hahler & Fleischmann, 2013:3) • *"Inspection […] may encompass […] testing […]."* (Sasikumar & Kannan, 2008a:160)
Storage	None	• *"Inspection […] may encompass […] storage steps."* (Sasikumar & Kannan, 2008a:160)

Source: Compiled by the researcher

Table 5.7 shows that the only information flow of inspection includes verification of information, while all other activities involve product flows, including product evaluation, determine disposition/exit options, product classification, grading, disassembly, testing and storage. As emphasised in the links between inspection and CRR, gatekeeping and processing (see section 5.5.1.1), inspection involves the *verification of information* to identify the accuracy of information provided by consumers during the CRR and confirming the legitimacy of the returned product needed for return authorisation and issue of a credit/refund. Consequently, inspection can play an important role in online retailing, eliminating unnecessary and fraudulent returns.

The main product flow activities of inspection include product evaluation, disposition decisions and product classification since other activities might be excluded because of the influence of product type and quality on inspection (see section 5.5.1.1). For example, both clothing and electronic products require product evaluation, disposition decisions and classification, but only electronic products will include testing and disassembly assembly activities. As a main inspection activity, *product evaluation* involves the identification of product condition and quality to *determine the* more appropriate *disposition/exit option*. Resultingly, returned products can be *classified* based on the disposition decisions, for example, *reusable* and non-reusable groups. Similarly, the *grading* activity might be present in inspection to classify returned products based on their quality condition (such as high quality, acceptable quality or low quality).

As indicated, *disassembly*[11] and *testing* activities during inspection mostly associate with specific product categories, for example, a faulty cell phone requires disassembly and testing to identify the faulty part (see section 5.5.1.1). Furthermore, testing can be an important part of the main product evaluation activity, facilitating with effective identification of the product condition (i.e. working or in faulty condition). Finally, *storage* might be an important activity in inspection either keeping grouped products in separate spaces or keeping disassembled parts in storage units to prevent loss. In the next section, the facilities used for inspection will be discussed.

5.5.1.3 Facilities used for the inspection process of consumer returns

In this section, the facilities that can be used for the inspection process will be identified. Table 5.8 provides an overview of the findings related to the *facilities used for the inspection process of consumer returns*, including details on the inspection facilities, supporting sources and key quotations to support the discussion of the findings.

[11] Sasikumar and Kannan (2008a:160) described disassembly as a method of splitting a product into parts and components.

Table 5.8 Findings related to the facilities used for the inspection process of consumer returns

FACILITIES	SUPPORTING SOURCES	KEY QUOTATIONS
Retail stores/ collection points	Agrawal and Choudhary (2014:15) Srivastava and Srivastava (2006:530)	• *"[…] initial collection points […] inspection of returned products is carried out during this stage."* (Sasikumar *et al.* 2010:1225) • *"[…] inspection of returns can be handled at the retail level […] may be immediately returned to the shelf for resale."* (Ruiz-Benítez *et al.* 2014:55)
Warehouses	Abraham (2011:218) Konstantaras *et al.* (2010:452-453) Lee *et al.* (2012:5617) Luitel *et al.* (2014:86)	• *"Direct flow to warehouse […] where an inspection is performed to determine their condition."* (Mazahir *et al.* 2011:100)
Collection facilities	Dhib *et al.* (2016:376) Fattahi and Govindan (2016:6) Ghezavati and Beigi (2016:3) Kannan *et al.* (2016:5) Pishvaee *et al.* (2010:270) Pourmohammadi *et al.* (2008:5) Yu and Solvang (2016:4) Zandieh and Chensebli (2016:2)	• *"[…] inspecting […] at dedicated collection centre."* (Luitel *et al.* 2014:86)
Processing facilities	Assavapokee and Wongthatsanekorn (2012:137) Mutha and Pokharel (2009:336)	• *"[…] the central processing facility inspects […] the returns after which they are reintroduced into the marketplace."* (Ruiz-Benítez *et al.* 2014:56)
CRCs	Min *et al.* (2006:58), Ni *et al.* (2014:312) Rogers *et al.* (2012:108) Sasikumar *et al.* (2010:1225)	• *"In the CRCs, the returns are inspected […]."* (Tuzkaya *et al.* 2011:4545)
Inspection centres	Alumur *et al.* (2012:72) Ayvaz and Bolat (2014:35) Ghezavati and Beigi (2016:3) Pishvaee *et al.* (2010:270)	• *"These returned products are collected in specific centers [sic] and quality inspection operation is performed […]. These locations are […] inspection centers [sic] […]."* (Zandieh & Chensebli, 2016:2)
Disassembly facilities	El-Sayed *et al.* (2010:424) Kumar *et al.* (2016:4) Salema *et al.* (2010:339)	• *"[…] used products are […] shipped to disassembly centers [sic] where inspection, sorting, and disassembly operations are performed."* (Aras *et al.* 2008:1224)
Repair facilities	Ko and Evans (2007:350)	• *"[…] repair facilities where returned products […] were inspected […]."* (Min & Ko, 2008:176)

Source: Compiled by the researcher

Table 5.8 shows that the inspection process involves various facilities, which can be classified as (1) traditional FL facilities, (2) RL facilities and (3) recovery facilities. The *traditional FL facilities* used for inspection include retail stores (used as collection points in multi/omnichannel retailing) and warehouses, which emphasise the influence of channel type on inspection locations. Evidently, multi/omnichannel retailers can use their *stores* for inspection, while online-only retailers must use their facilities, like *warehouses*, for returned product inspection. Additionally, using warehouses for inspection demonstrates that online retailers can choose to perform RL processes in the same facilities used for forward operations.

Alternatively, *RL process facilities* can be used for inspection, including collection facilities, processing facilities, CRCs, inspection and disassembly facilities, which can demonstrate various inspection characteristics and activities. Using *collection facilities* and *processing facilities* for inspection demonstrates the links between inspection and collection and inspection and processing processes. The use of *CRCs* (specialised return facilities) and dedicated *inspection facilities* for inspection, emphasise the inspection characteristics of complexity, importance and need for skilled/trained staff (see section 5.5.1.1). Furthermore, using *disassembly facilities* for inspection, emphasise the disassembly and testing activities in inspection (see section 5.5.1.2).

Finally, using *recovery facilities*, like *repair facilities*, for inspection emphasise the links between

inspection and disposition processes and the inspection activities, involving disposition decisions, and disassembly and testing (also activities in repair discussed in section 5.6.3).

In the next section, the final category in inspection, namely the parties, will be presented and discussed.

5.5.1.4 Parties associated with the inspection process of consumer returns

In this section, the various parties involved in the inspection process will be explored. Table 5.9 provides an overview of the findings related to the *parties associated with the inspection process of consumer returns*, including details on the parties, sources to support the identified parties and key quotations to support the discussion of the findings.

Table 5.9 Findings related to the parties in the inspection process of consumer returns

PARTIES	SUPPORTING SOURCES	KEY QUOTATIONS
Consumers	Orboobadi (2009:834)	• *"The electronic profile […] following customers' requests to return product(s) proves invaluable in the inspection process."* (Genchev, 2009:145) • *"[…] customers return their used products […] which are located nearer to them. The inspection of returned products is carried out during this stage."* (Sasikumar *et al.* 2010:1225)
Retailers	Ni *et al.* (2014:312, 313) Ruiz-Benítez *et al.* (2014:55) Stock and Mulki (2009:53)	• *"[…] retailer […] recover the value from a returned product […] after inspection […]."* (Chen & Chen, 2015:3) • *"[…] online retailers […] are involved in […] verifying and inspecting the merchandise […]."* (Griffis *et al.* 2012:287) • *"Once customers return the products to retailers, they are shipped to a location for inspection."* (Orboobadi 2009:834)
Staff/department	Assavapokee and Wongthatsanekorn (2012:136) Sasikumar *et al.* (2010:1228)	• *"[…] returns inspection is the most complicated […] and related disposition options have to be accounted for by returns inspectors."* (Genchev, 2009:142) • *"The electronic profile created by customer service […] proves invaluable in the inspection process."* (Genchev, 2009:145) • *"[…] stations or physical locations are set up in the facility handling the product returns where personnel evaluate each item being returned."* (Stock & Mulki, 2009:34)
Third parties	Agarwal *et al.* (2016:5) Bai and Sarkis (2013:313) Kannan (2009:399) Prakash and Barua (2016a:70) Mazahir *et al.* (2011:100)	• *"The 3PRL partner has to deal with […] activities like […] inspection […]."* (Prakash & Barua, 2016b:64) • *"3PL's […] operations […] where the inspection […] is held […] of the products that are recoverable."* (Suyabatmaz *et al.* 2014:77) • *"The 4PL […] putting more efforts in […] quality inspection […]."* (Mukhopadhyay & Setaputra, 2006:725)

Source: Compiled by the researcher

Table 5.9 shows the parties associated with inspection include consumers, retailers, staff/departments and third parties. *Consumers* can play secondary roles in the inspection process by providing information during the CRR process that must be verified in during inspection, reemphasising the link between inspection and CRR. Additionally, consumers can act as suppliers by taking used products to locations that perform return product inspection.

Retailers can play both primary and secondary roles in the inspection process. As a primary role, retailers conduct inspection internally at any locations, and as a secondary role, retailers can send returned products to other facilities (such as CRCs) for inspection. Playing a secondary role indicates that retailers can either outsource the inspection process or send consumer product returns to suppliers for inspection. Likewise, the s*taff/departments* of retailers can play both primary and

secondary roles in the inspection process. Particularly, *inspectors* (dedicated inspection staff) play primary roles, responsible for main inspection activities (e.g. product evaluation, disposition decisions, testing and grading). Contrastingly, customer service staff can play secondary roles in capturing CRR information to be verified during inspection.

Finally, *third parties*, including 3PL, 3PRL and 4PL providers, can play direct roles, performing inspection activities on behalf of the retailer. Using third parties to conduct inspection, emphasise the complexity and importance of inspection (see section 5.5.1.1). The next section concludes the inspection process of consumer returns with a description.

5.5.1.5 Description of the inspection process of consumer returns

Based on the findings presented in section 5.5.1, inspection can be an important post-receipt RL process of consumer returns, and will be described as follows:

> The inspection process of consumer returns can be described as an important, complex, labour-intensive and time-consuming RL process, which (1) requires skilled/trained staff, (2) involves costs, (3) can be influenced by product and return type, product quality, channel type and return policy, and (4) can be linked with other pre- and post-receipt RL processes, especially sorting. The activities of the inspection process involve the (1) information flow activity of verification of information provided by consumers/customer service department, and (2) product flow activities of product evaluation, determining disposition/exit options, product classification, grading, disassembly, testing and storage, which can be performed by the inspectors of the online retailer and/or 3P(R)L or 4PL providers in traditional FL facilities (such as warehouses), RL process facilities (CRCs and collection, processing, inspection and disassembly facilities) or recovery facilities (such as repair facilities).

The conceptual framework that relates to the description of inspection, will be illustrated in section 5.5.3. In the next section, the findings related to the sorting process in RL will be presented and discussed.

5.5.2 Sorting process of consumer returns

In this section, the findings and interpretation of the findings related to the sorting process of consumer returns will be presented and discussed. The categories identified from the QCA of RL literature, included the (1) characteristics of sorting, (2) activities in sorting, (3) facilities used for sorting and (4) parties involved in the sorting process, which will be presented and discussed in subsequent sections, and concluded with a description.

5.5.2.1 Characteristics of the sorting process of consumer returns

In this section the characteristics of sorting will be discussed. Table 5.10 provides an overview of the findings related to the *characteristics of the sorting process of consumer returns*, including detail on the characteristics, sources to support the characteristics and key quotations to support the discussion of the findings.

Table 5.10 Findings related to the characteristics of the sorting process of consumer returns

CHARACTERISTICS	SUPPORTING SOURCES	KEY QUOTATIONS
Important and complex process	None	• *"Sorting […] is a crucial step in the reverse logistics process because employees make decisions on what ultimately happens to the returned product."* (Agrawal & Choudhary, 2014:15) • *"[…] sorting […] is innovative and difficult to set up […]."* (El Korchi & Millet, 2011:594)
Labour intensive	Bai and Sarkis (2013:308) De Leeuw *et al.* (2016:723) Narayana *et al.* (2014:395) Srivastava and Srivastava (2006:529)	• *"[…] the most labor [sic] intensive process […] is the manual sorting […]."* (Hsu *et al.* 2009:519)
Time-consuming	De Leeuw *et al.* (2016:723) Hsu *et al.* (2009:519)	• *"It is also time-consuming to perform the sorting."* (Sundin & Dunbäck, 2013:6)
Requires skilled/trained staff	None	• *"Manpower is skilled for […] sorting […]."* (Srivastava & Srivastava, 2006:529) • *"[…] sorting […] must be properly done and […] personnel should be informed and educated, so that money not wasted […]."* (Subhashini, 2016:2) • *"[…] experienced/trained sorters […]."* (Hsu *et al.* 2009:523)
Involves costs	El-Sayed *et al.* (2010:424) Toyasaki *et al.* (2013:1219)	• *"[…] these include […] sorting costs […]."* (Kumar *et al.* 2016:4) • *"[...] retailer incurs a unit reverse logistics cost [...] for sorting [...]."* (Alptekinoglu & Grasas, 2014:879)
Influenced by product type and characteristics	Abraham (2011:224) Rogers *et al.* (2012:111)	• *"[…] sort […] activity […] separate different product categories (e.g., fashion and consumer electronics […]."* (Asdecker, 2015:3) • *"[…] sorted […] based on their specific physical characteristics such as weight, size, shape, density, […]."* (De Oliveira *et al.* 2012:1604)
Influenced by product quality, condition and return type	El Korchi and Millet (2011:590) Gu and Tagaras (2014:5156) Kongar *et al.* (2015:57) Lhafiane *et al.* (2015a:1830) Rogers *et al.* (2012:111) Suyabatmaz *et al.* (2014:75, 77)	• *"The quality or condition of returned products […] is required for sorting the products into different categories."* (Agrawal *et al.* 2016a:934) • *"[...] by taking into consideration return quality, which is related to sorting […]."* (Ayvaz & Bolat, 2014:33) • *"[…] some products in bad condition are sorted in a longer time […]."* (Kara & Onut, 2010:718) • *"In order to decrease or even eliminate the uncertainty associated with returns quality, […] may establish a sorting operation [...]."* (Zikopoulos & Tagaras, 2015:438) • *"[…] can be classified […] into categories […] defective merchandise […] end-of-life merchandise […]."* (Hsu *et al.* 2009:519) • *"[…] damaged merchandise […] for this is the manual sorting that takes place […]."* (Hsu *et al.* 2009:525) • *"[…] sorting for […] warranty returns."* (Janse et al. 2010:510)
Linked to the gatekeeping process	Lhafiane *et al.* (2015b:399)	• *"[…] must then examine the item in view of deciding how to treat it […] to undertake a cross-verification […] given at gatekeeping."* (Lambert *et al.* 2011:562)
Linked to the collection process	Agrawal *et al.* (2015:86) Agrawal *et al.* (2016b:93) Kara and Onut (2010:718) Luitel *et al.* (2014:86) Srivastava and Srivastava (2006:528) Suyabatmaz *et al.* (2014:77)	• *"[…] Sorting […] may be carried out either at the point/ time of collection itself or afterwards."* (Agrawal & Choudhary, 2014:15) • *"Used items are collected from customers and brought to a warehouse facility where […] sorting […] occurs."* (Konstantaras *et al.* 2010: 453) • *"[…] returned product is collected […] for sorting […]."* (Baker & Zabinsky, 2008:252) • *"The collector is responsible not only for collecting but also for sorting […]."* (Gu & Tagaras, 2014:5169)
Linked to the transportation process	Chari *et al.* (2016:2) Silva *et al.* (2013:379) Stock and Mulki (2009:41) Suyabatmaz *et al.* (2014:77) Tuzkaya and Gülsün (2008:346)	• *"After used products […] are shipped […] sorting, and disassembly operations are performed."* (Aras *et al.* 2008:1224) • *"[…] returned product is […] transported […] for sorting […]."* (Barker & Zabinsky, 2008:252) • *"The transportation […] in sorting activities […]."* (Hsueh & Lin, 2015:164) • *"[…] are sorted […] and then shipped to their next destination."* (Jayaraman *et al.* 2008:416) • *"Some of them are sorted […] and then transported […]."* (Kara & Onut, 2010:718) • *"The initial sorting […] must be properly done […] so that money not wasted on unnecessary transportation."* (Subhashini, 2016:2)
Linked to the receiving process	De Leeuw *et al.* (2016:723) Li and Olorunniwo (2008:382) Shaik and Abdul-Kader (2014:97)	• *"[...] receives returns [...] and [...] sorts […] products […]."* (Zuluaga *et al.* 2016:2) • *"A preliminary sorting first occurs upon reception of the returned product […]."* (Lambert *et al.* 2011:568-570)
Linked to the processing process	Agrawal and Choudhary (2014:15) Baker and Zabinsky (2008:252) Jayaraman *et al.* (2008:416) Shaik and Abdul-Kader (2014:97) Suyabatmaz *et al.* (2014:75)	• *"[…] sorted into specific product categories before promoted for processing."* (Achillas *et al.* 2010:2594) • *"[…] sort […] activity prepares the efficient processing of incoming items."* (Asdecker, 2015:3) • *"[…] initial sorting and by making decisions on processing […]."* (Stock & Mulki, 2009:53) • *"[…] the products are sorted, processed and shipped to their next destination."* (Tuzkaya & Gülsün, 2008:346)
Linked to the inspection process	Abraham (2011:218) Agrawal *et al.* (2016b:93) De Leeuw *et al.* (2016:723) De Oliveira *et al.* (2012:1604) El-Sayed *et al.* (2010:424) Ghezavati and Beigi (2016:4)	• *"[...] include [....] inspection and sorting [...]."* (Kumar *et al.* 2016:4) • *Inspection/ Sorting is the next stage which may be carried out […]."* (Agrawal & Choudhary, 2014:15) • *"[…] inspection of each item is required for sorting the products into different categories."* (Agrawal *et al.* 2016a:934) • *"[…] where inspection, sorting, and disassembly operations are performed."* (Aras *et*

CHARACTERISTICS	SUPPORTING SOURCES	KEY QUOTATIONS
	Kongar *et al.* (2015:57) Konstantaras *et al.* (2010:452-453) Lhafiane *et el.* (2015a:1827) Lieckens and Vandaele (2012:24) Luitel *et al.* (2014:86) Mazahir *et al.* (2011:100) Narayana *et al.* (2014:395) Pishvaee *et al.* (2010:270) Prakash and Barua (2016b:64) Ruiz-Benítez *et al.* (2014:61) Selvi and Kayar (2016:17) Srivastava and Srivastava (2006:528) Stock and Mulki (2009:41) Suyabatmaz *et al.* (2014:77) Toyasaki *et al.* (2013:1215) Zandieh and Chensebli (2016:6)	*al.* 2008:1224) • *"Detailed sorting […] the company may decide what to do with the product, be it subject to inspection […]."* (Lambert *et al.* 2011:562) • *"Product inspection is linked to product sorting."* (El Korchi & Millet, 2011: 591) • *"[…] where returned products are inspected for quality failure, sorted for potential repair […]."* (Min *et al.* 2006:58)
Linked to the disposition process	Abraham (2011:224) Agrawal and Choudhary (2014:15) Agrawal *et al.* (2016b:93) Das and Duta (2012:470) El Korchi and Millet (2011:590) Fehr and Santos (2013:291) Ghezavati and Beigi (2016:4) Li and Olorunniwo (2008:384) Min and Ko (2008:179) Shaik and Abdul-Kader (2014:97) Stock and Mulki (2009:41) Suyabatmaz *et al.* (2014:75, 77) Zikopoulos and Tagaras (2015:436) Zuluaga *et al.* (2016:2)	• *"The goods are sorted […] based on typical recovery strategies as follows: direct reuse, reprocessing, and final disposal."* (Silva *et al.* 2013:379) • *"[…] sorting and disposition – activities that evaluate the condition of the returned goods […]."* (Jayaraman *et al.* 2008:411) • *"[…] sort the products that can be directly re-shelved from those that need to undergo further recovery operations (that is repackaging and/or refurbishment)."* (Ruiz-Benítez *et al.* 2014:61) • *"Used items are collected from customers and brought to a warehouse facility where […] sorting and refurbishing occurs."* (Konstantaras *et al.* 2010:452-453) • *"[…] the sorting […] have to be completed before dispositioning."* (Rogers *et al.* 2012:111)
Linked to the redistribution process	None	• *"[…] the sorted products are redistributed […]."* (Suyabatmaz *et al.* 2014:75) • *"A reverse distribution center [sic] [...] sorts […] products […] until they are […] sent to a secondary channel."* (Zuluaga *et al.* 2016:2)

Source: Compiled by the researcher

Table 5.10 shows that, like the inspection process, the characteristics of the sorting process can be classified as general, requirement and involve characteristics, influenced by characteristics and linked with characteristics. Particularly, the *general characteristics* of the sorting process include *important, complex*, *labour-intensive* and *time-consuming*. The *importance* and *complexity* of sorting stems from the need to determine the appropriate outcome of the returned product. Additionally, sorting can be *labour intensive* and *time-consuming* since manual labour is needed to sort returned products effectively. Consequently, the *requirement characteristic* of the sorting process includes the need for *skilled/trained staff* to effectively perform sorting activities and avoid unnecessary and costly mistakes (e.g. sorting a new/unused product into the destinated for recovery group). Evidently, the *involve characteristic* of costs demonstrate that the sorting process can be costly and involve cash outflows in the RL process.

The *influenced by characteristics* of the sorting process include product type, characteristic, quality and condition and return type, which associate with the physical sorting of products into groups. For example, clothing and electronic products will be sorted into separate groups, products of the same weight and size will be sorted into the same group, high-quality and low-quality products will be sorted into separate groups, and defective products (from defective or warranty returns) and new/unused products (from unwanted returns) will be sorted into separate groups. Subsequently, the

influenced by characteristics of sorting emphasise the importance, complexity, labour intensive, time consuming and skilled staff characteristics of sorting.

Finally, the *linked with characteristics* of the sorting process involve links with most *pre-receipt RL processes*, including gatekeeping, collection and transportation, and all *post-receipt RL processes*, including receiving, processing, inspection, disposition and redistribution. Particularly, the links between sorting and other RL processes can be explained by (1) flows, (2) related/shared activities, (3) related/shared facilities and parties, and (4) occurring more than once, during or at the same time as other RL processes. Specifically, the link between sorting and the *gatekeeping process* involves information flows and the related activity of verification of information. The link between sorting and the *collection process* involves products flows, shared parties (e.g. collectors performing sorting activities), shared facilities/locations (e.g. collection points/facilities) and sorting occurring at the time of collection or after collection. The link between sorting and the *transportation proces*s relates to product flows and the transportation/shipment of returned products, which can occur (1) before sorting (e.g. a damaged product transported from the consumer to the warehouse for sorting) or (2) after sorting (e.g. damaged product sorted into the repair group for transportation to a repair facility).

The link between sorting and the *receiving process* involves product flows and preliminary sorting taking place at the receiving dock of a facility (see section 5.3) and taking place after receiving within a facility. Furthermore, the link between sorting and the *processing process* involves product flows with sorting occurring before processing (e.g. preliminary sorting at the receiving dock) and after processing in the facility. Alternatively, organisations might opt to perform sorting activities before issuing refunds. Apart from the shared activity of verification of information that involves information flows, the links between sorting and the *inspection process* involves product flows, relating to shared activities (e.g. product classification) and sorting occurring before or directly after inspection. Additionally, sorting and the inspection process share several characteristics, facilities and parties, explaining the view that sorting and inspection can represent a single RL process. The links between sorting and inspection will further be explored in the subsequent sections and shared conceptual framework presented in section 5.5.3.

The link between sorting and the *disposition process* involves product flows and relates to (1) disposition decisions and product classification as sorting activities (e.g. sorting products according to disposition/exit option) and (2) sorting occurring before disposition. Similarly, the link between sorting and the *redistribution process* involves product flows and relates to the sorting activity of classifying products according to exit options (e.g. sell in the secondary market) and sorting taking place in a redistribution facility, before redistribution (to the secondary market). In the next section, the activities of sorting will be discussed.

5.5.2.2 Activities of the sorting process of consumer returns

In this section, some of the activities associated with the sorting process of consumer returns will be examined. Table 5.11 provides an overview of the findings related to the *activities of the sorting process of consumer returns*, including details on the sorting activities, supporting literature and key quotations to support the discussion of the findings.

Table 5.11 Findings related to the activities of the sorting process of consumer returns

ACTIVITIES	SUPPORTING SOURCES	KEY QUOTATIONS
Verification of information	Lhafiane *et al*. (2015b:399)	• *"[…] must then examine the item in view of deciding how to treat it […] to undertake a cross-verification […] given at gatekeeping."* (Lambert *et al*. 2011:562)
Updating information on systems	None	• *"The sorters' decisions on the levels of damages/desirability are an essential […] the sorting information is constantly updated to the database […]."* (Hsu *et al*. 2009:523)
Product evaluation	Shaik and Abdul-Kader (2014:97) Suyabatmaz *et al.* (2014:75) Zikopoulos and Tagaras (2015:438)	• *"[...] sorting [...] activities that evaluate the condition of the returned goods […]."* (Jayaraman *et al*. 2008:411) • *"[…] must then examine the item in view of deciding how to treat it."* (Lambert *et al*. 2011:562) • *"[…] analysing [sic] the returned products quality, during the sorting process […]."* (Lhafiane *et al*. 2015a:1830)
Determine disposition/exit options	Abraham (2011:218) Agrawal, *et al.* (2015:86) De Oliveira *et al.* (2012:1604) Konstantaras *et al.* (2010:452) Min and Ko (2008:179) Rogers *et al.* (2012:108) Silva *et al.* (2013:379) Beh *et al.* (2016:6) Daaboul *et al.* (2014:3) De Oliveira *et al.* (2012:1604) Shaik and Abdul-Kader (2014:97) Hsu *et al.* (2009:523) Suyabatmaz *et al.* (2014:75) Lhafiane *et al.* (2015b:397; 399)	• *"[...] sorting [...] determine the most appropriate mode of disposition i.e. reuse, recycle or remanufacture."* (Jayaraman *et al*. 2008:411) • *"Sorting […] refers to deciding what to do with each product […] that will be […] sold or disposed. It is a crucial step in the reverse logistics process because employees make decisions on what ultimately happens to the returned product."* (Agrawal & Choudhary, 2014:19) • *"[…] sorted […] and a disposition decision is made."* (Rogers *et al*. 2012:111) • *Detailed sorting […] decides the fate of each returned item."* (Lambert *et al*. 2011:562) • *"[…] the sorting process […] must […] identify the treatment option."* (Lhafiane *et al*. 2015a:1830)
Product classification and grouping	Agrawal and Choudhary (2014:19) Agrawal *et al.* (2015:77) Agrawal *et al.* (2016b:93) Agrawal *et al.* (2016c:41) Agrawal et al. (2016a:934) Asdecker (2015:3) Chan *et al.* (2012:1329) Kinobe *et al.* (2015:89) Li and Olorunniwo (2008:384) Shaik and Abdul-Kader (2014:97) El Korchi and Millet (2011:590) Gu and Tagaras (2014:5156) Pishvaee *et al.* (2010:270) Tan and Kumar (2006:339) Zandieh and Chensebli (2016:6) Hsu *et al.* (2009:519) Konstantaras *et al.* (2010:452) Zikopoulos and Tagaras (2015:436)	• *"[…] classification is simply a sorting process."* (Shi *et al*. 2012:219) • *"[…] grouping of the collected products based on subsequent operations […]."* (De Oliveira *et al*. 2012:1604) • *"[…] they are divided into recoverable products and scrapped products."* (Ghezavati & Beigi, 2016:4) • *"[…] sorted into specific product categories […]."* (Achillas *et al*. 2010:2594) • *"[…] sort the goods according to potential sale value […]."* (Abraham, 2011:218)
Separation	Kinobe *et al.* (2015:83) Fehr and Santos (2013:291)	• *"Sortation and separation can make RL activities very labor [sic] intensive […]."* (Bai & Sarkis, 2013:308) • *"[…] separation and sorting are conducted."* (Bing *et al*. 2014:128) • *"Typical sorting processes include […] separation […]."* (De Oliveira *et al*. 2012:1593)
Storing	Agrawal and Choudhary (2014:19) Chan *et al.* (2012:1329)	• *"Sorting and storing […] each product […]."* (Shaik & Abdul-Kader, 2014:97) • *"[…] returned products […] sorted for potential repair […] stored long enough to create volume for freight consolidation."* (Min & Ko, 2008:179) • *"[...] most sorting processes happen during storage."* (Zhou *et al*. 2007:64) • *"[...] sorts and keeps products in stock until they are assigned and sent to a secondary channel."* (Zuluaga *et al*. 2016:2)
Moving products	None	• *"The sorting processes take up the majority of time in moving the returned product through the reverse logistics process."* (Hsu *et al*. 2009:523)

Source: Compiled by the researcher

Table 5.11 shows that sorting includes the (1) information flow activities of verification of information and updating sorting information, and (2) product flow activities of product evaluation, determine disposition/exit options, product classification and grouping, separation, storage and movement. Evidently, the sorting and inspection process share several activities, including verification of information, product evaluation, determine disposition option, product classification and storage, which reemphasise the intricate link between sorting and inspection.

However, if inspection and sorting take place separately, some shared activities might be excluded from inspection and sorting. For example, if the inspection involves the *information flow activity* of *verification of information* to confirm the accuracy of information captured during gatekeeping, sorting might exclude verification of information. Nonetheless, the unique sorting activity of *updating sorting information* on a database illustrates that sorting involve information flows in the RL process.

Similarly, for the *product flow activities,* sorting might exclude product evaluation if inspection was conducted, and inspection might exclude product classification if sorting is conducted. Alternatively, the product type and condition might dictate the required activities in each process. For example, a defective electronic product requires full product evaluation performed by the inspector and a new/unused clothing item requires quick visual *evaluation* performed by the sorter, reemphasising the influence of product type, condition and return type on both inspection and sorting processes.

Nevertheless, the dominant activities in the sorting process involve *determining the disposition/exit options* and *classifying* and *grouping products* according to their disposition/exit options (e.g. return to stock, repair and destroy). Consequently, the sorting process involves *separation* of products, for example, separating unused clothes from used clothes, which emphasise the labour-intensive characteristic of sorting. In terms of *storage,* sorted products might be stored for a period before disposition or until sufficient products can be consolidated for cost-effective transportation, emphasising the link between sorting and transportation processes. Finally, *product movement* relates to the transfer of products to and from the sorting areas in the facility (e.g. from inspection to sorting and from sorting to storage) and movement of products during sorting (e.g. while grouping and separating products). Consequently, both storage and product movement activities emphasise that sorting can be a time-consuming process that predominantly involves product flows (see section 5.5.2.1).

In the next section, the findings related to the facilities used for sorting will be presented and discussed.

5.5.2.3 Facilities used for the sorting process of consumer returns

Several facilities can be used for the sorting process in RL, which will be identified and discussed in the rest of the section. Table 5.12 provides an overview of the findings related to *the sorting process of consumer returns*, including details on the sorting facilities, supporting literature and key quotations to support the discussion of the findings.

Table 5.12 Findings related to the facilites used for the sorting process of consumer returns

FACILITIES	SUPPORTING SOURCES	KEY QUOTATIONS
Stores or collection points	Agrawal and Choudhary (2014:15)	• *"Sorting may be carried out either at collection points […]."* (Srivastava & Srivastava, 2006:528) • *"[…] sorting takes place at the store […]."* (Hsu *et al.* 2009:523)
Warehouses	Luitel *et al.* (2014:86)	• *"Used items are […] brought to a warehouse facility where sorting […] occurs."* (Konstantaras *et al.* 2010:452-453)
Collection facilities	Baker and Zabinsky (2008:254) Kara and Onut (2010:718) Luitel *et al.* (2014:86) Subhashini (2016:9) Toyasaki *et al.* (2013:1219)	• *"[…] returned products are sorted in the collection center [sic] […]."* (Alshamsi & Diabat, 2015:590) • *"[…] products are sorted […] at […] the collection site […]."* (Baker & Zabinsky, 2011:560) • *"Sorting may be carried out […] at collection […] facilities […]."* (Srivastava & Srivastava, 2006:528)
Inspection centres	Ghezavati and Beigi (2016:3)	• *"[…] sorting […] in inspection centers [sic] […]."* (Ayvaz & Bolat, 2014:33)
Centralised return centre (CRC)	Baker and Zabinsky (2011:560) Min *et al.* (2006:58) Rogers *et al.* (2012:111) Tuzkaya and Gülsün (2008:346)	• *"[…] returned product is […] transported to a central facility for sorting […]."* (Baker & Zabinsky, 2008:252) • *"[…] the manual sorting that takes place once the merchandise reaches the CRC."* (Hsu *et al.* 2009:525) • *"Once a product is returned to the retailer, it should be sent to a centralised return centre (CRC) where they are sorted […]."* (Jayaraman *et al.* 2008:417)
Processing facilities	None	• *"[…] processing facility, where employees […] sort these products into different categories […]."* (Li & Olorunniwo, 2008:384) • *"[…] processing centers [sic] […] are responsible for […] sorting […]."* (Lu & Bostel, 2007:301-302)
Disassembly facilities	El-Sayed *et al.* (2010:424)	• *"[…] used products are […] shipped to disassembly centers [sic] where […] sorting […] operations are performed."* (Aras *et al.* 2008:1224) • *"Disassembly locations [...] include [....] sorting [...]."* (Kumar *et al.* 2016:4)
Refurbish facilities	None	• *"Sorting […] take place at the refurbishing site."* (Gu & Tagaras, 2014:5156)
Redistribution facilities	None	• *"A reverse distribution center [sic] [...] receives returns [...] and [...] sorts […] products […]."* (Zuluaga *et al.* 2016:2)

Source: Compiled by the researcher

Table 5.12 shows that the sorting process involves various facilities, which can be classified as (1) traditional FL facilities, (2) RL facilities, (3) recovery facilities and (4) exit facilities. Like inspection, the *traditional FL facilities* used for sorting include retail stores (used as collection points) and warehouses, implying that the channel type (influenced by characteristic of inspection) might also influence the sorting process.

Additionally, sorting involves the same *RL process facilities* used for inspection, including collection facilities, processing facilities, CRCs, inspection and disassembly facilities, which not only demonstrate the links between sorting and inspection but sorting and other processes. For example, using *collection facilities* and *processing facilities* for sorting establishes the links between sorting and collection and sorting and processing processes. Moreover, the use of *CRCs* and dedicated *inspection facilities* for sorting, emphasise the complexity and skilled/trained staff characteristics of sorting. Additionally, using *disassembly facilities* for sorting, demonstrates the possibility of sorting

product parts after disassembly (inspection activity), for example, separating defective and non-defective parts of electronic products.

In terms of *recovery facilities*, sorting can take place at *refurbishment facilities*, which demonstrate that sorting can occur at the disposition point, emphasising the link between the sorting and disposition process. Finally, sorting associate with *redistribution facilities* as *exit facilities* in the RL process, which emphasises the link with sorting and the redistribution process. Subsequently, the facilities that can be used for sorting shows that sorting can take place at various stages in the RL process, from initial facilities (e.g. collection points) to exit facilities, indicating the importance of sorting as post-receipt RL process of consumer returns.

In the next section, the parties involved in the sorting process will be discussed.

5.5.2.4 Parties associated with the sorting process of consumer returns

In this section, the parties involved with the sorting process of consumer returns will be explored. Table 5.13 provides an overview of the findings related to the *parties associated with the sorting process of consumer returns*, including details on the sorting parties, supporting literature sources and key quotations to support the discussion of the findings.

Table 5.13 Findings related to the parties involved in the sorting process of consumer returns

PARTIES	SUPPORTING SOURCES	KEY QUOTATIONS
Consumers	None	• *"[…] from customers […] products […] are sorted […]."* (Kara & Onut, 2010:718) • *"Used items are collected from customers and brought to a warehouse facility where […] sorting […] occurs."* (Konstantaras *et al.* 2010:453)
Retailers	Cardoso *et al.* (2013:445) Stock and Mulki (2009:53)	• *"[...] retailer incurs a unit reverse logistics cost [...] for sorting [...]."* (Alptekinoglu & Grasas, 2014:879) • *Once a product is returned to the retailer, it should be […] sorted […]."* (Jayaraman *et al.* 2008:411)
Staff	Kinobe *et al.* (2015:83) Li and Olorunniwo (2008:384)	• *"The sorter […] responsible for sorting activities."* (Daaboul *et al.* 2014:4) • *The sorting processes take up the majority of time in moving the returned product […] by well-managed […] experienced/trained sorters […]."* (Hsu *et al.* 2009:523) • *"The sorters' decisions on the levels of damages/desirability are an essential stepping stone of the whole reverse logistics process."* (Hsu *et al.* 2009:523) • *"Sorting […] is a crucial step in the reverse logistics process because employees make decisions on what ultimately happens to the returned product."* (Agrawal & Choudhary, 2014:19) • *"[…] employees doing the sorting […]."* (Wilcox *et al.* 2011:88) • *"[…] sorting […] must be properly done […] so the store personnel should be informed and educated […]."* (Subhashini, 2016:2)
Third parties	Prakash and Barua (2016b:64)	• *"[…] traders sort the goods […]."* (Abraham, 2011:218) • *3PRL provider […] carries out the […] sorting […]."* (Agarwal *et al.* 2016:5) • *"The collector is responsible not only for collecting but also for sorting […]."* (Gu & Tagaras, 2014:5169) • *"3PL's […] operations […] where inspection/sorting is held, consolidation of the products that are recoverable."* (Suyabatmaz *et al.* 2014:77)

Source: Compiled by the researcher

Table 5.13 shows the parties associated with sorting include consumers, retailers, staff and third parties. *Consumers* can play secondary roles in sorting by taking used products to locations that perform sorting activities. Since sorting can involve verification of information captured during

gatekeeping (see section 5.5.2.2), consumers can play indirect roles by providing the verifiable information.

Retailers mostly play primary roles in the sorting process, which involve providing facilities for sorting, employing staff to physical sort returned products and incurring sorting costs, emphasising the sorting characteristic of involving costs. Particularly, retailers can employ specialised *staff*, like *sorters*, who play primary roles in the sorting process by performing sorting activities, like grouping products into appropriate categories for disposition. Using specialised sorting staff in the sorting process proves the importance, complexity and skilled/trained staff characteristics of sorting (see section 5.5.2.1). However, retailers might use *standard employees* (e.g. store staff of multichannel retailers) for basic sorting activities (e.g. separating, moving and storage).

Otherwise, retailers might play secondary roles by choosing to outsource the sorting process to *third parties*, like *3P(R)L providers* to perform sorting activities on their behalf. The possibility of using specialised third parties for sorting reconfirms the importance, complexity and skills requirement (characteristics) in sorting. However, other third parties, like *traders* (buyers of used products from retailers), can perform sorting activities (also see section 5.6.5.3), illustrating the link between the sorting and disposition process. The next section concludes the sorting process of consumer returns with a description.

5.5.2.5 Description of the sorting process of consumer returns

Based on the findings presented in section 5.5.2, sorting can be an important post-receipt RL process of consumer returns, and will be described as follows:

> The sorting process of consumer returns can be described as an important, complex, labour-intensive and time-consuming RL process, which (1) requires skilled/trained staff, (2) involves costs, (3) can be influenced by product type, characteristics, condition and quality, and return type, and (4) can be linked with other pre- and post-receipt RL processes, especially inspection. The activities of the sorting process involve the (1) information flow activities of verification of information from gatekeeping and updating sorting information, and (2) product flow activities of product evaluation, determining disposition/exit options, product classification and grouping, separation, storage and movement, which can be performed by sorters (or other staff) of the online retailer and/or 3P(R)L providers in traditional FL facilities (such as warehouses), RL processes facilities (such as CRCs and collection, processing, inspection and disassembly facilities), recovery facilities (such as refurbishment facilities) and exit facilities (such as redistribution facilities).

In the next section, the conceptual framework related to this description will be provided.

5.5.3 Conceptual framework of the inspection and sorting processes of consumer returns

From the discussions in section 5.5, the strong association between the inspection and sorting processes was established. While inspection and sorting involve unique elements, most characteristics, activities, facilities, parties and flows correspond. Accordingly, Figure 5.6 provides a

conceptual framework of the inspection and sorting processes in RL that may apply to consumer returns in online retailing. Particularly, the framework provides an overview of the inspection and sorting processes of consumer returns, illustrating the parties, facilities, flows, characteristics and activities. Specifically, the framework demonstrates the two specialised parties in the inspection and sorting processes, with the inspector representing the inspection process (all turquoise blocks) and the sorter representing the sorting process (all purple blocks). The shared partes, facilities, activities and characteristics are represented through turquoise/purple gradients. Subsequently, consumers, online retailers, third parties, FL and RL facilities and recovery/exit facilities can be involved in both processes. Furthermore, both inspection and sorting involve cash flows (shared characteristic of costs), information flows (shared characteristic of gatekeeping and activity of verification) and product flows (with various shared activities and characteristics) as well as share characteristics unrelated to the flows. Finally, the framework distinguishes between inspection and sorting, illustrating the unique characteristics and activities (inspection turquoise and sorting purple). Clearly, the framework reaffirms the interrelatedness of the inspection and sorting processes of consumer returns.

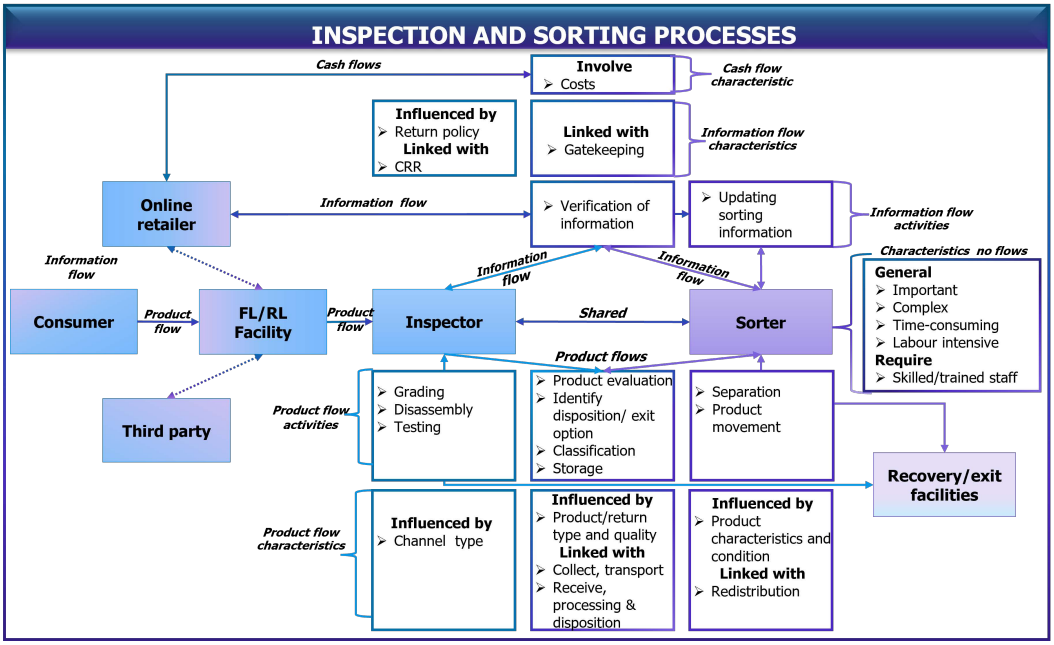


Figure 5.6 Conceptual framework of the inspection and sorting processes
Source: Compiled by the researcher

In the next section, the disposition process will be discussed and analysed.

5.6 DISPOSITION PROCESS OF CONSUMER RETURNS

In this section, the findings and interpretation of the findings related to the disposition process of consumer returns will be presented and discussed. The disposition process is not only the most widely discussed processes in literature (see Figure 5.3) but also include important outcomes. Due to

the vastness of content on the disposition process several subcategories were included in the coding framework for the QCA of RL literature (see Appendix A.2). Figure 5.7 provides an overview of the distribution of the subcategories of the disposition process based on the results of the QCA of RL literature (see Appendix C.3 for quantitative results), including general disposition processes and various disposition/exit options discussed in this section.

Figure 5.7 shows a distribution of the subcategories in the disposition process derived from code frequencies (number of quotations assigned to subcategories for the disposition process) of the QCA of RL literature. The pie chart clearly shows that most content on the disposition process is mostly evenly distributed, with refurbishment (27%) receiving the most attention, followed by repair (23%), general disposition process (19%) and exit options (18%). Reuse received the least attention in the content (13%), implying that more research can be conducted on reuse as a disposition option for consumer returns.

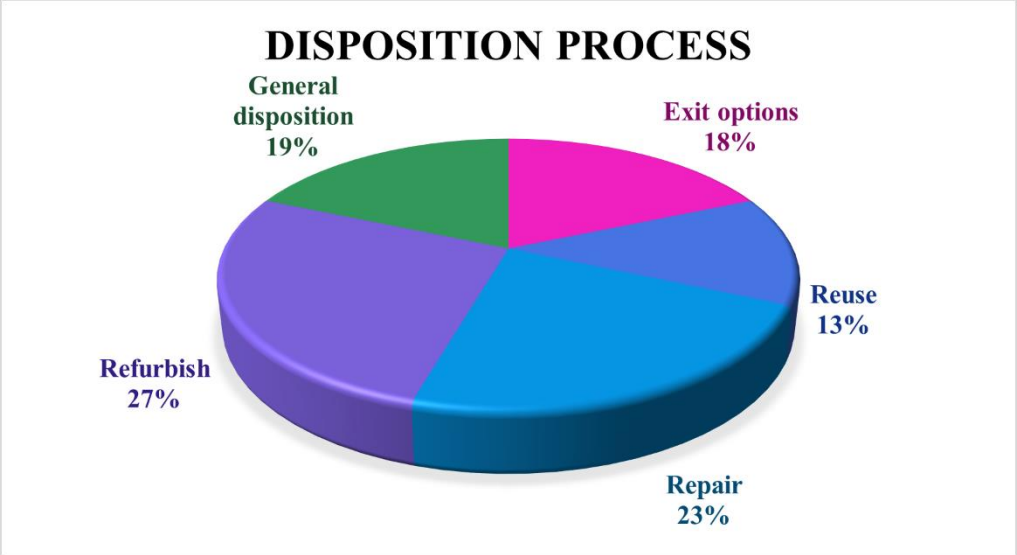


Figure 5.7 Distribution of disposition processes
Source: Compiled by the researcher

In the subsequent sections, the qualitative findings for each disposition process subcategory will be provided, including general disposition process, direct reuse, repair and refurbishment as disposition options[12], and exit options in the disposition process. While each disposition and exit option contains a description and conceptual framework, this section concludes with an overall description of the disposition process and conceptual framework for disposition as a post-receipt RL process of consumer returns.

[12] In section 4.2. a demarcation for the post-receipt RL processes was given, mentioning that only reuse, repair, refurbishment and several exit options were included in the findings. While other disposition options, like reconditioning, remanufacturing, recycling and disposal, can be possible, these options were excluded since they fall outside the scope of this study.

5.6.1 General disposition process of consumer returns

In this section the findings related to the disposition process in general will be given. Several categories were identified from the QCA of RL literature related to the disposition process, which included the (1) characteristics of disposition, (2) activities in disposition, (3) facilities used for disposition, (4) parties in disposition, and (5) outcomes of disposition. These categories of the disposition process will be presented and discussed in subsequent sections.

5.6.1.1 General characteristics of the disposition process of consumer returns

In this section, the findings related to the characteristics of the disposition process will be presented and discussed. Table 5.14 provides an overview of the findings related to these *general characteristics of the disposition process of consumer returns*, including detail on the characteristics, supporting literature sources and key quotations to support the discussion of the findings.

Table 5.14 Findings related to the general characteristics of the disposition process

CHARACTERISTICS	SUPPORTING SOURCES	KEY QUOTATIONS
Important process	None	• *"[…] the important decisions is to disposition returned products […]."* (Agrawal *et al.* 2016b:93) • *"[…] final disposition […] were highlighted as critical."* (Bernon *et al.* 2011:491) • *"[…] disposition of the product is essential."* (Dowlatshahi, 2010a:1374)
Complex process	Min *et al.* (2006:57) Rogers *et al.* (2013:47)	• *"This complexity stems from a high degree of uncertainty due to […] the variety of disposition options […]."* (Dhib *et al.* 2016:373) • *"[…] the complex decision-making process of final disposition […]."* (Jayaraman *et al.* 2008:418) • *"Understanding the […] difficulty of dispositioning […]."* (Rogers *et al.* 2012:115)
Time-consuming	Badenhorst and van Zyl (2015:157)	• *"[…] consume a lot of time […] in the decision of the right disposition mode […]."* (Jayaraman *et al.* 2008:416) • *"Regardless of their disposition, the process can take considerable time."* (Ruiz-Benítez *et al.* 2014:55)
Requires resources	Khor and Udin (2013:71, 74)	• *"[…] disposition options all require significant resources […]."* (Skinner *et al.* 2008:518)
Requires technology	Srivastava and Srivastava (2006:530)	• *"[…] technology for the […] disposition."* (Jayaraman *et al.* 2008:413) • *"[…] software […] suggests an appropriate disposition method for the product."* (Subhashini, 2016:9) • *"ERP must also track the disposition of the returned items and coordinate various activities."* (Jayaraman *et al.* 2008:418)
Involves costs	Beh *et al.* (2016:19) Hsu *et al.* (2009:521) Rogers *et al.* (2013:47) Shaik and Abdul-Kader (2014:97)	• *"[…] returns handling as it has a direct impact on […] disposition costs."* (Asdecker, 2015:11) • *"[…] money spent on determining the most suitable disposition option […]."* (Badenhorst & Van Zyl, 2015:157) • *"Costly product returns process especially in the disposition […] process."* (Shaharudin *et al.* 2015:229) • *"[…] determine the disposition mode up-front thereby minimising the costs of transportation […]."* (Jayaraman *et al.* 2008: 417) • *"Understanding the cost and difficulty of dispositioning […]."* (Rogers *et al.* 2012:115) • *"[…] disposition […] involves […] investment."* (Srivastava & Srivastava, 2006:530)
Involves options/ alternatives	Agrawal *et al.* (2015:77) Agrawal *et al.* (2016b:93) Dhib *et al.* (2016:373) Keh *et al.* (2012:27) Khor *et al.* (2016:97) Sharma *et al.* (2016:409) Hazen *et al.* (2012: 260) Rogers *et al.* (2013:47) Srivastava (2008:547) Srivastava and Srivastava (2006:530)	• *"[…] product disposition options (repair, recondition, remanufacture, recycle and disposal)."* (Khor & Udin, 2013:74) • *"This disposition process includes options ranging from simply reusing the product to properly disposing of the product."* (Hazen *et al.* 2012:245) • *"[…] a number of options are available as to disposition, i.e. what is done with the returned product."* (Skinner *et al.* 2008:523) • *"With returned product, a wide range of disposition options is available […]."* (Rogers *et al.* 2012:108)
Involves routes, channels, destinations and markets	Agrawal *et al.* (2016b:98) Bernon and Cullen (2007:52, 54) Daaboul *et al.* (2014:2, 3)	• *"The process of "final disposition" refers to the exit route returned products finally take."* (Bernon *et al.* 2011:492) • *"The goods are […] routed based on typical recovery strategies […]."* (Silva *et al.*

CHARACTERISTICS	SUPPORTING SOURCES	KEY QUOTATIONS
	Govindan *et al.* (2015:603) Hazen *et al.* (2012:259) Lambert *et al.* (2011:562) Lhafiane *et al.* (2015a:1827) Rogers *et al.* (2013:46) Shaik and Abdul-Kader (2014:97) Stock and Mulki (2009:42)	2013:379) • *"In the last instance, the product is […] disposed of in an alternative channel."* (De Leeuw *et al.* 2016:716) • *"In […] disposition […] the product enters the reverse value channel […]."* (Jayaraman *et al.* 2008:411) • *"[…] disposition is the sending of the products to the desired destination."* (Beh *et al.* 2016:6) • *"[…] disposition […] such as moving product to the secondary market […]."* (Rogers *et al.* 2012:107) • *"[…] all the returned goods are resold in primary or seconds' market after necessary disposition."* (Srivastava, 2008:540)
Influenced by industry/ organisation and product type	Agrawal *et al.* (2015:77) Shaik and Abdul-Kader (2014:97)	• *"[…] product disposition […] are industry […] specific."* (Khor & Udin, 2013:73) • *"[…] case of apparel and fashion […] reuse […] plays the major role […]."* (Beh *et al.* 2016:6) • *"[…] product design […] are associated with reverse logistics product disposition options."* (Khor & Udin, 2013:74) • *"[…] computers, mobile phones, and cameras […] for after-sale repair services."* (Li *et al.* 2016:223)
Influenced by return type/reason, product condition, quality and characteristics	Prahinski and Kocabasoglu (2006:421) Rogers *et al.* (2013:47) Srivastava and Srivastava (2006:525)	• *"[…] the defective product return […] for final disposition determination."* (Janse *et al.* 2010:511) • *"[…] the reason for return […] can determine the disposition mode […]."* (Jayaraman *et al.* 2008:417) • *"[…] these consumer returns call for an efficient disposition […]."* (Reimann, 2016:32) • *"[…] product disposition […] where decision-making highly depends on conservable value in used products."* (Khor & Udin, 2013:73) • *"[…] recovery to allow reuse […] based on functionality of products […]."* (Khor *et al.* 2016:97) • *"Depending on item […] quality, […] product can be dispositioned […]."* (Rogers *et al.* 2012:111) • *"The disposition strategy […] have more stringent requirements for the condition of the product upon customer return."* (Skinner *et al.* 2008:521) • *"Many of the items returned to the company were still in their original, unopened packaging and thus could be placed directly back into inventory."* (Stock & Mulki, 2009:48-49) • *"[…] disposition options are often […] product-specific, and depend upon the characteristics of the product, such as, price and/or value, cost to transport, product shelf life, and market demand patterns."* (Shaik & Abdul-Kader, 2014:97)
Influenced by return policies	Skinner *et al.* (2008:521)	• *"[…] product according to its returns policies […] facilitate the […] disposition process."* (De Leeuw *et al.* 2016:715) • *"[…] disposition […] and the importance of the returns policy […]."* (Skinner *et al.* 2008:520) • *"The disposition […] must correlate with its returns policy."* (Shaik & Abdul-Kader, 2014:97)
Linked to gatekeeping	Griffis *et al.* (2012:287)	• *"[…] the company verifies whether the consumer is entitled to return the product according to its returns policies […] to manage returns flows and facilitate the […] disposition process."* (De Leeuw *et al.* 2016:715) • *"[…] return material authorisation (RMA) […] for returns authorisation and disposition."* (Jayaraman *et al.* 2008:415)
Linked to collection	Alumur *et al.* (2012:68) Kinobe *et al.* (2015:89) Presley *et al.* (2007:4607) Skinner *et al.* (2008:523) Jayaraman (2006:983)	• *"[…] collection of returned products […] and disposition them […]."* (Agrawal *et al.*, 2016b:93) • *"[…] from the point of collection to the disposition destination."* (Jayaraman *et al.* 2008:411) • *"Collection […] and disposition decision of collected return products […]."* (Prakash & Barua, 2016b:70)
Linked to transportation	Bernon and Cullen (2007:55)	• *"[…] activities required to physically move the goods […] to the disposition destination."* (Jayaraman *et al.* 2008:411) • *"[…] transfer of the item for final disposition determination."* (Janse *et al.* 2010:511) • *"This was through […] transportation and disposition."* (Kinobe *et al.* 2015:89) • *"[…] dispositions where the product is shipped […]."* (Rogers *et al.* 2013:46)
Linked to receiving	Janse *et al.* (2010:511)	• *"[…] receiving the return […] and […] determining disposition […]."* (Griffis *et al.* 2012:287) • *"[…] receive […] incoming merchandise and then […] disposition of that item."* (Hsu *et al.* 2009:527)
Linked to processing	Agrawal *et al.* (2016c:42) Ferguson *et al.* (2011:777) Genchev (2009:146) Prahinski and Kocabasoglu (2006:422) Genchev *et al.* (2011:255) Lambert *et al.* (2011:570) Sharma *et al.* (2016:409) Srivastava (2008:548) Srivastava and Srivastava (2006:530) Stock and Mulki (2009:48)	• *"[…] next step is to take disposition decision for further processing."* (Agrawal *et al.* 2015:78) • *"[…] returns handling as it has a direct impact on administrative, processing, and disposition […]."* (Asdecker, 2015:11) • *"[…] processing […] and subsequent product disposition."* (Beh *et al.* 2016:19) • *"[…] processing these returns […] and […] determining disposition […]."* (Griffis *et al.* 2012:287) • *"[…] determine the disposition mode up-front thereby minimising […] processing time […]."* (Jayaraman *et al.* 2008:417) • *"Reprocessing includes the options such as repair, refurbishing […]."* • *"[…] determining disposition and authorizing [sic] the refund for the customer."* (Griffis *et al.* 2012:287)

CHARACTERISTICS	SUPPORTING SOURCES	KEY QUOTATIONS
Linked to inspection	Agrawal *et al.* (2015:78) Griffis *et al.* (2012:287) Hsu *et al.* (2009:527) Agrawal *et al.* (2016b:93) Xiao *et al.* (2010:176) Ni *et al.* (2014:312) Prakash and Barua (2016b:70)	• *"[…] the products are inspected and […] next step is to take decision for their disposition."* (Agrawal *et a*l. 2016a:934) • *"Once the products are inspected, next step is to disposition them."* (Agrawal *et al.* 2016c:42) • *"During the inspection and disposition process […]."* (Prahinski & Kocabasoglu, 2006:422)
Linked to sorting	Bernon and Cullen (2007:54) Jayaraman *et al.* (2008:413) Rogers *et al.* (2012:111) Prakash and Barua (2016a:70)	• *"[…] sorting out into different categories, and disposition them […]."* (Agrawal *et al.* 2016b:93) • *"[…] the products are […] sorted out, next step is to take decision for their disposition."* (Agrawal *et al.* 2016a:934) • *"[…] sorting and grading of product have to be completed before dispositioning […]."* (Rogers *et al.* 2012:111)
Linked to redistribution	Rogers *et al.* (2013:46)	• *"These options are return to the seller, reuse of the product (which includes resell, redistribution […]."* (Badenhorst & Van Zyl, 2015:147)

Source: Compiled by the researcher

Table 5.14 shows that the disposition process can involve various characteristics, which can be classified as (1) general characteristics, (2) requirement characteristics, (3) involvement characteristics, (4) influenced by characteristics and (5) linked with characteristics. These characteristics will be briefly discussed in the subsequent paragraphs.

The *general characteristics* of the disposition process include *important, complicated* and *time-consuming.* The *importance* of disposition relates to correct disposition decisions, which can result in beneficial outcomes (such as profits and cost-savings). The *complexity* of disposition can be attributed to various disposition options, correct disposition decision-making and high degree of uncertainty associated with product returns. Similarly, disposition decisions and disposition operations (such as performing repair) can be *time-consuming*. The *requirement characteristics* of the disposition process include resources and technology. Particularly, *resources* are needed to perform product recovery disposition options, like repair and refurbishment operations (sections 5.6.3 and 5.6.4). Additionally, the disposition process requires *technology* for (1) effective disposition decision-making, (2) tracking product recovery progress, and (3) recovery operations, which emphasise the resources requirements in the disposition process.

The *involvement* characteristics of the disposition process include costs, options/alternatives, routes, channels, destinations and markets. Linking with the resources and technology requirements, disposition *costs* can be attributed to (1) logistics costs (e.g. handling and transportation costs), (2) disposition decisions process, and (3) investments (resources) to perform recovery operations. Accordingly, the disposition process involves various *options/alternatives* related to disposition decisions (e.g. direct reuse, repair and refurbishment) for the recovery of value from returned products, emphasising the importance and complexity of disposition. Similarly, the routes, channels, destinations and markets associate with the disposition options, with the (1) *routes* representing the paths of the returned/recovered products, (2) *channels* specifying the type of SC for the returned/recovered product, which can include primary and secondary (or even tertiary) channels, (3)

destinations representing the recovery locations (e.g. repair facility) or market locations (e.g. factory stores), and (4) *markets* relating to the reselling of recovered products (such as a refurbished television) on the primary market or secondary markets. Essentially, in the disposition process products can be routed (directed) towards various destinations necessary to recapture value from the returned product.

The *influenced by characteristics* of the disposition process include industry/organisation and product type, return types/reasons, product condition, quality and characteristics and return policies. The influence of the *industry/organisation* on disposition can be demonstrated through the different disposition options, for example, the apparel industry might be more appropriate for direct reuse, minor repairs and selling on secondary markets, while the electronics industry might be more appropriate for repair and refurbishment. Similarly, *product type, return type/reasons* (see section 4.3) and *product condition* play a role in the chosen disposition options, for example, new/unused unwanted fashion items (such as dresses and scarves) can be reused/resold, while defective electronic products (such as computers and cameras) might need repair or refurbishment. Likewise, lower *quality* products might be resold as scrap and higher quality might be repaired/refurbished. Additionally, various *product characteristics,* including product design, price, value, transportation costs, perishability and market demand can influence the disposition process, reconfirming the complexity of the disposition process. Lastly, the *returns policy* of a retailer can influence disposition decisions and facilitate the disposition process. For example, a return policy specify that only defective products are allowed, which limit disposition decisions to repair, refurbishment or selling to third parties.

Finally, the *linked with characteristics* of the disposition process involve links with most *pre-receipt RL processes,* including gatekeeping, collection and transportation, and all *post-receipt RL processes,* including receiving, processing, inspection, sorting and redistribution. The links with pre- and post-receipt RL processes can either relate to information flows, cash flows or product flows. In terms of *information flows,* the link between disposition and *gatekeeping* can associate with return authorisation and the captured reasons of returns that may guide disposition decision-making (e.g. warranty return must be shipped to the supplier).

Regarding *product flows,* the link between disposition and *collection* relates to the sequence of RL processes, for example, product returns must first be collected from consumers before disposition can take place. Additionally, the link between disposition and *transportation* mostly associates with disposition taking place at various facilities, reconfirming the involvement characteristic of destinations. Similarly, the link between disposition and the *receiving* process associates with the

sequence of RL processes and facilities used for disposition. Evidently, receiving must take place at facilities before disposition can be conducted within the facilities.

The link between disposition and *processing* involves *information, product and cash flows*. For example, the processing activity of pre-disposition decisions (see section 5.4) can provide important information to determine the final disposition option. Additionally, the product flow link between disposition and processing associates with the sequence of RL processes, with processing either taking place before disposition or after disposition. Evidently, if disposition takes place before processing, determining the disposition option can trigger the processing activity of issuing a refund, which represents cash flows.

Continuing with the *product flows*, the links between the disposition and *inspection* and *sorting* processes associate with inspection/sorting activities of determining disposition/exit options, taking take place before disposition because the condition of the returned product must first be determined during inspection (see section 5.5.1) and sorted into disposition option categories during sorting (see section 5.5.2). Finally, the link between *redistribution* and disposition processes is emphasised through the routes, destinations and markets associated with disposition, since redistribution involve transportation of returned/recovered products to the markets.

In the next section, the activities of disposition will be discussed.

5.6.1.2 General activities of the disposition process of consumer returns

In this section, the general activities associated with the disposition process applicable to consumer returns will be identified. Table 5.15 provides an overview of the findings related to the *general activities of the disposition process of consumer returns*, including details on the activities, supporting literature sources of the activities and key quotations to support the discussion of the findings.

Table 5.15 Findings related to the general activities of the disposition process

ACTIVITIES	SUPPORTING SOURCES	KEY QUOTATIONS
Administration	Asdecker (2015:11)	• *"[…] administrative process […] facilitate the screening and disposition process."* (De Leeuw *et al.* 2016:715) • *"[…] predisposition codes for returns; and […] the documentation."* (Beh *et al.* 2016:12) • *"[…] appropriate disposition method for […] less paperwork […]."* (Subhashini, 2016:9)
Communication and scanning	None	• *"[…] communication […] for disposition […]."* (Hsu et al. 2009:526) • *"Items are scanned and a disposition decision is made."* (Rogers *et al.* 2012:108)
Product examination/ evaluation	Asdecker (2015:3) Rogers *et al.* 2013:42)	• *"[…] must examine each item and decide its best disposition."* (Rogers *et al.* 2012:114) • *"[…] disposition involves evaluating the product to determine the most appropriate disposition."* (Khor & Udin, 2013:72) • *"[…] disposition is to determine the level of quality of a returned product […]."* (Prahinski & Kocabasoglu, 2006:421, 422) • *"[…] disposition process, employees must determine functionality […]."* (Prahinski & Kocabasoglu, 2006:421, 422)
Disposition decisions	Agrawal *et al.* (2015: 78) Asdecker (2015:3)	• *"[…] is to take decision for their disposition."* (Agrawal *et al*. 2016a:934) • *"[…] disposal depending on the decision taken to either recapture value or dispose of it."* (Agrawal

ACTIVITIES	SUPPORTING SOURCES	KEY QUOTATIONS
	Badenhorst and van Zyl (2015:157) Ferguson *et al.* (2011:777) Jayaraman *et al.* (2008:415) Prakash and Barua (2016a:70) Prakash and Barua (2016b:70) Rogers *et al.* (2012:107) Jayaraman *et al.* (2008:416) Genchev (2009:146) Srivastava and Srivastava (2006:525; 530) Rogers *et al.* (2012: 108, 114) Rogers *et al.* (2013:42)	*et al.* 2015:77) • *"One of the important decisions is to disposition returned products appropriately […]."* (Agrawal *et al.* 2016b:93) • *"Disposition option: The decision about what is to be done next to the accepted returns."* (Srivastava, 2008:547) • *"….] different decisions are undertaken including […] disposing of some used parts."* (Govindan *et al.* 2015:603) • *"[…] figure out the most profitable disposition of that item."* (Hsu *et al.* 2009:527) • *"[…] the complex decision-making process of final disposition […]."* (Jayaraman *et al.* 2008:418) • *"[…] disposition involves evaluating the product to determine the most appropriate disposition."* (Khor & Udin, 2013:72) • *"[…] decision is made to retrieve product within the supply chain, a number of options are available as to disposition […]."* (Skinner *et al.* 2008:523
Repackaging	De Leeuw *et al.* (2016:716) Hsu *et al.* (2016:95)	• *"[…] new packaging […] these costs are referred to as disposition costs."* (Asdecker, 2015:2) • *"[…] disposition […] and repackaging."* (Shaik & Abdul-Kader, 2014:97) • *"[…] disposition […] returned product may be […] repackage and sell as new […]."* (Rogers *et al.* 2012:115) • *"[…] product disposition is handled […] by repackaging […]."* (Stock & Mulki, 2009:41, 42)
Restocking / return to inventory	Bernon *et al.* (2016:589) Genchev *et al.* (2011:254)	• *"[…] disposition […] the product […] can be put into stock […]."* (De Leeuw *et al.* 2016:716) • *"[…] product disposition […] send a portion of their products directly to inventory […]."* (Stock & Mulki, 2009:42)
Testing, disassembly, sorting and cleaning	None	• *"Product recovery includes performance testing, sorting, cleaning […]."* (Das & Dutta, 2013:724) • *"[…] disassembly is necessary to harvest valuable inventories from every product disposition options […]."* (Khor & Udin, 2013:71)
Replacement and upgrade	None	• *"Product recovery includes […] replacing components as necessary, and, in some cases, upgrading the product […]."* (Das & Dutta, 2013:724)
Storage	None	• *"Disposition—putting the product back into inventory or temporary storage […]."* (Stock & Mulki, 2009:41, 42)
Handling	None	• *"[…] returned products would mainly be handled in one of three different ways. These are direct reuse, product recovery and waste handling"* (Chan *et al.* 2012:1323) • *"[…] handling and disposition of goods returned from the customer."* (Skinner *et al.* 2008:518)
Reselling	Badenhorst and Van Zyl (2015:147) Govindan *et al.* (2015:603) Rogers *et al.* (2012:108, 115) Sharif *et al.* (2012:2517) Khor *et al.* (2016:97) Srivastava (2008:540)	• *"[…] disposition alternative […] reuse and resell as new; or repair or refurbish and resell […]."* (Agrawal *et al.* 2016b:93) • *"[…] disposition […] the product is fit for resale and […] the product can be made fit for resale after rework […]."* (De Leeuw *et al.* 2016:716) • *"[…] selling through the secondary market to a disposition […]."* (Rogers *et al.* 2012:112) • *"The first disposition (sell directly without rework) […]."* (Srivastava & Srivastava, 2006:530) • *"[…] recovery rates for its returned products […] the item can be resold."* (Stock & Mulki, 2009:48)

Source: Compiled by the researcher

Table 5.15, shows that the activities of the disposition process can be classified as information flow, product flow and cash flow activities. The *information flow* activities of the disposition process involve administration, scanning and communication. Particularly, *administration* activities of disposition involve paperwork, assigning disposition codes on the system and documentation that can facilitate the disposition process. For example, sending a product for repairs to another facility with accompanied documentation with important information (e.g. type of return and product condition). Accordingly, disposition involves *communication* between parties involved in the disposition process, which can be important for information sharing. Lastly, *scanning* can associate with the registering the returned/recovered product at every facility, emphasising the link between disposition and the receiving process (scanning of products at receipt). Consequently, the information flow activities in the disposition process emphasise the technology requirement characteristic of disposition (section 5.6.1.1).

Various *product flow* activities exist in the disposition process, including product evaluation/examination, disposition decisions, restocking or return to inventory, testing, disassembly,

sorting, cleaning, replacement, upgrade, storage, handling and repackaging. *Product evaluation* emphasise the disposition characteristics associated with product quality and condition and links between disposition and inspection and sorting processes (see section 5.6.1.1). While product evaluation can occur at inspection/sorting to verify gatekeeping information and determine disposition options, product evaluation in the disposition process can involve recovery operations (e.g. identify faulty part for repair). Although various RL processes can involve identification of disposition options, one of the most common activities of the disposition process involves *disposition decisions.* Evidently, the disposition process finalise the envisaged disposition/exit options determined in other post-receipt RL processes, ensuring that the most value can be recovered from the product. Since disposition decision-making is strategic in nature, the disposition practices related to effective disposition decisions will be explored in section 6.6.

Some product flow activities in the disposition process can associate with specific disposition options. For example, the direct reuse option involves *repackaging* and *restocking/return to inventory* (see section 5.6.2), repair can involve *testing, disassembly, sorting* and *cleaning* (see section 5.6.3) and refurbishment can involve *upgrading* and *replacement* (see section 5.6.4). *Storage* can either be related to the returning of returned/repackaged products to stock or temporarily store products before shipment to various facilities/locations. Lastly, product *handling* in disposition emphasises all the other product flow activities, where products are handled during restocking, disassembly, testing, repackaging and storage, amongst others.

Finally, the *cash flow* activity of disposition involves *reselling,* which represents the ultimate purpose of disposition. Reselling can take place, (1) directly after the return of unused/new products, (2) after recovery (repair or refurbishment), or (3) when choosing the exit options of selling on secondary markets or to third parties (see section 5.6.5).

In the next section, the facilities used for the disposition process will be discussed.

5.6.1.3 General facilities/locations used for the disposition process of consumer returns

In this section, the findings related to the facilities used for the disposition process will be presented and discussed. The findings in this section only focus on the facilities mentioned specifically when authors describe the disposition process, excluding some potential facilities associated with specific disposition options. Therefore, the facilities discussed in this section provide a basis for the types of facilities that can be used for disposition in general.

Table 5.16 provides an overview of the findings related to the *general facilities of the disposition process of consumer returns*, including details on the facilities, sources to support the mentioned facilities and key quotations to support the discussion of the findings.

Table 5.16 Findings related to the general facilities/locations used for the disposition process

FACILITIES	SUPPORTING SOURCES	KEY QUOTATIONS
Stores	None	• *"[…] disposition […] can be extended to many other types of retail store […]."* (Beh *et al*. 2016:6) • *"Disposition can also be done in stores […]."* (De Leeuw *et al*. 2016:716) • *"[…] disposition, such as a factory outlet store […]."* (Rogers *et al*. 2012:112)
Collection facilities	Srivastava (2008:547)	• *"The first disposition (sell directly without rework) is carried out at collection centers [sic]."* (Srivastava & Srivastava, 2006:530)
CRCs	None	• *"Product disposition may take place in a central facility, after which it is put in central stock […]."* (De Leeuw *et al*. 2016:716) • *"[…] merchandise can all be disposed of […] by the CRC."* (Hsu *et al*. 2009:521) • *"CRC […] in the complex decision-making process of final disposition of the returned product."* (Jayaraman *et al*. 2008:418) • *"[…] the various dispositions leaving the CRC […]."* (Rogers *et al*. 2012:111)
Processing facilities	None	• *"[…] processing centre […] to determine the most appropriate disposition."* (Khor & Udin, 2013:72)
Repair and refurbishment facilities	None	• *"There are two types of such centers [sic] depending upon the disposition decision […] repair and refurbish center[sic] […]."* (Srivastava & Srivastava, 2006:530)

Source: Compiled by the researcher

Table 5.16 shows the facilities used for the disposition process can include stores, RL process facilities and recovery facilities. *Stores* represent locations in the disposition process, which can be used by multi/omnichannel retailers to return new/unused products to stock for reselling through primary channels or can be used for selling products in secondary markets (e.g. factory stores). Regardless, stores emphasise the disposition activity of reselling returned products for value recovery.

The RL process facilities associated with disposition include collection facilities, CRCs, and processing facilities. *Collection facilities* can associate with the direct reuse option for returned products that can be resold as new, which emphasise the link between the disposition and collection process. *CRCs* as dedicate RL facilities can (1) employ direct reuse (put new/unused returned products to stock), (2) make disposition decisions, and (3) route returned products to other facilities for recovery. *Processing facilities* associate with disposition decision-making, which may involve return to stock or routing of products to other facilities for recovery.

The *recovery facilities* in the disposition process include *repair facilities* and *refurbishment facilities*, which associate with specific disposition options. Accordingly, a repair facility specialises in repair operations and a refurbishment facility specialises in refurbishment. The functions of the recovery facilities will be explored in sections 5.6.3 and 5.6.4.

In the next section, the parties involved in the disposition process will be discussed.

5.6.1.4 General parties involved in the disposition process of consumer returns

Disposition involves a variety of parties, which will be identified in this section. Table 5.17 provides an overview of the findings related to the *general parties involved in the disposition process of consumer returns*, including details on the parties, sources to support the mentioned parties and key quotations to support the discussion of the findings.

Table 5.17 Findings related to the general parties in the disposition process

PARTIES	SUPPORTING SOURCES	KEY QUOTATIONS
Consumers	Griffis *et al.* (2012:287) Kabir (2013:96) Khor and Udin (2013:72) Skinner *et al.* (2008:518) Xiao *et al.* (2010:173) Rogers *et al.* (2013:47)	• *"[…] the consumer is entitled to return the product […] and facilitate the screening and disposition process."* (De Leeuw *et al.* 2016:715) • *"[…] customers' input be vital in providing complete solutions from initiation to disposition of returned products […]."* (Genchev, 2009:147) • *"[…] different decisions are undertaken […] to resale them to […] to first customers."* (Govindan *et al.* 2015:603) • *"[…] key component of the RL disposition […] is customer behaviour [sic] […].* (Hazen *et al.* 2012:260) • *"[…] the role of customers is critical to determining which RL disposition option to employ […]."* (Hazen *et al.* 2012:260) • *"Products must be obtained from the end-user […] for final disposition."* (Jayaraman, 2006:983) • *"[…] consumer returns call for an efficient disposition […]."* (Reimann, 2016:32) • *"Consumers expect to trade in an old product […] as per the most appropriate disposition […]."* (Srivastava & Srivastava, 2006:525)
Retailers	Reimann (2016:50) Rogers *et al.* (2012:113; 114) Beh *et al.* (2016:6; 9) Hsu *et al.* (2009:526) Xiao *et al.* (2010:176)	• *"[…] retailers must bear […] disposition costs."* (Asdecker, 2015:2) • *"[…] retailers […] manage final product dispositioning effectively."* (Bernon & Cullen, 2007:54) • *"[…] retailers have several choices, including resell […]."* (Sharif *et al.* 2012:2517) • *"[…] the retailer is fully in charge of the disposition of the returned product […]."* (Ruiz-Benitez & Muriel, 2014:574) • *"[…] online retailers […] are involved in […] determining disposition […]."* (Griffis *et al.* 2012:287) • *"Because each retailer uses its own […] disposition […]."* (Ni *et al.* 2014:312) • *"[…] retailers should consider outsourcing recovery, refurbishing, or disposition activities."* (Rogers *et al.* 2012:111) • *"[…] retailer's first choice of disposition is to return the items for full credit back to the supplier."* (Rogers *et al.* 2013:42, 46) • *"Some of the product may enter the secondary market through […] value retailers […]."* (Rogers *et al.* 2013:42, 46) • *"Being close to the point-of-sale, retailers have more disposition options […]."* (Stock & Mulki, 2009:48)
Staff	None	• *"Disposition can also be […] that the store clerk can restock the product immediately if it is fit for resale […]."* (De Leeuw *et al.* (2016:716) • *"[…] help the employees in the complex decision-making process of final disposition […]."* (Jayaraman *et al.* 2008:418) • *"During the […] disposition process, employees must determine functionality […]."* (Prahinski & Kocabasoglu, 2006:422) • *"[…] dispositioning on a state-by-state basis could be extremely helpful to the manager responsible […]."* (Rogers *et al.* 2012:115) • *"Operations and supply chain managers […] selecting the most appropriate reverse disposition method."* (Skinner *et al.* 2008:532)
Suppliers/ vendors	None	• *"[…] the vendors and retailers when merchandise is waiting for disposition."* (Hsu *et al.* 2009: 526) • *"[…] retailer's first choice of disposition is to return the items for full credit back to the supplier."* (Rogers *et al.* 2013:42) • *"[…] the company and its vendors […] suggest an appropriate disposition method for the product."* (Subhashini, 2016:9)
Third parties	Bernon and Cullen (2007:54) Das (2012:1439) Jayaraman *et al.* (2008:418) Kinobe *et al.* (2015:89) Narayana *et al.* (2014:395) Prakash and Barua (2016b:70) Rogers *et al.* (2012:113)	• *"[…] third-party logistics providers specializing [sic] in […] disposition […]."* (Genchev *et al.* 2011:254) • *"The recovery process can be handled by […] 3P Logistics."* (Das & Chowdhury, 2012:210) • *"[…] outsourcing partner to manage product […] disposition decisions."* (Prakash & Barua 2016a:70) • *"[…] approaches to product disposition is through salvage brokers […]."* (Rogers *et al.* 2013:46) • *"The recovery option thus determines the […] type of actors involved (e.g. […] transportation providers, logistics providers, brokers […])."* (Gobbi 2011:774)

Source: Compiled by the researcher

Table 5.17 shows that the parties involved in the disposition process can include consumers, retailers, staff, suppliers or vendors and various third parties. *Consumers* can play several roles in the

disposition process, including (1) returning products for disposition, (2) providing information to facilitate disposition decisions, (3) receiving repaired products (original consumer), and (4) creating a demand for recovered/used products (second consumers). The significance of consumers in disposition, points to the importance of the disposition process of consumer returns in online retailing.

Retailers can play both primary and secondary roles in the disposition process. Particularly, the primary role of retailers can include (1) covering the cost of disposition, (2) making disposition decisions, (3) employing staff to perform disposition options and activities and/or (4) choosing to outsource disposition. The secondary role involves second retailers operating in the secondary markets, linking with outlet/factory stores (disposition locations) for the reselling of used/recovered products after disposition. The roles of *staff* can be linked to the activities of disposition (see section 5.6.1.2), including (1) product flow activities (e.g. restocking, handling and evaluating the product condition), (2) cash flow activities related to reselling product returns, and (3) disposition decisions (mostly managerial involvement).

In the context of this study, *supplier or vendors*[13] associate with the ship to a vendor option selected by retailers, which involves directing consumer returns to the supplier or manufacturer of the product. Subsequently, retailers can shift their responsibilities in the disposition process to vendors, indicating that vendors can play primary roles in terms of crediting the consumer, repairing the product and/or paying for disposition costs. The specific role of vendors will be explored in section 5.6.5.2.

Finally, various *third parties* can play primary or secondary roles in the disposition process. Third parties that play primary roles, include 3PL providers who specialise in product disposition and perform disposition on behalf of retailers (if the retailer decide to outsource disposition). The third parties that can play secondary roles in disposition include third parties responsible for (1) buying returned products (such as salvage dealers) and (2) transporting products between facilities in the disposition process. Essentially, the disposition process can involve primary channel and secondary channel parties, emphasising the channel involvement characteristic of disposition (section 5.6.1.1). The importance of disposition, will be explored in the outcomes of disposition, discussed in the next section.

[13] Vendors can be any type of business, selling to retailers, but this study will view the vendor as the manufacturer or supplier of the product (see the exit options).

5.6.1.5 General outcomes of the disposition process of consumer returns

In this section, the findings related to the outcomes (the results of performing disposition effectively) of the disposition process are discussed. The outcomes of disposition were categorised as (1) economic outcomes, (2) product-related outcomes and (3) environmental outcomes. However, other outcomes associated with performing specific disposition options (not discussed here) are also possible, including market-related outcomes and social outcomes (see sections 5.6.2 - 5.6.5). Table 5.18 provides an overview of the findings related to these *outcomes of the disposition process of consumer returns*, including detail on the categories, outcomes, literature sources to support the outcomes and key quotations to support the discussion of the findings.

Table 5.18 Findings related to the general outcomes of the disposition process

CATEGORIES	OUTCOMES	SUPPORTING SOURCES	KEY QUOTATIONS
Economic outcomes	***Cost savings***	None	• *"Disposition can also be done in stores […]. This saves considerable logistics costs […]."* (De Leeuw *et al.* 2016:716) • *"[…] determine the disposition mode up-front thereby minimising the costs of transportation […]."* (Jayaraman *et al.* 2008:417) • *"[…] disposition options for returned product need to be identified […] for cost minimization [sic] […]."* (Rogers *et al.* 2013:46) • *"[…] an appropriate disposition method […] can also reduce the labor [sic] costs."* (Subhashini, 2016:9)
	Profits	Rogers *et al.* (2012:112) Rogers *et al.* (2013:47)	• *"[…] disposition of the merchandise […] for a profit […]."* (Hsu *et al.* 2009:521)
	Cost/asset recovery	Ravi and Shankar (2015:876) Hazen *et al.* (2012:248)	• *"The next step is to dispose them […] to […] recapture value […]."* (Agrawal *et al.* 2015:77) • *"[…] dispositioning routes designed to maximise asset recovery."* (Bernon & Cullen, 2007:54) • *"[…] disposition options […] to reclaim value from returns."* (Skinner *et al.* 2008:518) • *"Product disposition refers to the different ways […] to recover the costs of the products that were returned."* (Stock & Mulki, 2009:38)
Product-related outcomes	***Improved product quality/condition***	De Leeuw *et al.* (2016:716)	• *"[…] disposition options that improve the quality of the returned product to functional condition in order to enable resale."* (Khor *et al.* 2016:97)
	Extend product's life cycle	None	• *"At disposition […] creating a second life for the goods […]."* (Beh *et al.* 2016:6) • *"[…] recovery loops to extend products' useful life […]."* Khor *et al.* (2016:97)
	Recover products	Silva *et al.* (2013:379) Ferguson *et al.* (2011:777) Khor and Udin (2013:73)	• *"[…] multiple cycles of recovery to allow reuse of […] products […]."* (Khor *et al.* 2016:97) •
Environmental outcomes	***Reduce waste***	Khor *et al.* (2016:97)	• *"[…] products […] are properly dispositioned and do not end up in landfills."* (Hazen *et al.* 2015:167)
	Reduce resource consumption	None	• *"[…] product disposition […], firms ought to undertake environmentally proactive approaches to generate benefits from resources that are undeservingly discarded as landfill waste."* (Khor & Udin, 2013:71)

Source: Compiled by the researcher

Table 5.18 show that the disposition process involves several beneficial outcomes, including (1) economic outcomes (i.e. cost savings, profit and cost/value and asset recovery), (2) product-related outcomes (i.e. improved product quality, extending product life and product recovery), and (3) environmental outcomes (i.e. reduce waste and resource consumption), which emphasise the importance of the disposition process.

The *economic outcome* of *cost savings* in disposition, relate to the location of disposition and the value of early and correct disposition decisions in RL. Multichannel retailers can use their stores for

disposition, resulting in RL cost savings (e.g. collection and transportation costs). Online-only retailers that can only use facilities for disposition can realise cost savings through early and appropriate disposition decisions, indicating the importance of identifying disposition options in processing, inspection and sorting processes. Regardless of the retail channel, the remaining economic outcomes of *profitability* and *cost/asset recovery* can be realised through the reselling activity of disposition (see section 5.6.1.2). Subsequently, the economic outcomes of the disposition process involve *cash (money) flows* in the RL process of consumer returns.

Associating with *product flows*, the *product-related* outcomes relate to recovery operations (repair and refurbishment), which can *improve* the *quality* of the returned product, and *extends the product's useful life*. Furthermore, disposition allows for the *recovery of products*, which can contribute to the economic outcomes of cost/asset recovery possible through reselling of recovered products.

In linking with the product-related outcomes, the disposition process involves *environmental outcomes*, which can include *reduction* in *waste* and *natural resources*. Therefore, through product recovery, organisations can prevent used/defective products from ending up landfills and reduce the need for natural resource consumption. For example, repairing a part prevents the procurement of a new part, eliminating the use of natural raw materials for manufacturing.

All the outcomes associated with the disposition process will be explored in the following sections that focus on the different disposition/exit options. The description and conceptual framework related to the general disposition processes and other subsequent categories will be given in section 5.6.6. In the next section, direct reuse as a disposition option will be discussed and analysed.

5.6.2 Direct reuse as a disposition option for consumer returns

The direct reuse[14] option associates with unwanted B2C returns of products in new/unused condition, which online retailers can select to recover value. The categories of direct reuse identified from the QCA of RL literature, included (1) characteristics of direct reuse, (2) activities/processes in direct reuse, (3) facilities/locations in direct reuse, (4) parties involved in direct reuse, and (5) outcomes of direct reuse. Table 5.19 provides an overview of the findings related to *direct reuse* as a disposition option for consumer returns, including detail on the categories, related subcategories, sources to support the subcategories and key quotations to support the discussion of the findings.

[14] It should be noted that the term "reuse" is often used as an outcome for performing certain recovery disposition options (e.g. after refurbishment the product is reused). Therefore, a distinction is made by referring to the term "direct reuse" as a disposition option associated with reselling unused/new returned products to recover value.

Table 5.19 Findings related to direct reuse as a disposition option for consumer returns

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
Characteristics	***Important***	None	• *"Product recovery activities such as […] direct reuse is becoming integral to […] supply chains."* (Barker & Zabinsky, 2011:558)
	Requires less resources, work and activities	Li and Olorunniwo (2008:385) Lieckens and Vandaele (2012:24)	• *"[…] activities of reuse […] when fewer resources are required […]."* (Hazen *et al.* 2011:382) • *"The first disposition (sell directly without rework) […] involves no substantial investment."* (Srivastava & Srivastava, 2006:530) • *"[…] less works was associated with reuse […]."* (Eskandarpour *et al.* 2014:1394) • *"Reuse […] may not require rework if no damages are found on the returned product."* (Khor & Udin, 2012:7) • *"[…] product can go back to the shelf […] if the product needs minimum changes."* (Ruiz-Benítez *et al.* 2014:55)
	Involves some costs	None	• *"[…] the returned product has […] reuse processing cost […]."* (Dowlatshahi, 2010a:1376) • *"Reuse costs – cost incurred to repackage each product return […]."* (Tan & Kumar, 2006:335)
	Influenced by industry and product type,	None	• *"[…] case of apparel and fashion […] reuse […] plays the major role […]."* (Beh *et al.* 2016:6) • *"[…] sectors such as consumer electronics or domestic appliances need more […] in order to decide whether the product can go back to the shelf."* (Ruiz-Benítez *et al.* 2014:55)
	Influenced by product quality	Jayaraman (2006:981) Lieckens and Vandaele (2012:24)	• *"Higher quality returns result in simple repackaging […]."* (Tan & Kumar, 2006:336) • *"[…] primary quality, which may be sold as a new product […]."* (De Leeuw *et al.* 2016:716)
	Influence by product/package condition	Agrawal *et al.* (2016b:94) Badenhorst (2016:4) Chan *et al.* (2012:1320) De Leeuw *et al.* 2016:716) Hazen *et al.* (2012:248) Khor and Udin (2012:7) Kim and Goyal (2011:2545) Lieckens and Vandaele (2012:24) Reimann (2016:36) Rogers *et al.* (2012:112) Ruiz-Benítez *et al.* (2014:55) Xiao *et al.* (2010:171) Xie and Breen (2014:456)	• *"[…] products being returned are in […] perfect condition […]."* (Stock & Mulki, 2009:38, 48) • *"Reuse involves new unopened returned items […]."* (Agrawal *et al.* 2016c:42) • *"[…] direct reuse […] includes products that are completely unused […]."* (Hazen *et al.* 2011:375) • *"[…] related to products that are new with the original manufacturer's seal intact, is to place them back in new inventory as sellable."* (Genchev, 2009:146) • *"[…] a product can only be available for reuse […] to retail condition."* (Hazen *et al.* 2011:375) • *"[…] the item is in good condition, with no apparent damage […]."* (Ruiz-Benitez & Muriel, 2014:573) • *"Reuse […] if no damages are found on the returned product."* (Khor & Udin, 2012:7) • *"[…] returned products, which are found to be defect- or damage-free, may be redistributed […]."* (Min *et al.* 2006:58) • *"[…] products being returned are in damaged boxes yet are in otherwise perfect condition […]."* (Stock & Mulki, 2009:38)
	Influenced by return type	None	• *"[…] reuse […] of unwanted items […]."* (Bouzon *et al.* 2016:183) • *"[…] the reuse option, […] if a product was returned because the consumer changed their mind about their purchase […]."* (Jayaraman *et al.* 2008:411) • *"[…] such that false-failure returns may be immediately returned to the shelf for resale."* (Ruiz-Benitez *et al.* 2014:55)
	Influenced by legislation	None	• *"[…] countries have enforced legislation for […] collect and reuse the unused products […]."* (Chan *et al.* 2012:1320) • *"[…] collected for reuse […] due to strict legislations."* (Das & Dutta, 2013:724)
Activities during reuse	***Cleaning***	Kim *et al.* (2006:280) Singhry (2015:121)	• *"Direct reusable products require only minor […] cleaning […]."* (Agrawal *et al.* 2015:84) • *"Some items may be reused directly […] after cleaning […]."* (Sasikumar & Kannan, 2008a:157)
	Relabelling	None	• *"[…] returned products, which are found to be defect- or damage-free, may be redistributed to customers after […] relabelling."* (Min et al. 2006:58)
	Minor repair/rework	Li and Olorunniwo (2008:385) Olorunniwo and Li (2011:4)	• *"Reuse […] after […] minor repairs."* (Singhry, 2015:121) • *"[…] some rework may have to be done in the product in order to make it suitable for sale […]."* (Ruiz-Benítez *et al.* 2014:55) • *"In terms of direct reuse and minor repairs […] process takes place."* (Subhashini, 2016:9)
	Minor maintenance	Sasikumar and Kannan (2008a:157)	• *"Direct reusable products require only […] minor maintenance."* (Agrawal *et al.* 2015:84)
	Re-kit	Olorunniwo and Li (2011:4)	• *"[…] products are processed […] with a little re-kit […]."* (Li & Olorunniwo, 2008:385)
	Minor inspection	None	• *"Direct reusable products require only minor inspection […]."* (Agrawal *et al.* 2015:84) • *"[…] most of the returned products, after a quick visual inspection, can be put back on the shelf […]."* (Ruiz-Benítez *et al.* 2014:55)
	Repacking	Badenhorst (2016:4) Li and Olorunniwo (2008:385) Rogers *et al.* (2012:112) Skinner *et al.* (2008:524) Tan and Kumar (2006:335)	• *"[…] repackaged and sold as new […]."* (Khor & Udin, 2012:7) • *"Returned products […] with simple […] repacking."* (Li *et al.* 2013:453) • *"[…] product return that […] only requires some minor reprocessing activities like repackaging […]."* (Lieckens & Vandaele, 2012:24) • *"[…] returned products, which are found to be defect- or damage-free, may be redistributed to customers after repackaging […]."* (Min *et al.* 2006:58) • *"[…] repackaging of the items can take place immediately […]."* (Stock & Mulki, 2009:38)
Activities/	***Back to inventory /***	Badenhorst (2016:4)	• *"Return to stock […] related to products that are new […] to place them back in new*

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
processes after reuse	***place on shelf***	Li and Olorunniwo (2008:385) Olorunniwo and Li (2011:4) Ruiz-Benitez and Muriel, (2014:573) Xiao *et al.* (2010:171)	*inventory as sellable."* (Genchev, 2009:146) • *"[…] stock can be returned to store stock and made available for resale […]."* (Bernon *et al.* 2016:596) • *"[…] most of the returned products […] can be put back on the shelf […]."* (Ruiz-Benítez *et al.* 2014:55) • *"[…] items returned […] were still in their original, unopened packaging and thus could be placed directly back into inventory."* (Stock & Mulki, 2009:48-49)
	Storage	None	• *"[…] reuse process includes the storage […] activities."* (Shi *et al.* 2012:219)
	Resale	Badenhorst (2016:4) Badenhorst and Van Zyl (2015:147) Bernon *et al.* (2016:596) Chan *et al.* (2012:1323) De Leeuw *et al.* (2016:716) Jayaraman (2006:981, 995) Jayaraman *et al.* (2008:411) Khor and Udin (2012:7) Mutha and Pokharel (2009:337) Prahinski and Kocabasoglu (2006:422) Rogers *et al.* (2012:112) Ruiz-Benitez and Muriel (2014:573) Ruiz-Benítez *et al.* (2014:55) Sharma *et al.* (2016:409) Srivastava (2008:542) Srivastava and Srivastava (2006:530) Tan and Kumar (2006:335) Xie and Breen (2014:458)	• *"[…] reuse and resell as new."* (Agrawal *et al.* 2016b:93) • *"[…] direct reuse, which entails […] reselling the returned product […]."* (Hazen *et al.* 2012:248) • *"Returned products can be sold directly for the second time […]."* (Li *et al.* 2013:453) • *"[…] is re-sold as-new in the primary market […]."* (Lieckens & Vandaele, 2012:24) • *"[…] full system reuse. The products that can be resold are moved to the facility […]."* (Mazahir *et al.* 2011:98) • *"[…] the product is repackaged to prepare it for […] re-sale."* (Skinner *et al.* 2008:524) • *"[…] product reuse concerns redistribution into market."* (Khor & Udin, 2013:73) • *"[…] same returned item needs to be shipped back to the customer."* (Lambert *et al.* 2011:573) • *"[…] returned products, which are found to be defect- or damage-free, may be redistributed to customers […]."* (Min *et al.* 2006:58)
	Redistribution / shipment	Badenhorst (2016:4) Badenhorst and Van Zyl (2015:147) Sharma *et al.* (2016:409)	• *"[…] reused […] it can go directly back to the distribution process."* (Badenhorst, 2013:2) • *"[…] product can be again […] shipped laterally to another retailer, shipped back to the distributor, or shipped to any other place […]."* (Hazen *et al.* 2012:248) • *"[…] reuse process includes […] transportation activities."* (Shi *et al.* 2012:219) • *"[…] the product is repackaged to prepare it for reshipment […]."* (Skinner *et al.* 2008:524)
Facilities/ locations	***Stores/ collection points***	None	• *"[…] customer receives a credit immediately and […] stock can be returned to store stock […]."* (Bernon *et al.* 2016:596) • *"[…] collection points […] returned products can be reused more quickly […]."* (Chan *et al.* 2010:6304)
	DCs	None	• *"[…] product return that is […] as-new in the primary market by using the forward distribution centre […]."* (Lieckens & Vandaele, 2012:24) • *"[…] direct reuse of returned products, which means products returned to a suitable DC may be used […]."* (Wang *et al.* 2007:351)
	Collection facilities	None	• *"The first disposition (sell directly without rework) is carried out at collection centers [sic] […]."* (Srivastava & Srivastava, 2006:530) • *"[…] all goods with first disposition decision are resold at the collection centers [sic] […]."* (Srivastava, 2008:542)
	CRCs	None	• *"CRCs […] to determine whether a returned product may be reused as is […]."* (Jayaraman *et al.* 2008:419)
	Processing facilities	None	• *"[…] products being returned […] in otherwise perfect condition […] are maintained at the returns processing facility."* (Stock & Mulki, 2009:38)
	Markets	Dowlatshahi (2010a:1376) Mutha and Pokharel (2009:337) Khor and Udin (2013:73)	• *"Reuse […] shipped to […] secondary market […]."* (Badenhorst 2016:4) • *"[…] activities of reuse […] to return a product to market […]."* (Hazen *et al.* 2011:382) • *"[…] is re-sold as-new in the primary market […]."* (Lieckens & Vandaele, 2012:24)
Parties in reuse	***Consumers***	Bernon *et al.* (2016:596) Hazen *et al.* (2011:375) Hazen *et al.* (2012:248) Mahapatra *et al.* (2013:51)	• *"Reuse […] a customer returns the new product as it is […]."* (Agrawal *et al.* 2016b:94) • *"[…] the reuse option, the product can be […] returned because the consumer changed their mind […]."* (Jayaraman *et al.* 2008:411) • *"[…] the possibility that the same returned item needs to be shipped back to the customer […]."* (Lambert *et al.* 2011:573) • *"[…] some returned products, which are found to be defect- or damage-free, may be redistributed to customers […]."* (Min *et al.* 2006:58)
	Retailers	Hazen *et al.* (2011:375) Mutha and Pokharel (2009:337) Ruiz-Benítez *et al.* (2014:55)	• *"[…] reuse and resell […] through e-business or e-retailers […]."* (Agrawal *et al.* 2016b:98) • *"[…] the case of […] retailers, reuse […] plays the major role."* (Beh *et al.* 2016:6) • *"Direct reuse […] the […] product can be again offered for sale by the retailer, shipped laterally to another retailer […]."* (Hazen *et al.* 2012:248) • *"[…] retailers […] the item is not apparently damaged, it will go back to the shelf."* (Xiao *et al.* 2010:171)
	Distributors	None	• *"The product can be again […] shipped back to the distributor […]."* (Hazen *et al.* 2012:248)
	Third parties	Jayaraman (2006:983)	• *"[…] in reuse, […] using a third party logistics provider […]."* (Govindan *et al.* 2012:204)

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
Outcomes	***Economic outcomes***	Das and Dutta (2013:720) Tan and Kumar (2006:336) Jayaraman (2006:983; 995)	• *"[…] reuse […] play an important role in the profitability […]."* (Govindan & Soleimani, 2016:11) • *"[…] financial motivation for activities involving reuse."* (García-Rodríguez *et al*. 2013:585) • *"[…] potential financial gains […] on opportunities to reuse […] products."* (Hazen *et al*. 2012:248) • *"[…] major portion of revenue is earned due to product reuse."* (Kannan *et al.* 2016:16) • *"[…] reuse practices […] improve […] financial performance […]."* (Lai *et al.* 2013:114) • *"[…] reuse […] to save money […]."* (Han *et al.* 2010:1077) *"[…] most value-producing and least resource-demanding option […] the activities of reuse […]."* (Hazen *et al.* 2011:382) • *"Reuse is the most preferable option […] as it helps recover most of the economic value of the product […]."* (Mazahir *et al*. 2011:93)
	Environmental outcomes	Han *et al.* (2010:1077)	• *"[…] environmental perspective supports sound practices, such as […] reuse […]."* (Beh *et al.* 2016:6) • *"[…] minimize [sic] waste generation by means of reuse […] of unwanted items […] contributing to sustainability and circular economy issue."* (Bouzon *et al*. 2016:183) • *"[…] reuse […] less impact the process has on the environment."* (Hazen *et al*. 2011:382) • *"[…] reuse reduces the negative effects on environment […]."* (Turrisi *et al.* 2013:565) • *"[…] reuse […] reduces natural resources consumption."* (Keh *et al.* 2012:34)
	Market-related outcomes	None	• *"[…] direct reuse of returned products […] to satisfy other demand."* (Wang *et al.* 2007:351)

Source: Compiled by the researcher

Table 5.19 shows that reuse as a disposition option involves various characteristics, activities and processes, facilities/locations, parties and outcomes, which will be discussed in the subsequent sections and concluded with a description and conceptual framework.

5.6.2.1 Characteristics, product condition and return type of direct reuse as a disposition option for consumer returns

Direct reuse can include general, require (less), involve (some) and influenced by characteristics. The *general characteristic* relates to the *importance* of direct reuse as a disposition option, which can be illustrated by the *require characteristics* of *less resources, work* and *activities.* Consequently, the direct reuse option can result in the highest recovery rates since less work and activities are needed before products can be resold. However, the *involvement characteristic* of some *costs* can be expected during direct reuse, which can include reuse processing costs and activity costs (e.g. costs of repacking and labour costs of returning products to inventory).

Lastly, the *influenced by characteristics* of direct reuse involves industry and product type, product and package condition, quality, return type and legislation. The *industry* and *product type* can influence the types of activities associated with reuse. For example, fashion/apparel products need minor activities (such as checking for buttons on a shirt), while appliances and electronics need more activities and testing to ensure that the product is in working condition. The *product condition, quality* and *return types* influence the selection of the direct reuse option. Particularly, the direct reuse option can be selected for *higher quality* products in *perfect, new/unused/unopened, good/resalable* and *defect/damage free* condition, reemphasising the fewer activity and resource

requirements. However, direct reuse can be possible for returned products with *minor use* and/or *damaged packaging*, which associates with the repackaging activity of reuse (see section 5.6.2.2). Subsequently, direct reuse can be selected for *B2C consumer return types* with return reasons related to unwanted products, buyer's remorse/change of mind and false failures (i.e. consumer mistakenly believe a working product is faulty).

Finally, direct reused can be influenced by *legislation*, which means that governments can drive organisations to be involved in direct reuse activities. For example, in South Africa the Consumer Protection Act (No. 68 of 2008:56) gives consumers the right to return products that was not pre-examined prior to delivery. Without legislation, organisations might see no value in allowing unused/new products returns destined for direct reuse.

5.6.2.2 Activities/processes in direct reuse as a disposition option for consumer returns

Table 5.19 shows that the activities/processes in direct reuse can be classified as activities/processes (1) during reuse, which include cleaning, relabelling, minor maintenance, minor repair/rework, re-kitting, repackaging and minor inspection, and (2) after direct reuse, which include back to inventory/shelf (restocking), storage, resale and redistribution or shipment. Consequently, most activities of direct reuse involve product flows, with resale as the only cash flow activity.

The *activities/processes during reuse* associate with the influenced by characteristics of direct reuse, including industry/product type, product and package condition and type of return. For example, minor use of the returned product may need (1) *cleaning* and *relabelling* for clothing/apparel and (2) *minor repair, minor maintenance* and *re-kit* (e.g. adding a missing instruction manual or accessory) for electronics/appliances. Additionally, *repackaging* can be performed on new/unused products with damaged packaging, illustrating the influence of package condition on the selection of direct reuse. Lastly, *minor inspection* forms part of the inspection process, which can include visual inspection (e.g. confirming that the product is new/unused) or inspecting false failure returns (B2C consumer return type). The need for minor inspection reaffirms the link between the disposition and inspection process and the significance of inspection as a post-receipt RL process of consumer returns (see section 5.5.1)

The *activities after direct reuse* associate with the influenced by characteristics, outcomes and locations of reuse. For example, *back to inventory/shelf* and *storage* emphasise that the returned product is in performed, new/unused and good condition. Additionally, directly *reselling* the new/unused returned product points to economic outcomes (e.g. profits), representing cash flows in the direct reuse option. Furthermore, *redistribution* or *shipment* emphasise that the new/unused

returned products are destined for the markets (locations of direct reuse). Evidently, redistribution as part of the direct reuse option, illustrates the important link between the disposition and redistribution process. Redistribution as a post-receipt RL process of consumer returns will be discussed in section 5.7.

5.6.2.3 Facilities/locations and parties in direct reuse as a disposition option for consumer returns

Table 5.19 shows the *facilities/locations* used for direct reuse include (1) traditional FL facilities/locations (such as stores/collection points and DCs), (2) RL process facilities (such as (collection facilities, CRCs and processing facilities) and markets (such as primary or secondary markets). In terms of *traditional FL facilities/locations* for direct reuse, retail *stores* (also used as collection points by multi/omnichannel retailers) or *DCs* can be used to restock new/unused product returns for resale. Subsequently, retailers can use any location/facilities in their primary forward sales channel for the direct reuse option. Alternatively, *RL process facilities* (of online retailers or third parties), including *collection facilities, CRCs* and *processing facilities* can be used for direct reuse, which can range from direct reselling from the collection centre, identifying the disposition option of reuse in CRCs and storage of new/unused products in processing facilities.

The final locations (or destinations) of direct reuse include *markets,* which associates with redistribution (product flows) and reselling (cash flows) activities of reuse. The direct reuse option mostly involves redistribution and resale in the primary market, which associate with the traditional FL facilities/locations. However, secondary markets might be a possibility in direct reuse, for example, the online retailer might resell repackaged unused products through online factory stores (separate for primary online store). While secondary markets can be locations in the disposition process, selling on the secondary market form part of the exit options in the disposition process, which will be explored in section 5.6.5.1.

The *parties in direct reuse* include consumers, retailers, distributors and third parties. *Consumers* can play important roles in direct reuse and can be classified as (1) *original consumers* responsible for returning new/unused products and (2) *second consumers* responsible for creating demand for returned products. However, original consumers can play secondary roles by receiving their returned products back from the retailer (e.g. shipping a false failure return in non-defective condition back to the consumer).

Likewise, *retailers* can be classified as original and second retailers, playing either primary or secondary roles in direct reuse. Specifically, the *original retailer* can play a primary role in direct

reuse by (1) receiving (or allowing) B2C unwanted returns and (2) performing direct reuse activities (e.g. repackage, restock, reselling and shipment). Contrastingly, the *second retailer* play a secondary role by receiving new/unused returned products from original retailers (the original sellers) for reselling on the secondary markets. Evidently, both second consumers and second retailers emphasise the importance of markets as locations in direct reuse.

Finally, *distributors* and *third parties* (such as 3PL providers) can play primary roles in the direct reuse option by being responsible for shipping/redistributing products to the markets. Alternatively, retailers might outsource specific direct reuse activities to 3P(R)L providers, for example, minor repairs, maintenance and repackaging.

5.6.2.4 Outcomes of direct reuse as a disposition option for consumer returns

Table 5.19 shows that direct reuse as a disposition option can result in economic, environmental and market-related outcomes, which demonstrates the importance of direct reuse (characteristic). The *economic outcomes* in direct reuse relate to profits and financial performance, cost saving and economic value recovery, representing cash flows in direct reuse. The *profitability* in direct reuse can be the result of reselling the returned product as new/unused on the primary or secondary market. The *cost savings* can be realised if products can be returned to stock and resold as new without effort, emphasising the require less characteristics of direct reuse (see section 5.6.2.1). Essentially, direct reuse can be the most economic value-producing (*value recovery*) and least resource demanding option, with the highest economic recovery rate in the disposition process.

The *environmental outcomes* in direct reuse include *environmental sustainability* and *waste reduction* and reduction of natural resource consumption. Particularly, retailers can reduce waste and protect the environment by taking unwanted products back from consumers (preventing disposal by consumer) and placing these products back on the market. Additionally, direct reuse can indirectly *reduce natural resource consumption* by reducing the need for additional purchases to replenish stock (lower production requirements).

Finally, the *market-related outcome* of direct reuse includes *demand satisfaction* which associate with markets as locations and the second consumers as parties in the direct reuse option (see section 5.6.2.3). Evidently, demand satisfaction can be realised through reselling and redistribution activities, linking to the economic outcome of profits and environmental outcomes of waste reduction.

5.6.2.5 Description and conceptual framework of direct reuse as a disposition option for consumer returns

Based on the findings presented in section 5.6.2, direct reuse can be an important disposition option in the disposition process for consumer returns, and will be described as follows:

> Direct reuse as a disposition option for consumer returns can be described as an important disposition option that (1) requires less resources, activities and work, (2) involves some costs, and (3) can be influenced by industry and product type, product and package condition, quality, return type and legislation. The activities/processes of direct reuse can be classified as activities/processes (1) during direct reuse, including cleaning, relabelling, minor maintenance, minor repair/rework, re-kitting, repackaging and minor inspection (product flows), and (2) after direct reuse, including back to inventory/shelf (restocking), storage, redistribution or shipment (product flows), and reselling (cash flows), which can be performed by online retailers and/or 3P(R)L providers in traditional FL facilities/locations (stores and DCs) and/or RL process facilities (collection facilities, CRCs and processing facilities).
>
> The aims of direct reuse as a disposition option are to (1) recover value from new/unused/repackaged returned products received from original consumers, and (2) resell and redistribute returned products to second consumers in the primary markets, other second market retailers or second consumers in the secondary markets. Direct reuse as a disposition option can result in (1) economic outcomes (profits, cost savings, value recovery and financial performance) (2) environmental outcomes (environmental sustainability, reduce waste and reduce natural resource consumption), and (3) market-related outcome (demand satisfaction).

Figure 5.8 provides a conceptual framework for the direct reuse as a disposition option that may apply to consumer returns in online retailing.

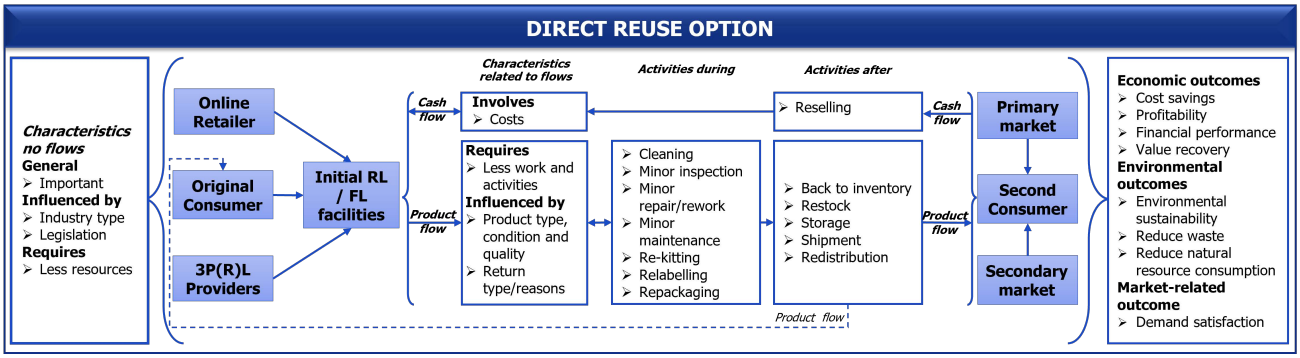


Figure 5.8 Conceptual framework of direct reuse as a disposition option
Source: Compiled by the researcher

Figure 5.8 gives a basic overview of direct reuse as a disposition option, illustrating the parties, facilities/locations, flows, characteristics and activities. Particularly, the framework illustrates that the direct reuse option starts with the original consumers returning products to the FL or RL facilities of the online retailer or 3P(R)L provider. Additionally, the flows in direct reuse involve cash flows and product flows, with related characteristics, activities during reuse and activities after reuse. Furthermore, the framework shows the primary market and secondary market locations with a second consumer purchasing the product (involving a cash inflow to the online retailer) and receiving the product (involving product outflow to the second consumer). Alternatively, the original consumer might receive the returned product back (involving product outflow to the original consumer). Finally, the framework demonstrates the characteristics unrelated to flows as well as the

outcomes of direct reuse. In the next section, repair in the disposition process will be discussed and analysed in detail.

5.6.3 Repair as a disposition option for consumer returns

Repair can be selected as a disposition option for various types of consumer returns to recover (economic, product-related, environment and market-related) value from returned products in used/damaged/defective condition. The categories of *repair* identified from the QCA of RL literature, included (1) characteristics of repair, (2) activities/processes in repair, (3) facilities/locations in repair, (4) parties involved in repair, and (5) outcomes of repair. Due to the comprehensiveness of the findings for repair as a disposition option, each of these categories, which will be presented and discussed in separate sections. This section concludes with a description and conceptual framework of repair as a disposition option.

5.6.3.1 Characteristics of repair as a disposition option for consumer returns

In this section, the characteristics of repair will be discussed. Table 5.20 provides an overview of the findings related to the *characteristics of repair as a disposition option for consumer returns*, including detail on the characteristics, sources to support the characteristics and key quotations to support the discussion of the findings.

Table 5.20 Findings related to the characteristics of the repair disposition option

CHARACTERISTICS	SUPPORTING SOURCES	KEY QUOTATIONS
Complex	None	• *"[…] complexity of repairing […] returned products […]."* (Min & Ko, 2008:177)
Time consuming	None	• *"[…] lead-time for product repairs […]."* (Banomyong *et al.* 2008:31) • *"[…] repair […] caused […] long period of waiting time."* (Banomyong *et al.* 2008: 38) • *"[…] time delayed during repair."* (Tan & Kumar, 2006:350) • *"[…] consumers must wait for the return of repaired products […]."* (Ni *et al.* 2014:312)
Requires skilled/trained staff	Banomyong *et al.* (2008:41) Tan and Kumar (2006:343)	• *"[…] using appropriate level of […] skills for repairing […]."* (Srivastava & Srivastava, 2006:530) • *"[…] trained and skilled personnel […] for testing and repair […]."* (Gobbi, 2011:783) • *"Employees tasked with […] detailed instructions about […] repairing."* (Stock & Mulki, 2009:49)
Requires resources, equipment and technology	Lambert *et al.* (2011:571) Gobbi (2011:783)	• *"[…] include investment […] of […] repairing […]."* (El-Sayed *et al.* 2010:424) • *"[…] repairs […] required […] equipment."* (Tan & Kumar, 2006:343) • *"[…] product repair […] with higher commitment of resources."* (Khor & Udin, 2013:77) • *"[…] the resources and technology needed to execute the repair function […]."* (Shaharudin *et al.* 2015:10) • *"[…] using appropriate level of technology […] for repairing […]."* (Srivastava & Srivastava, 2006:530)
Involves costs	Banomyong *et al.* (2008:37) Bernon *et al.* (2011:499) Gobbi (2011:783) Niknejad and Petrovic (2014:145) Piplani and Saraswat (2012:1428) García-Rodríguez *et al.* (2013:585)	• *"Repair cost – cost incurred to repair each product return […]."* (Tan & Kumar, 2006:335) • *"Holding cost for repairable stock."* (Bazan *et al.* 2015:309) • *"[…] fixed costs due to the operation of […] repairing […]."* (El-Sayed *et al.* 2010:424) • *"[…] direct costs associated with […] repair […]."* (Ni *et al.* 2014:312) • *"Repair costs have an effect on the RL network […]."* (Niknejad & Petrovic, 2014:150)
Involves consumer returns	Ahsan and Rahman (2016:627) Banomyong *et al.* (2008:40) Chan *et al.* 2012:1322)	• *"….] repair […] of end-of-use products […]."* (Pochampally & Gupta, 2012:1349) • *"[…] many products under warranty are returned for repair […]."* (Ho *et al.* 2012:29) • *"[…] warranty return usually calls for repair […]."* (Khor & Udin, 2012:7)

CHARACTERISTICS	SUPPORTING SOURCES	KEY QUOTATIONS
	Janse *et al.* (2010:510) Kara and Onut (2010:717) Lambert *et al.* (2011:568) Piplani and Saraswat (2012:1426) Sharma and Singh (2013:39) Sharma and Singh (2013:39) Subhashini (2016:9) Wu (2014:52) Xanthopoulos and Iakovou (2009:1704)	• *"Service […] return […] calls for repair."* (Khor & Udin, 2012:7) • *"[…] recalled products […] repairs."* (Ni *et al.* 2014:312)
Influenced by product type	Assavapokee and Wongthatsanekorn (2012:137) De Oliveira *et al.* (2012:1595, 1597, 1602) Gobbi (2011:781) Li *et al.* (2016:223) Ponce-cueto *et al.* (2011:108)	• *"[…] clothes […] are repaired […]."* (Abraham, 2011:219) • *"[…] repair […] mobile phones […]."* (Agrawal *et al.* 2016b:98) • *"Examples of repair are numerous and include long-lasting products, domestic appliances, industrial machinery and electronic equipment."* (Singhry, 2015:121) • *"[…] the printer in a defective condition […] third-party can decide on […] repair […]."* (Badenhorst & Van Zyl, 2015:148) • *"[…] vehicle returns and provide repair […]."* (Chan *et al.* 2012:1322) • *"Used computers and household appliances are […] repaired […]."* (De Oliveira *et al.* 2012:1601) • *"[…] cameras […] for after-sale repair services."* (Li *et al.* 2016:223)
Influenced by quality	Chan *et al.* (2012:1320)	• *"[…] returned products of good quality are used for repair […]."* (Niknejad & Petrovic, 2014:150) • *Higher quality returns result in simple […] repair […]."* (Tan & Kumar, 2006:336)
Influenced by product condition	Agrawal *et al.* (2015:76) Banomyong *et al.* (2008:31, 38) Chan *et al.* (2012:1322) Choi *et al.* (2007:764) De Oliveira *et al.* (2012:1597) Gobbi (2011:781) Jayaraman *et al.* (2008:410) Keh *et al.* (2012:31) Khor and Udin (2012:7) Khor and Udin (2013:78) Khor *et al.* (2016:106) Kim and Goyal (2011:2537) Kim *et al.* (2013:510) Konstantaras *et al.* (2010:452) Kumar *et al.* (2016:4) Olorunniwo and Li (2010:454) Piplani and Saraswat (2012:1424) Ponce-cueto *et al.* (2011:108) Selvi and Kayar (2016:17) Sharma and Singh (2013:39) Ye *et al.* (2013:134) Yu and Solvang (2016:5)	• *"[…] good condition and […] are repaired […]."* (Abraham, 2011:219) *"[…] repairing used products […]."* (Alinovi *et al.* 2012:1243) • *"[…] defective products […] in a defective condition, the […] third-party can decide on […] repair […]."* (Badenhorst & Van Zyl, 2015:148) • *"[…] repair usually involves activities necessary to restore a damaged product […]."* (Niknejad & Petrovic, 2014:143) • *"If the product is defective or damaged it may undergo repair […]."* (Bernon *et al.* 2011:491) • *"[…] minor faults, and products can be […] repaired […]."* (Gobbi, 2011:784) • *"[…] repair […] failed products […]."* (Sasikumar & Kannan, 2008a:159)
Influenced by regulations	None	• *"[…] effect of regulatory pressure is particularly significant for repair […]."* (Khor *et al.* 2016:101)

Source: Compiled by the researcher

Table 5.20 shows that repair as a disposition option can include general, require, involve and influenced by characteristics. The *general characteristic* of repair relates to the *complex* and *time-consuming* nature of repair as a disposition option. The complexity and time-consuming nature of repair can relate to repair operations needed to restore defective/damaged products to working order (see section 5.6.3.2) and repair lead-time, which can include the time of (1) receiving the returned product for repairs, (2) completing repair activities and (3) returning the repaired product to the consumer. Additionally, the complexity of repair can be emphasised through the repair *requirement characteristics* of *skilled/trained staff, resources, equipment* and *technology.* Consequently, to effectively engage in repair operations, online retailers must commit or invest in financial resources, human resources (skilled staff) and physical resources (equipment and technology).

The *involvement* characteristics of repair include costs and consumer returns. Particularly, the *costs* of repair can include holding costs for repairable products (e.g. inventory carrying costs and storage), fixed costs (e.g. rent and fixed salaries) and direct costs (e.g. testing and replacement costs), indicating the repair can be an expensive disposition option. Additionally, repair can *involve* any type of *consumer return*, including B2C consumer returns, end-of-use (EoU), service returns, warranty returns and product recalls, emphasising the significance of repair as a disposition option for any type of online retailer. Evidently, unlike other disposition/exit options, the type of return plays no influential role on the selection of repair as a disposition option.

Nevertheless, the *influenced by characteristics* of product type, product quality, product condition and legislation can influence the selection of repair as a disposition option. For example, certain *product types*, including clothes, electronic products and equipment, vehicles, printers, appliances, mobile phones, computers and cameras, can be more suitable for repair activities. However, the type of product may also influence the degree/level of repair, for example, clothing items (such as a dress) will require less effort or resources than vehicles. Furthermore, the *product quality* and *condition* can influence the selection of repair as a disposition option. Particularly, repair can be selected for new or used *higher/good quality* products in *good* but *faulty*, *defective* and *damaged condition*, implying that it might be too costly to repair low quality products in poor condition. For example, the repair costs of a severely damaged fridge of lower quality might be higher than the costs of buying a new fridge. Finally, like direct reuse, repair can be influenced by *legislation*, for example, governments can create laws and regulations that enforce organisations to accept warranty and service returns for repair. In the next section, the activities/processes in repair will be discussed.

5.6.3.2 Activities/processes in repair as a disposition option for consumer returns

Repair activities/processes were categorised as activities/processes before, during and after repair. Table 5.21 provides an overview of the findings related to the *activities/processes in repair* as a disposition option for consumer returns, including details on the activities, sources to support the activities and key quotations to support the discussion of the findings.

Table 5.21 Findings related to the activities/processes in repair as a disposition option

CATEGORIES	SUBCATEGORIES	SUPPORTING SOURCES	KEY QUOTATIONS
Activities/ processes before repair	***Collection and transportation***	Chan *et al.* (2012:1320, 1321) Piplani and Saraswat (2012:1426)	• *"[…] customers will be required to bring or send the goods […] for repair."* (Banomyong *et al.* 2008:38) • *"[…] repair […] to […] the transportation flows between collection sites and facility sites."* (Du & Evans, 2008:2618, 2620) • *"[…] transports the returned products to repair […]."* (Du & Evans, 2008:2618, 2620)
	Sorting and storage	None	• *"[…] returned products […] sorted for potential repair […] stored long enough to create volume for freight consolidation."* (Min & Ko, 2008:179)
	Communication	None	• *"[…] retailers interact with customer where customers […] claim product […] repair […]."* (Ahsan & Rahman, 2016:627)
Activities during repair	***Disassembly***	Khor and Udin (2012:18) Khor *et al.* (2016:106)	• *"[…] repairing […] and disassembling outdated equipment […]."* (Assavapokee & Wongthatsanekorn, 2012:137)

CATEGORIES	SUBCATEGORIES	SUPPORTING SOURCES	KEY QUOTATIONS
			• *"In repair […] a minimum level of disassembly."* (Choi *et al.* 2007:764) • *For product repair […] products are disassembled […]."* (Khor & Udin, 2013:74)
	Treatment	None	• *"Some of the treatment aspect may consist in […] repairs […]."* (González-Torre *et al.* 2010:897)
	Fixing	Khor and Udin (2012:7) Khor and Udin (2013:73) Sharma *et al.* (2016:416)	• *"Product repair involves fixing […]."* (Jayaraman, 2006:982) • *"Correction of faults in a product."* (Khor *et al.* 2016:106)
	Replacement	Khor and Udin (2013:78) Khor *et al.* (2016:106) Sharma *et al.* (2016:416)	• *"Product repair involves […] replacement of failed parts."* (Jayaraman, 2006:982) • *"Is the work of […] replacing malfunctioning components […]."* (Khor & Udin, 2012:7) • *"[…] replace it with […] new module to complete the repair process."* (Piplani & Saraswat, 2012:1426) • *"Repair […] by […] replacing deteriorated parts."* (Singhry, 2015:121)
	(Re)Testing	Li and Olorunniwo (2008:384)	• *"[…] repaired […] products […] retests them again […]."* (Janse *et al.* 2010:510) • *"Repair: […] they are first tested in order to determine the failure causes."* (Keh *et al.* 2012:31) • *"Returned products […] with some test and repair […]."* (Olorunniwo & Li, 2010:454)
	Restoring	Khor and Udin (2012:7) Piplani and Saraswat (2012:1424)	• *"Repair […] restores existing product […]."* (Khor & Udin, 2013:73) • *"Restore product to working order."* (Khor *et al.* 2016:106) • *"[…] repair usually involves […] restore."* (Niknejad & Petrovic, 2014:143) • *"Repair […]: Restoring used products […]."* (Selvi & Kayar, 2016:17)
	Upgrade	Prahinski and Kocabasoglu, (2006:422)	• *"Product upgrade involves repairing […]."* (Badenhorst, 2016:4) • *"[…] repair. Products are also systematically upgraded […]."* (Lambert *et al.* 2011:576)
	Servicing	None	• *"Repairing […] is concerned with […] servicing of products […]."* (Agrawal *et al.* 2015:85)
	Washing / cleaning	None	• *"[…] clothes […] are repaired and washed […]."* (Abraham, 2011:219) • *"[…] repairing and cleaning […]."* (Kim *et al.* 2006:281)
Activities/ processes after repair	***Back to inventory***	None	• *"Returned products […] are processed to put back to finished goods with some test […] repair […]."* (Olorunniwo & Li, 2010:454)
	Trading	None	• *"Some of these products can be traded […] after simple repairs […]."* (Zhou & Zhou, 2015:60)
	Redistribution / delivery	Khor and Udin (2012:12) Piplani and Saraswat (2012:1426) Li *et al.* (2016:225) Eskandarpour *et al.* (2014:1396) Janse *et al.* (2010:510) Kumar *et al.* (2016:4)	• *"[…] repaired […] it can go directly back to the distribution process."* (Badenhorst, 2013:2) • *"After repair, the products are delivered […]."* (Du & Evans, 2008:2620) • *"[…] repair the repairable products and supplying them directly to the redistribution locations."* (El-Sayed *et al.* 2010:425) • *"[…] returned products […] repaired […] for redistribution."* (Min & Ko, 2008:176) • *"[…] repaired […] and then forwarded […] through redistributors."* (Soleimani & Govindan, 2014:491)
	Redelivery to original consumer	Agrawal *et al.* (2015:85) Agrawal *et al.* (2016c:48) Banomyong *et al.* (2008:38) González-Torre *et al.* (2010:897) Min and Ko (2008:177) Wu (2014:52)	• *"After repair, the products are […] delivered back to the […] customers."* (Li *et al.* 2016:225)
	Remarketing	None	• *"Repairing items […] and marketing them."* (Brix-Asala *et al.* 2016:3) • *"[…] then repaired and remarketed."* (Gobbi, 2011:781)
	Reselling or charging	Abraham (2011:219) Agrawal *et al.* (2016b:98) Asdecker (2015:3) Assavapokee and Wongthatsanekorn (2012:137) De Oliveira *et al.* (2012:1597, 1601) Gobbi (2011:781) Khor *et al.* (2016:97) Kim and Goyal (2011:2537) Kumar *et al.* (2016:4) Olorunniwo and Li (2010:454) Pochampally and Gupta (2012:1355) Ponce-cueto *et al.* (2011:107) Srivastava and Srivastava (2006:525, 5230) Tan and Kumar (2006:335)	• *"[…] product can be made fit for resale after […] repair […]."* (De Leeuw *et al.* 2016:716) • *"[…] repair, to be sold to customers."* (Agrawal & Choudhary, 2014:19) • *"All the repaired […] products can be sold […]."* (Yu & Solvang, 2016:5) • *"[…] the repair staff […] charges the customer […]."* (Östlin *et al.* 2008:343)

Source: Compiled by the researcher

Table 5.21 shows that the activities/processes in repair can be classified as activities/processes (1) before repair, including collection, transportation, sorting, storage and communication, (2) during repair, including disassembly, treatment, fixing, parts replacement, (re)testing, restoration, upgrade, servicing and washing/cleaning, and (3) after repair, including back to inventory, trading, redistribution, delivery, remarketing, reselling and charging. Evidently, most activities/processes of repair involve product flows with communication and remarketing as the only information flow activities and reselling, trading and charges as the only cash flow activities.

The *activities/processes before repair* mostly represent other RL processes, including collection, transportation and sorting. Subsequently, repair can include *collection* and *transportation* of returned products from consumers to initial facilities for repair and/or from initial facilities to recovery facilities for repair. Additionally, products can be *sorted* according to appropriate disposition options (in this case repair) and *stored* for freight volume consolidation before transportation to recovery facilities. While volume consolidation can reduce repair costs, storage can increase repair lead-time, which might influence customer service and value depreciation. The *communication* activity before repair associates with consumers and retailers interacting about warranty claims for used products destinated for repair, demonstrating the involvement of warranty returns in the repair option (characteristic).

The *activities during repair*, including disassembly, treatment, fixing, parts replacement, (re)testing, restoration, upgrade, servicing and washing/cleaning, can associate with product type and condition as (influenced by) characteristics of repair. For example, the repair activities for vehicles can include *disassembly, testing, restoration, upgrading, parts replacement, washing* and *servicing*, and the repair activities for cloths can be limited to *fixing* and *cleaning*. Additionally, products in defective/faulty condition may require *fixing, parts replacement* and *retesting* and products in damaged condition may require *restoration* and *cleaning*.

The *activities/processes after repair* demonstrate the recovered condition of the repaired product, which enables the activities/processes of *back to inventory*, *trading*, *redistribution, remarketing* and *reselling.* Additionally, products sent for warranty or service repairs can involve *charges* and *redelivery* back to the original consumers, representing cash inflows and product outflows. Furthermore, the activities/processes after repair can associate with the outcomes of repair (see section 5.6.3.5). For example, *reselling* and *trading* the repaired product points to economic outcomes of repair (e.g. profits and cost recovery), representing cash inflows. Additionally, *remarketing* of the repaired product points to market-related outcomes of repair (e.g. demand satisfaction), representing information flows. Similarly, redelivery to the original consumer points to the market-related outcomes of repair (e.g. consumer service and satisfaction). Finally, *redistribution*

emphasise that recovered/repaired returned products are destined for the markets/second consumers, which will be further explored in the next section.

5.6.3.3 Facilities/locations in repair as a disposition option for consumer returns

In this section the facilities/locations used for repair as a disposition option will be explored. Table 5.22 provides an overview of the findings related to the *facilities/locations of repair* as a disposition option for consumer returns, including details on the facilities, sources to support the mentioned facilities and key quotations to support the discussion of the findings.

Table 5.22 Findings related to the facilities/locations of the repair disposition option

FACILITIES / LOCATIONS	SUPPORTING SOURCES	KEY QUOTATIONS
Warehouses	Tan and Kumar (2006:343)	• *"The warehouse serves as a hub between front end and back end of the repair network."* (Janse *et al.* 2010:510) • *"[…] repairing for returned product […] at current warehouse […]."* (Lee *et al.* 2012:5629) • *"[…] warehouses […] may dedicate their space for repair."* (Min & Ko, 2008:179)
Distribution Centres (DCs)	Banomyong *et al.* (2008:37)	• *"[…] distribution centers [sic] […] designated for repair service […]."* (Du & Evans, 2008:2620) • *"[…] the part for repair can […] then forwarded to […] a regional DC."* (Piplani & Saraswat, 2012:1426)
Collection facilities	Soleimani and Govindan (2014:487)	• "*Repaired […] products are treated in collection center [sic]."* (Dhib *et al.* 2016:376) • *"[…] if it needs repair […] returned product may be transferred […] through a collection centre."* (Chan *et al.* 2012:1321) • *"After repair, the products are delivered back to the collection sites […]."* (Du & Evans, 2008:2620) • *"After repair, the products are daily delivered back to the respective collection points."* (Li *et al.* 2016:225) • *"[…] repair […] activities […] may be carried out […] at collection centers [sic] […]."* (Srivastava & Srivastava, 2006:528)
Processing facilities	None	• *"[…] processing facility is responsible for repairing used electronics for resale […]."* (Assavapokee & Wongthatsanekorn, 2012:137)
Disassembly facilities	None	• *"Disassembly locations […] to the operation of […] repairing […]."* (El-Sayed *et al.* 2010:425) • *"[…] repairing by […] disassembly centers [sic] […]."* (Soleimani & Govindan, 2014:487)
Service centres / shops	Agrawal *et al.* (2016c:48) Lambert *et al.* (2011:576)	• *"[…] to a service centre […] to complete the repair process."* (Piplani & Saraswat, 2012:1426) • *"[…] returned products are repaired at the service shops."* (Banomyong *et al.* 2008: 39) • *"[…] after repair re-enter the network and travel towards the service centres."* (Piplani & Saraswat, 2012:1426) • *"[…] service centers [sic] near customers […] to help minimize [sic] customers inconvenience […] to access […] repair services […]."* (Banomyong *et al.* 2008:37)
Workshops	None	• *"Repair […] carried out in informal or semi-formal workshops."* (De Oliveira *et al.* 2012:1607)
Repair facilities	Aitken and Harrison (2013:755) Du and Evans (2008:2618, 2620) Keh *et al.* (2012:31) Jayaraman (2006:982) Lee *et al.* (2012:5629) Srivastava and Srivastava (2006:530)	• *"[…] if it needs repair […] returned product may be transferred to a repair centre […]."* (Chan *et al.* 2012:1321) • *"[…] repair facilities where returned products […] were […] repaired […]."* (Min & Ko, 2008:176) • *"[…] repair […] centres […] that repair […] goods […]."* (Turrisi *et al.* 2013:567) • *"[…] repaired goods from the […] repair center [sic]."* (Kumar *et al.* 2016:4) • *"[…] repair shop where the repair […]."* (Östlin *et al.* 2008:343)
Refurbishment facilities	Kim *et al.* (2006:281) Srivastava and Srivastava (2006:530)	• *"[…] refurbishing centres […] that repair […] goods […]."* (Turrisi *et al.* 2013:567)
Recovery centres	None	• *"[…] after some repairs and must be transferred to recovery centers [sic] […]."* (Eskandarpour *et al.* 2014:1396)
Redistribution facilities	None	• *"[…] repaired goods to the redistribution center [sic]."* (Kumar *et al.* 2016:4)
Customer location	None	• *"Repairing network is concerned with repairing, and servicing of products and return of those products to the customers"* (Agrawal *et al.* 2015:85) • *"After repairs […] send back the goods to the customers […]."* (Banomyong *et al.* 2008:38)

FACILITIES / LOCATIONS	SUPPORTING SOURCES	KEY QUOTATIONS
		• *"Repair operations can be performed at the customer's location […]."* (Jayaraman, 2006:982) • *"Repair: […] from customer sites […]."* (Keh *et al.* (2012:31)
Markets	De Oliveira *et al.* (2012:1597) Govindan *et al.* (2015:603) Kim and Goyal (2011:2545) Pochampally and Gupta (2012:1355) Ponce-cueto *et al.* (2011:107) Soleimani and Govindan (2014:487, 491) Srivastava and Srivastava (2006:525)	• *"[…] repair […] and resell […] in secondary market […]."* (Agrawal *et al.* 2016b:98) • *"[…] defective lots are bought from the market, then repaired […]."* (Gobbi 2011:781) • *"[…] repair […] that improve products to working order so that they enter the […] market […]."* (Khor & Udin, 2012:12) • *"[…] repaired […] products can be sold in both primary and secondary markets."* (Yu & Solvang, 2016:5)

Source: Compiled by the researcher

Table 5.22 shows the *facilities/locations* used for the repair option include (1) traditional FL facilities (such as warehouses and DCs), (2) RL process facilities (such as collection facilities, processing facilities and disassembly facilities), (3) recovery facilities (such as service centres, workshops, refurbishment facilities, repair facilities and recovery centres), (4) exit facilities (such as redistribution facilities), and (5) consumer and market locations. The functionalities of these facilities and locations can be described in terms of the activities/processes in repair as a disposition option (see section 5.6.3.2).

The *traditional FL facilities* used for repair can include warehouses and DCs. *Warehouses* can be used as initial locations that perform (1) processes/activities before repair, for example, receiving collected and transported returned products from consumers, sorting and storage of returned products, and transporting of returned products to other facilities for repair, or (2) activities during repair, for example, repairing and cleaning clothes. In contrast, *DCs* might be second tier locations (e.g. regional DCs) that receive products from initial locations, like warehouses, to perform repair activities. Additionally, DCs might be responsible for redistributing repaired products to markets, forming part of exit facilities. Therefore, organisations can combine FL operations alongside repair activities in their existing warehouses and DCs.

Similarly, RL process facilities, including collection, processing and disassembly facilities can be used for activities/processes before, during and after repair. Particularly, *collection facilities* can (1) receive returned products through collection and transportation from consumers and then ship/transport returned products to recovery facilities (second tier) for repair, (2) perform activities during repair (e.g. fixing and cleaning), and (3) receive repaired products from other facilities for activities after repair (e.g. resale and redistribution) to markets. Similarly, *processing facilities* can perform activities during repair (e.g. testing and fixing) and activities after repair (e.g. resale). In contrast, *disassembly facilities* can be second tier RL facilities, used for activities during repair (e.g. disassembly and testing).

The *recovery facilities* represent facilities that specialise in disposition and recovery activities, including service centres, workshops, refurbishment facilities, repair facilities and recovery centres. *Service centres* can receive products for repair directly from consumers and can be located closely to consumer locations. Alternatively, service centres can be utilised as second tier facilities that receive returned products from first-tier facilities/locations (e.g. collection facilities). Both service centres and *workshops* are dedicated to performing activities during repair (e.g. servicing, fixing, restoration and cleaning). Similarly, *refurbishment facilities* can perform activities during repair, but their main functionality involves refurbishment as a disposition option for consumer returns (see section 5.6.4.4).

Repair facilities specialise in activities during repair and represent second-tier facilities that receive returned products from initial facilities/locations for repair. However, repair facilities can be responsible for activities after repair (such as redistribution and delivery), implying that repair facilities can also be exit facilities in repair. *Recovery centres* represent the only recovery facilities that receive repaired products from locations, implying that these centres can be responsible for activities after repair (e.g. reselling or redistribution). Evidently, recovery centres can also be regarded as *exit facilities,* like *redistribution facilities,* specialising in the reselling and redistribution of repaired products to markets.

The *locations of repair* include consumer and market locations, which relate to activities during and after repair. *Consumer locations* represent the locations of the original consumers, which can be used for activities during repair or serve as locations after repairs. Evidently, repair activities can be performed at *consumer locations* (e.g. consumer residences), excluding the physical return of products to facilities for repairs. This option can be valuable in terms of reducing repair/RL costs and improving consumer service. Alternatively, consumer locations associate with the activity of redelivery after repair, representing original consumers that returned products to facilities for repairs. Finally, *markets* signify reselling (cash flows) and redistribution (product flows) activities in repair (see section 5.6.3.2) and relate to second consumers. Like direct reuse disposition (see section 5.6.2.3), repaired products can be destined for primary markets or secondary markets.

In the next section, the various parties involved in repair will be discussed.

5.6.3.4 Parties involved in repair as a disposition option for consumer returns

In this section the parties in repair as a disposition option for consumer returns will be identified and discussed. Table 5.23 provides an overview of the findings related to the *parties in repair* as a

disposition option for consumer returns, including details on the parties, sources to support the mentioned parties and key quotations to support the discussion of the findings.

Table 5.23 Findings related to the parties in repair as a disposition option

PARTIES	SUPPORTING SOURCES	KEY QUOTATIONS
Consumers	González-Torre *et al.* (2010:897) Lambert *et al.* (2011:576) Li *et al.* (2016:225) Olorunniwo and Li (2010:454) Piplani and Saraswat (2012:1426)	• *"[…] used product from the customers for the purpose of […] repair […]."* (Agrawal *et al.* 2015:76) • *"[…] customers explain the causes of service failure and claim product […] repair […]."* (Ahsan & Rahman, 2016:627) • *"[…] customer return […] to the retailer […] or third-party can decide on different options such as repair […]."* (Badenhorst & Van Zyl, 2015:148) • *"After repairs are made […] the customers themselves come to pick up the repaired goods."* (Banomyong *et al.* 2008:37, 38) • *"Customers would bring their products back to repair […]."* (Chan *et al.* 2012:1320) • *"[…] repairing and sending returned products back […] end-customers."* (Min & Ko, 2008:177) • *"Repair operations can be performed at the customer's location […]."* (Jayaraman *et al.* 2006:982) • *"[…] customers are encouraged to return products that can be repaired."* (Khor & Udin, 2012:13) • *"[…] products after repairing […] are sold to secondary customers."* (Kumar *et al.* 2016:4) • *"[…] consumers may be asked to […] receive a repair kit […]."* (Ni *et al.* 2014: 313) • *"[…] the repair staff […] charges the customer […]."* (Östlin *et al.* 2008:343) • *"[…] consumer will […] seek a warranty repair […]."* (Sharma & Singh, 2013:39) • *"[…] repaired […] products […] based on the customers' demands."* (Soleimani & Govindan, 2014:491) • *"Second customers […] are interested in repaired […] products […]."* (Soleimani & Govindan, 2014:491)
Retailers	None	• *"[…] sold through e-business or e-retailers […] because only minor repair […] is required."* (Agrawal *et al.* 2016b:98) • *"[…] retailers interact with customer where customers […] claim product […] repair […]."* (Ahsan & Rahman, 2016:627) • *"[…] the retailer will send the printer back to the […] third-party can decide on […] repair […]."* (Badenhorst & Van Zyl, 2015:148) • *"[…] products from retailers […] were […] repaired […]."* (Min & Ko, 2008:176) • *"[…] the retailer is often responsible for […] repairs."* (Ni *et al.* 2014:312, 320)
Staff	Assavapokee and Wongthatsanekorn (2012:130)	• *"Employees tasked with […] repairing […] items."* (Stock & Mulki, 2009:49) • *"[…] the repair staff […] charges the customer […]."* (Östlin *et al.* 2008:343) • *"[…] the service personnel identify the faulty module […] to complete the repair process."* (Piplani & Saraswat, 2012:1426)
Third parties	Ko and Evans (2007:347)	• *"[…] third-party can decide on different options such as repair […]."* (Badenhorst & Van Zyl, 2015:148) • *"[…] a third-party transportation service provider is involved […] to return the repaired products […]."* (Banomyong *et al.* 2008:39) • *"[…] the jobber will undertake repair […]."* (Bernon *et al.* 2011:492) • *"The 3PL provider immediately transports the returned products to repair […]."* (Du & Evans, 2008:2619, 2620) • *"[…] distribution centers [sic] of the 3PL provider should be designated for repair service […]."* (Du & Evans, 2008:2619, 2620) • *"LSP […] receives also repaired […] products back, retests them again and takes care of redistribution."* (Janse *et al.* 2010:510) • *"3PLs that offer value-added services such as repair […]."* (Min & Ko, 2008:176) • *"The repair operation may be carried out […] by […] repair vendors […]."* (Piplani & Saraswat, 2012:1424)
Re-distributors	None	• *"[…] repairing and sending returned products back to their distributors […]."* (Min & Ko, 2008:177) • *"[…] repaired […] and then forwarded […] through redistributors."* (Soleimani & Govindan, 2014:491) • *"Redistributors manage to send […] repaired […] products to the second markets […]."* (Soleimani & Govindan, 2014:491)

Source: Compiled by the researcher

Table 5.23 shows that repair involves several parties with various roles, including consumers, retailers, staff, third parties and (re)distributors. Like direct reuse, *consumers* can play significant roles in the repair option and can be classified as original consumers and second consumers. The *original consumers* can play primary roles in repair by being responsible for (1) returning and

transporting products for repairs, (2) explaining causes of product failures (or return reasons), (3) submitting warranty claims for repairs, (4) providing a repair location (residences or workplaces), (5) conducting repair activities through repair kits, (6) paying repair costs, and (7) receiving repaired products back. Contrastingly, the *second consumer* play indirect roles in repair by creating a demand for repaired products and purchasing repaired products. Subsequently, consumers can be responsible for information, product and cash flows in repair.

Similarly, *retailers* can play various roles in repair, including (1) receiving consumer returns for repairs, (2) interacting (communicating) with consumers regarding warranty claims, (3) selecting repair as a disposition option, (4) outsource repair to third parties or conduct repair in-house, and (5) (re)sell repaired products. Consequently, like consumers, retailers can be responsible for information, product and cash flows in repair. Repair can involve specialised *repair staff* employed by retailers (or third parties) to perform activities during repairs (e.g. testing, disassembly, servicing, fixing, replacing and washing) and activities after repair, like charging consumers. Essentially, repair staff emphasise the repair requirement characteristics of skilled/trained staff and human resources (see section 5.6.3.1).

Repair involves multiple *third parties*, including transport service providers, 3P(R)L providers, jobbers[15] and repair vendors, playing various roles, including (1) collecting and transporting product from consumers to facilities for repair (transporters, 3PL and LSP), (2) selecting repair as a disposition option (3PLs), (3) owning facilities used for repair (3PLs), (4) conducting repair operations (3PLs, jobbers and repair vendors), and (5) redistributing/redeliver of repaired products (transporters, 3PLs and LSP). Evidently, third parties are responsible for product flows in repair as a disposition option for consumer returns.

Likewise, *(re)distributors* are responsible for product flows in repair with the main role of redistributing repaired products to the markets. Consequently, they are involved in the activities after repair and indirectly provide value to the repair process. In the next section the outcomes of repair will be identified.

5.6.3.5 Outcomes of repair as a disposition option for consumer returns

The outcomes of repair were divided into several categories, namely economic, product-related, environmental and market-related outcomes. Table 5.24 provides an overview of the findings related

[15] *Jobbers* are third parties that buy product returns from retailers for the purpose of recovery and resale (Bernon & Cullen, 2007:49) and will be discussed in section 5.6.6.3.

to the *outcomes of repair* as a disposition option for consumer returns, including detail on the categories, outcomes, sources to support the outcomes and key quotations to support the discussion of the findings.

Table 5.24 Findings related to the outcomes of the repair as a disposition option

CATEGORIES	SUBCATEGORIES	SUPPORTING SOURCES	KEY QUOTATIONS
Economic outcomes	***Economic benefits and profitability***	Chan *et al.* (2012:1320) Khor and Udin (2012:12, 13) Pishvaee *et al.* (2010:269) Serrato *et al.* (2007:4290)	• *"[…] returns accepted for repair […] are profitable for business."* (Khor *et al.* 2016:106) • *"[…] prefer repair […] to minimize [sic] potential revenue losses."* (Ni *et al.* 2014:320) • *"[…] profits generated from selling the repaired products."* (Yu & Solvang, 2016:11) • *"[…] economic benefits can be obtained through […] repair […]."* (Yu & Solvang, 2016:12)
	Value recovery	Gobbi (2011:787) Subhashini (2016:9)	• *"[…] repairing […] termed value-added recovery […]."* (Jayaraman *et al.* 2006:984)
	Cost savings and effectiveness	None	• *"[…] repair […] to save money […]."* (Han *et al.* 2010:1077) • *"[…] product repair activities gain cost-effectiveness […]."* (Khor & Udin, 2013:77)
Product-related outcomes	***Functional/ working and good-as-new products***	Gobbi (2011:773) Khor and Udin (2012:7, 12) Khor and Udin (2013:73) Konstantaras *et al.* (2010:452) Piplani and Saraswat (2012:1424) Selvi and Kayar (2016:17) Sharma *et al.* (2016:416) Singhry (2015:121)	• *"In repair, used products are returned to ''working order'' […]."* (Choi *et al.* 2007:764) • *"Repair […] that improve the quality of the returned product to functional condition […]."* (Khor *et al.* 2016:97) • *"The purpose of repair is to return failed products to working condition […]."* (Sasikumar & Kannan, 2008a:159) • *"[…] repair usually involves activities necessary to restore a damaged product into the working order […]."* (Niknejad & Petrovic, 2014:143) • *"[…] repair […] goods in order to make them almost "as good as new" […]."* (Turrisi *et al.* 2013:567)
	Extend product lifecycle	Khor and Udin (2012:11) Khor *et al.* (2016:103)	• *"Repair prolongs the product's lifecycle."* (Khor & Udin, 2013:78) • *"[…] products can be […] repaired, thus, extending their useful life."* (Shaik & Abdul-Kader, 2014:92)
	Recover product/parts for reuse	Hazen *et al.* (2012:248) Niknejad and Petrovic (2014:143) Ye *et al.* (2013:134)	• *"[…] repairing […] for component recovery […]."* (Assavapokee & Wongthatsanekorn, 2012:137) • *"[…] repairable items collected […] for recovery."* (Bazan *et al.* 2015:309) • *"[…] the recovery of products […] achieved through processes such as repair […]."* (Cardoso *et al.* 2013:437) • *"[…] repair, as the lowest level of product recovery activity […]."* (Khor & Udin, 2012:13) • *"[…] repair […] through whole unit recovery […]."* (Khor & Udin, 2012:13) • *"Repair is done […] and product recovered […]."* (Subhashini, 2016:9) • *"Repair […] involve making the product reusable for its intended purpose […]."* (Agrawal & Choudhary, 2014:19) • *"[…] returned products […] may be re-used (even partially), after some form of repair […]."* (Nenes & Nikolaidis, 2012:1362)
Environmental outcomes	***Environmental protection and sustainability***	Serrato *et al.* (2007:4290)	• *"[…] green and ecologically friendly, because repairing […] a product instead of throwing it in a landfill protects the environment."* (Hsu *et al.* 2016:95) • *"[…] repair diminishes products' threat to the environment […]."* (Khor & Udin, 2012:12) • *"[…] the significant environmental contribution […] through repair […]."* (Khor *et al.* 2016:103) • *"[…] environmentally responsible which includes […] repair […]."* (Sasikumar & Kannan, 2008a:165)
	Reduce resource consumption	None	• *"[…] repair […] to […] reduce natural resources."* (Han *et al.* 2010:1077)
Market-related outcomes	***Customer service/ satisfaction***	Alinovi *et al.* (2012:1243) Du and Evans (2008:2619) Ferguson *et al.* (2011:783) Li *et al.* (2016:223) Min and Ko (2008:176) Pishvaee *et al.* (2010:269) Sasikumar and Kannan (2008b:234) Shaharudin *et al.* (2015:10)	• *"[…] repair services for customers in order to maintain a high customer service level."* (Chan *et al.* 2012:1322) • *"[…] enhanced after sales or repair service to customers […]."* (Banomyong *et al.* 2008:37) • *"[….] value-added services such as […] repair."* (Ko & Evans, 2007:347) • *"[…] products returned for repair […] insure that the customer will be satisfied."* (Morgan *et al.* 2016:305) • *"Repair and after-sales service […] can also enhance a company's ability to market its product […]."* (Pokharel & Mutha, 2009:178)
	Satisfy demand and supply	Soleimani and Govindan (2014:491)	• *"These used products after repairing […] are sold to […] customers according to demand."* (Kumar *et al.* 2016:4) • *"[…] repair […] enables the company to meet production target."* (Khor & Udin, 2012:12)

Source: Compiled by the researcher

Table 5.24 shows the outcomes of repair can include economic, product-related, environmental and market-related outcomes, indicating that repair as a disposition option for consumers can add value to the RL process.

The *economic outcomes* of repair include economic benefits, profitability, value recovery and cost savings and effectiveness, representing the cash flows in the repair option. The *economic benefits* and *profitability* in repair can be the result of reselling/trading the repaired product on the primary or secondary market. Additionally, *value recovery* represents the monetary value that can be recovered through repair activities. *Cost savings* and *effectiveness* may be realised by selecting repair as the most economical disposition option (e.g. instead of refurbishment) and performing repair activities cost effectively. For example, using consumer locations for repair, which can save collection, transportation, receiving, storage and handling costs.

The *product-related outcomes* relate to product flows and represent the main purpose of repair, which involves fixing or restoring a defective/damaged/used product to a working and functional condition. A *working/functional (good as new) product*, *extending the product life* and *product (or parts) recovery for reuse* as product-related outcomes of repair emphasise the (1) repair activities of fixing, restoring and replacing of parts, back to inventory, reselling and redistribution, (2) economic outcomes of repair (such as value recovery) and (3) environmental outcomes (such as preventing products from entering landfills).

The *environmental outcomes* of repair, include *environmental protection, sustainability* and reducing natural resource consumpti*on*. Particularly, retailers can protect the environment by accepting products for repair, repairing returned products and reselling/redistributing products, which prevents products from entering landfills or incineration plants. Additionally, like direct reuse, repair can *reduce natural resource consumption* by reducing the need for buying new products/parts (lower production requirements). Consequently, the environmental outcomes of repair represent product flows.

The *market-related outcomes* of repair include consumer service/satisfaction, demand satisfaction and supply satisfaction. Specifically, *consumer service* and *satisfaction* can be *improved* through service/warranty returns by providing repair as a value-added service to consumers. Therefore, retailers can serve and satisfy the original consumers by offering repair as a disposition option for consumer returns. Furthermore, demand satisfaction can be realised through reselling, remarketing and redistribution of repaired products to second consumers. Finally, linking with the environmental outcome of reducing natural resources, repair can reduce production requirements, which can lead to *supply satisfaction*. Alternatively, repair may reduce the need for retailers to purchase new products

since repaired products can be restocked. Essentially, the market-related outcomes represent cash flows, information flows and product flows in repair.

In the next section, the description and conceptual framework of repair will be provided.

5.6.3.6 Description and conceptual framework of repair as a disposition option for consumer returns

Based on the findings presented in section 5.6.3, repair can be an important disposition option in the disposition process of consumer returns, and will be described as follows:

> Repair as a disposition option for consumer returns can be described as a complex and time-consuming disposition option that (1) requires skilled/trained staff, resources, equipment and technology, (2) involves costs and consumer returns, and (3) can be influenced by product type, quality and condition, and legislation. The activities/processes of repair can be classified as activities/processes (1) before repair, including collection, transportation, sorting, storage (product flows) and communication (information flows), (2) during repair, including disassembly, treatment, fixing, parts replacement, (re)testing, restoration, upgrade, servicing and washing/cleaning (product flows), and (3) after repair, including back to inventory, redistribution, delivery (product flows), remarketing (information flow), trading, reselling and charging (cash flows), which can be performed by repair staff of the online retailer and/or other third parties in traditional FL facilities (warehouses and DCs), RL process facilities (collection, processing and disassembly facilities), recovery facilities (service centres, workshops, refurbishment facilities, repair facilities and recovery centres), exit facilities (redistribution facilities), or at consumer locations (residences).
>
> The aims of the repair option are to (1) recover value from used/damaged/defective returned products received from original consumers, (2) restore products to working/resalable condition, and (3) redeliver repaired to the original consumer or resell and redistribute repaired products to second consumers in the primary markets or secondary markets. Repair as a disposition option can result in (1) economic outcomes (profits, economic benefits, value recovery and cost savings and effectiveness), (2) product-related outcomes (working product, extending the product life and product or parts recovery for reuse) (3) environmental outcomes (environmental protection and sustainability, and reduce natural resource consumption), and (4) market-related outcome (consumer service/satisfaction, demand satisfaction and supply satisfaction).

Figure 5.9 provides a conceptual framework for repair as a disposition option in the disposition process that may apply to consumer returns in online retailing.

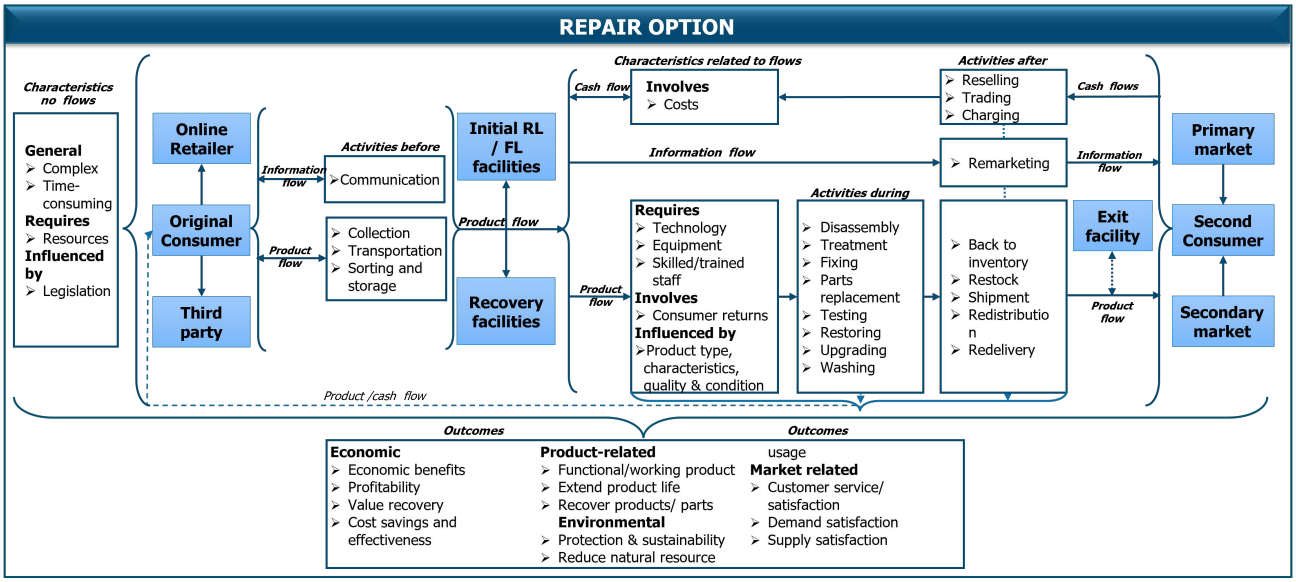


Figure 5.9 Conceptual framework of the repair disposition option
Source: Compiled by the researcher

Figure 5.9 provides a basic overview of repair as a disposition option, illustrating the parties, facilities/locations, flows, characteristics and activities. Particularly, the framework illustrates that the repair option starts with the original consumer, online retailer and third party, performing activities before repair that involve information (communication) and product (collection, transportation, sorting and storage) flows. Additionally, the framework shows that the returned products from consumers can be directed to FL/RL facilities and/or recovery facilities (owned by the online retailers and/or third parties) for further repair operations. In the facilities (of online retailers and third parties) the cash, information and product flows with related characteristics, activities during repair and activities after repair continues. Furthermore, the framework shows that the repaired products can either be delivered from FL/RL and recovery facilities to exit facilities for redistribution to markets or can directly be redistributed to the markets. The markets can include primary or secondary markets with a second consumer purchasing and receiving the repaired product (involving product outflow to the second consumer and cash inflow to the online retailer). Alternatively, the repaired product can be redelivered to the original consumer that may include charges for repair (involving product outflow to the original consumer and cash inflow to the online retailer). Additionally, the framework presents the repair characteristics unrelated to flows. Finally, the framework illustrates the various economic, product-related, environmental and market-related outcomes of repair, which can be realised through successful implementation and execution of repair as a disposition option for consumer returns.

In the next section, refurbishment as a disposition option for consumer returns will be discussed.

5.6.4 Refurbishment as a disposition option for consumer returns

Refurbishment can be selected as a disposition option for consumer returns to recover (economic, product-related, environment and market-related) value from returned products in used/damaged/defective condition. The categories of *refurbishment* identified from the QCA of RL literature included (1) characteristics of refurbishment, (2) activities/processes in refurbishment, (3) facilities/locations in refurbishment, (4) parties involved in refurbishment, and (5) outcomes of refurbishment, which will be presented and discussed in the subsequent sections and concluded with a description and conceptual framework of refurbishment as a disposition option for consumer returns.

5.6.4.1 Characteristics of refurbishment as a disposition option for consumer returns

In this section, the characteristics of refurbishment will be discussed. Table 5.25 provides an overview of the findings related to the *characteristics of refurbishment* as a disposition option for

consumer returns, including detail on the characteristics, sources to support the characteristics and key quotations to support the discussion of the findings.

Table 5.25 Findings related to the characteristics of refurbishment as a disposition option

CHARACTERISTICS	SUPPORTING SOURCES	KEY QUOTATIONS
Complex	None	• *"[…] a more complex refurbishing process."* (Ruiz-Benítez *et al.* 2014:55)
Requires more effort/work	None	• *"Refurbishing […] more work involved […]"* (Rogers et al. 2012:115) • *"[…] considerable effort has to be undertaken to rapidly refurbish the returned product […]."* (De Leeuw *et al.* 2016:711) • *"Refurbishing denotes higher degree of repair […]."* (Sharma *et al.* 2016:416)
Requires expertise and skilled staff	None	• *"[…] specialist technical expertise in terms of product refurbishment […]."* (Bernon & Cullen 2007:54) • *"[…] specialized [sic] personnel and refurbishment […]."* (Gobbi 2011:785) • *"[…] skills for […] refurbishing […]."* (Srivastava & Srivastava, 2006:530)
Requires investments, resources, technology and equipment	Weeks *et al.* (2010:1090)	• *"[…] investment of unnecessary cost to refurbish […]."* (Barker & Zabinsky, 2008:257) • *"[…] logistics infrastructure […] in terms of product refurbishment […]."* (Bernon & Cullen, 2007:54) • *"[…] transportation and handling investment, refurbishment […]."* (Chan *et al.* 2012:1327) • *"[…] dedicated investments in […] refurbishment equipment […]."* (Gobbi, 2011:785) • *"[…] refurbishing […] require significant resources […]."* (Skinner *et al.* 2008:533) • *"[…] appropriate level of technology […] for […] refurbishing returned products."* (Srivastava & Srivastava, 2006:530) • *"[…] refurbishment […] a significant return on investment."* (Vahabzadeh *et al.* 2015:336)
Requires authorisation	None	• *"[…] authorization [sic] for refurbishment […] due to […] refurbishment costs."* (Gobbi, 2011:780)
Involves costs	Kannan *et al.* (2016:13)	• *"[…] the transportation costs for shipping refurbished products […]."* (Assavapokee & Wongthatsanekorn, 2012:137) • *"[…] cost to refurbish a product […]."* (Barker & Zabinsky, 2008:257) • *"[…] refurbishment […] taking into account the costs of the reverse logistics process."* (Bernon & Cullen, 2007:50) • *"[…] refurbishing cost of wheels […]."* (Chan *et al.* 2012: 1327) • *"[…] refurbishment […] fixed costs associated with new facilities."* (Gobbi, 2011:780) • *"[…] excessive refurbishment costs […]."* (Gobbi, 2011:780) • *"[…] processing cost for […] refurbishment […]."* (Piplani & Saraswat, 2012:1428)
Involves time	None	• *"[…] total lead time to perform […] refurbishment […]."* (Gobbi, 2011:780)
Involves technology	Sharma *et al.* (2016:416)	• *"Replacement […] with a higher level of technology is regarded as refurbishing."* (Chan *et al.* 2012:1324) • *"[…] refurbishing is combined with technology upgrading by replacing outdated modules and parts with technologically superior […]."* (Jayaraman *et al.* 2006:982)
Involves product design	None	• *"[…] products could be designed to refurbish […]."* (Das, 2012:1440)
Influenced by market value	None	• *"If the equipment has market value it will be refurbished […]."* (Vahabzadeh *et al.* 2015:335)
Influenced by product type	Agrawal *et al.* (2016b:98) Dowlatshahi (2010a:1367) Ene and Öztürk (2015:287, 295) Gobbi (2011:780; 781) Guarnieri *et al.* (2016:1111) Jayaraman (2006:989) Luitel *et al.* (2014:88) Mazahir *et al.* (2011:100) Piplani and Saraswat (2012:1431) Ponce-cueto *et al.* (2011:108) Ravi (2014:296, 298) Rogers *et al.* (2013:45) Serrato *et al.* (2007:4290) Vahabzadeh *et al.* (2015:335)	• *"[…] mobile phones for refurbishing […]."* (Lau & Wang, 2009:453) • *"[…] office equipment […] to be refurbished […]."* (Alshamrani *et al.* 2007:596) • *"[…] refurbishing […] equipment and machines."* (Alumur *et al.* 2012:67) • *"[…] medical device refurbishing […]."* (Barker & Zabinsky, 2008:250) • *"[…] refurbished […] auto parts […]."* (Chan *et al.* 2012:1321) • *"[…] refurbish the vehicle […]."* (Chan *et al.* 2012:1323) • *"Transmissions can be refurbished […]."* (Chan *et al.* 2012:1327) • *"[…] refurbishment […] of car batteries […]."* (Chan *et al.* 2012:1327) • *"[…] electrical and electronic equipment (EEE) destined for […] refurbishment […]."* (De Oliveira *et al.* 2012:1595) • *"[…] sell refurbished […] TV, refrigerators and mobile handsets […]."* (Das & Dutta, 2013:727) • *"[…] used appliances that may be […] refurbished […]."* (De Oliveira et al. 2012:1597) • *"The refurbished computers […]."* (De Oliveira *et al.* 2012:1606) • *"[…] refurbishment of […] IT equipment […]."* (Gobbi, 2011:788) • *"Refurbished servers […]."* (Keh *et al.* 2012:31) • *"[…] refurbished […] cameras […]."* (Kumar & Putnam, 2008:308) • *"[…] refurbishment […] of printer cartridges […]."* (Mafakheri & Nasiri, 2013:193) • *"[…] spare parts […] for refurbishment […]."* (Mafakheri & Nasiri, 2013:193)
Influenced by product quality and condition	Assavapokee and Wongthatsanekorn (2012:134) Gobbi (2011:773, 781)	• *"[…] items having a low-quality level can be instantaneously refurbished […]."* (Alinovi *et al.* 2012:1243) • *"Replacement of dated parts or components […] is regarded as refurbishing."* (Chan *et al.* 2012:1324)

CHARACTERISTICS	SUPPORTING SOURCES	KEY QUOTATIONS
	Jayaraman *et al.* (2008:410) Konstantaras *et al.* (2010:452, 453) Lau and Wang (2009:456) Mukhopadhyay and Setaputra (2011:5319) Ponce-cueto *et al.* (2011:108) Ravi 2014:298) Sasikumar and Kannan (2008a:159) Singhry (2015:121)	• *"[…] outdated machine may be either shipped back […] for refurbishing […]."* (Barker & Zabinsky, 2008:257 • *"[…] fairly good condition […] for refurbishment […]."* (Chan *et al.* 2012:1323) • *"[…] returned product is in good condition, […] for […] refurbishing […]."* (Das & Chowdhury, 2012:216) • *"Refurbishing […] of used […] products […]."* (Alumur *et al.* 2012:67) • *"If the product is defective or damaged it may undergo […] refurbishment."* (Bernon *et al.* 2011:491) • *"[…] damaged products can be […] refurbished […]."* (Shaharudin *et al.* 2015:7) • (Tan & Kumar, 2006:342) • *"[…] refurbishment […] faulty products […]."* (Piplani & Saraswat, 2012:1428)
Influenced by return type	None	• *"[…] refurbishment of […] dead on arrival […] general customer returns."* (Janse *et al.* 2010:509) • *"[…] the option to refurbish and resell consumer returns […]."* (Reimann, 2016:52) • *refurbishment of* • *"[…] warranty returns […] also […] refurbished […]."* (Janse *et al.* 2010:510)
Influenced by regulations	None	• *"[…] strict environmental regulations […] to refurbish […]."* (Eskandarpour *et al.* 2014:1394) • *"[…] refurbishing […] meeting […] regulatory norms."* (Srivastava & Srivastava, 2006:542)

Source: Compiled by the researcher

Table 5.25 shows that refurbishment as a disposition option can include general, require, involve and influenced by characteristics. The *general characteristic* of refurbishment relates to the *complexity* of refurbishment as a disposition option, which can be explained through the *requirement characteristics* of refurbishment. In comparison with other disposition options (direct reuse and repair), refurbishment requires more work, expertise, skilled staff, investment, resources, equipment and technology. Particularly, refurbishment involves a higher degree of repair, requiring *more effort* and *work* to recover a product. Additionally, refurbishment *staff* must be specialised and well-trained in refurbishment, possessing the necessary technical *expertise* and *skills* to perform refurbishment operations effectively. Accordingly, refurbishment requires financial *investments*, sufficient *resources* (e.g. financial, human, physical and infrastructure), *equipment* and *technology*. Furthermore, refurbishment uniquely *requires authorisation* due to the complexity and high cost of refurbishment.

Subsequently, the *involvement characteristics* of refurbishment include costs, time, technology and product design. Particularly, the *costs* of refurbishment can include (1) transportation and shipping costs, (2) direct costs of refurbishment operations, (3) general RL process costs, and (4) fixed costs, explaining the need for refurbishment authorisation. While the content on refurbishment excluded the general characteristic labelled as "time-consuming", refurbishment can *involve* an element of *time.* Specifically, like repair, refurbishment involves a lead-time, which refers to the total time of performing activities/processes before, during and after refurbishment. Therefore, the refurbishment lead-time may start at product collection and conclude with resale and redistribution to the markets, implying that refurbishment might be a time-consuming disposition option.

In addition to technology as a requirement to execute refurbishment operations, refurbishment *involves technology*, associating with the replacement of outdated technology components in

returned products with newer technology. Lastly, refurbishment can *involve product design,* which refers to the design of products with future refurbishment in mind. For example, a laptop computer can be designed for easy disassembly and parts removable during refurbishment.

Like other disposition options, refurbishment contains various *influenced by characteristics,* including market value, product type, quality and condition, return type and regulation. All these factors influence the selection (or appropriateness) of refurbishment as a disposition option. Specifically, returned products must possess sufficient *market value,* indicating that refurbishment can be inappropriate (due to high investments and costs) for lower value products. Additionally, refurbishment can only be performed on certain types of products, including mobile phones, office equipment (including printer cartridges), machines, electronics, vehicles and automotive parts, medical devices, household appliances, TVs, cameras and other IT equipment, emphasising the require and involve characteristics of expertise and technology.

Furthermore, refurbishment can be appropriate for *lower quality used* products in *good* but *outdated, defective/faulty* or *damaged condition*. Consequently, refurbishment can be more appropriate for lower quality product, emphasising more work, skills and resource requirements in refurbishment. While a product can be low quality, the market value must still drive the appropriateness of refurbishment to ensure that sufficient value can be recovered from the product. In terms of *return types,* refurbishment as a disposition option can be selected for *B2C consumer returns* (dead-on-arrival defective and damaged products) and *warranty returns,* implying that these returned products must be irreparable for refurbishment to be appropriate. Finally, refurbishment as a disposition option for consumer returns can be influenced by *regulations.* Some regions (e.g. Europe) developed environmental regulations, enforcing organisations to accept outdated/damaged/defective/used product returns for refurbishment. In 2023, South Africa is yet to implement such environmental regulations that enforces the refurbishment of returned products. In the next section, the activities/processes in refurbishment will be discussed.

5.6.4.2 Activities/processes in refurbishment as disposition option for consumer returns

Like other repair, the activities in refurbishment can be divided into activities before, during and after refurbishment. Table 5.26 provides an overview of the findings related to the *activities/processes of refurbishment* as a disposition option for consumer returns, including details on the activities, sources to support the activities and key quotations to support the discussion of the findings.

Table 5.26 Findings related to the activities/processes in refurbishment as a disposition option

CATEGORIES	SUBCATEGORIES	SUPPORTING SOURCES	KEY QUOTATIONS
Activities/ processes	***Collection***	Eskandarpour *et al.* (2014:1394) Gobbi (2011:779)	• *"[…] refurbishing […] collected products […]."* (Chan *et al.* 2012:1320)

CATEGORIES	SUBCATEGORIES	SUPPORTING SOURCES	KEY QUOTATIONS
before refurbishment		Mafakheri and Nasiri (2013:193) Guarnieri *et al.* (2016:1111) Konstantaras *et al.* (2010:453, 461) Piplani and Saraswat (2012:1426) Sasikumar and Kannan (2008a:154)	• *"A small number of collected products was refurbished […].* (Korchi & Millet, 2011:594) • *"[…] collected […] for […] refurbishment […]."* (Ponce-cueto *et al.* 2011:107)
	Transportation and shipping	None	• *"Products that may be refurbished are shipped […]."* (Barker & Zabinsky, 2008:257) • *"[…] transport those parts and components […] for […] refurbishing."* (Chan *et al.* 2012: 1321) • *"[…] transportation […] and refurbishment […]."* (Gobbi, 2011:780) • *"[…] returned products at […] should be […] transshipped [sic] […] for potential […] refurbishment."* (Min *et al.* 2006:58)
	Receiving	None	• *"[…] receiving […] and refurbishment […]."* (Gobbi, 2011:780) • *"[…] receives returns […] and […] refurbishes […]."* (Zuluaga *et al.* 2016:2)
	Product evaluation and inspection	Ruiz-Benítez *et al.* (2014:56) Min et al. (2006:58)	• *"[…] outdated product is evaluated for […] refurbishing."* (Barker & Zabinsky, 2008:257) • *"Each part is […] inspected, then refurbished […]."* (Jayaraman *et al.* 2008:410, 424) • *"[…] returned products from […] end-customers were inspected […] and refurbished […]."* (Min & Ko, 2008:176) • *"[…] assesses article quality and […] refurbishes […]."* (Zuluaga *et al.* 2016:2)
	Sorting	Min *et al.* (2006:58)	• *"Sorting and refurbishing take place […]."* (Gu & Tagaras, 2014:5156) • *"[…] refurbishing […] returned goods were classified according to their condition […]."* (Bernon & Cullen, 2007:48) • *"[…] sorting, refurbishment […] processes."* (Mafakheri & Nasiri, 2013:193) • *"[…] sorted for […] refurbishment […]."* (Min & Ko, 2008:179)
	Storage	Min *et al.* (2006:58)	• *"[…] remainder is stored for several months before being refurbished […]."* (El Korchi & Millet, 2011:594) • *"[…] for […] refurbishment, stored long enough to create volume for freight consolidation […]."* (Min & Ko, 2008:179) • *"[…] stored […] for […] refurbishment […]."* (Ponce-cueto *et al.* 2011:107)
	Handling	None	• *"[…] handling of a large volume of spare parts […] for refurbishment […]."* (Tan & Kumar, 2006:342)
	Authorisation	None	• *"[…] authorization [sic] for refurbishment […]."* (Gobbi, 2011:780)
	Instructions	None	• *"Employees […] are provided detailed instructions about […] refurbishing items."* (Stock & Mulki, 2009:49)
Activities during refurbishment	***Disassembly & dismantling***	Das and Chowdhury (2012:216) Gobbi (2011:780) Kim *et al.* (2006:282) Selvi & Kayar (2016:17)	• *"[…] functionalities include […] refurbishing, […] and disassembling […]."* (Assavapokee & Wongthatsanekorn, 2012:137) • *"[…] disassembling the items for […] refurbishing."* (Chan *et al.* 2012: 1329) • *"The refurbishment process involves […] dismantling […]."* (Piplani & Saraswat, 2012:1424)
	Refining and renovating	None	• *"[…] refurbishing refers to refining, renovating […] the returned or collected products."* (Chan *et al.* 2012:1320)
	Cleaning	Chan *et al.* (2012:1320) Kim *et al.* (2006:280)	• *"The refurbishment process involves cleaning […]."* (Piplani & Saraswat, 2012:1424) • *"Each part is cleaned […] then refurbished […]."* (Jayaraman *et al.* 2008:410)
	Treatment	None	• *"[…] refurbishment […] and […] pretreatment […]."* (Gobbi, 2011:780)
	Repairing/fixing	Sharma *et al.* (2016:416)	• *"The purpose of refurbishing is […] repairing […]."* (Chan *et al.* 2012:1324) • *"Refurbishing […] involves fixing […]."* (Sharma *et al.* 2016:416)
	Restoring	None	• *"Refurbishing […] involves […] restored products […]. Restoration gives the used product […]."* (Singhry, 2015:121)
	Replacing parts	García-Rodríguez *et al.* (2013:585) Singhry (2015:121)	• *"The purpose of refurbishing is to increase the quality of the returned products […] replacing part of them […]."* (Chan *et al.* 2012:1324) • *"[…] refurbishing is […] replacing outdated modules and parts […]."* (Jayaraman, 2006:982) • *"Refurbishing […] involves fixing the improper modules and replacing them […]."* (Sharma *et al.* 2016:416)
	Testing	Gobbi (2011:784) Janse *et al.* (2010:510) Keh *et al.* (2012:31)	• *"[…] facility […] tests, refurbishes, and repackages the returns […]."* (Ruiz-Benítez *et al.* 2014:56) • *"The refurbishment process involves […] testing […]."* (Piplani & Saraswat, 2012:1424)
	Rework	None	• *"Refurbished […] are reworked and then tested."* (Keh *et al.* 2012:31)
	Upgrade	None	• *"Refurbishing […] some products may need an upgradation […]."* (Subhashini, 2016:9) • *"[…] refurbishing is […] upgrading […] modules and parts […]."*

CATEGORIES	SUBCATEGORIES	SUPPORTING SOURCES	KEY QUOTATIONS
			(Jayaraman, 2006:982)
	Assembly	None	• *"The refurbishment process involves […] assembling […]."* (Piplani & Saraswat, 2012:1424)
Activities after refurbishment	***Retesting***	None	• *"[…] refurbished products back, retests them again […]."* (Janse *et al.* 2010:510)
	(Re)packaging	None	• *"[…] refurbishes and repackages the returns […]."* (Ruiz-Benítez *et al.* 2014:56) • *"The refurbishment process involves […] packaging […]."* (Piplani & Saraswat, 2012:1424)
	Back to inventory	None	• *"Usable parts are […] refurbished and put into part inventory."* (Kim *et al.* 2006:280) • *"Refurbished products […] inventory […]."* (Konstantaras *et al.* 2010:452)
	Storage and packing	None	• *"After refurbishment, products are stored in the warehouse and finally packed."* (Gobbi, 2011:781)
	Shipping and transportation	Assavapokee and Wongthatsanekorn (2012:134)	• *"[…] refurbished […] will be transported […]."* (Chan *et al.* 2012:1326) • *"[…] shipped […] after refurbishing operations."* (Ene & Öztürk, 2015:287)
	Redistribution	El-Sayed *et al.* (2010:425) Janse *et al.* (2010:510) Min and Ko (2008:176)	• *"Products after refurbishment […] are redistributed […]."* (Agrawal *et al.* 2016a:935) • *"[…] redistribution of […] refurbished products […]."* (Asdecker, 2015:3)
	Remarketed	Janse *et al.* (2010:510)	• *"[…] the product is […] refurbished […] and remarketed."* (Gobbi, 2011:774)
	Reselling	Agarwal *et al.* (2016:5) Agrawal *et al.* (2016b:93) Alshamrani *et al.* (2007:596) Bernon and Cullen (2007:49) Chan *et al.* (2012:1321) Das and Dutta (2013:721) De Oliveira *et al.* (2012:1597 Guarnieri *et al.* (2016:1111) Jayaraman (2006:989) Kannan *et al.* (2016:9) Keh *et al.* (2012:31) Konstantaras *et al.* (2010:453) Kumar and Putnam (2008:308) Lai *et al.* (2013:110) Mafakheri and Nasiri (2013:187,193) Mazahir *et al.* (2011:100) Ponce-cueto *et al.* (2011:107) Prahinski and Kocabasoglu (2006:422) Reimann (2016:32) Rogers *et al.* (2013:45) Sasikumar and Kannan (2008a:154) Skinner *et al.* (2008:519) Vahabzadeh *et al.* (2015:335)	• *"[…] refurbishment […] for resale […]."* (Agrawal *et al.* 2016a:935) • *"[…] refurbished items which can be sold to some customers […]."* (Assavapokee & Wongthatsanekorn, 2012:134) • *"[…] refurbished and sold through a couple of newly developed clearance stores."* (Assavapokee & Wongthatsanekorn, 2012:134) • *"[…] refurbishment […] and sell in secondary markets."* (Bernon & Cullen, 2007:49) • *"[…] refurbish the returned product in order to ensure quick availability for resale."* (De Leeuw *et al.* 2016:711, 716) • *"[…] refurbish […] and resell them […]."* (Dowlatshahi, 2010a:1367) • *"[…] products that are refurbished and sold via a network of brokers."* (Gobbi, 2011:784) • *"[…] is refurbished, it is sold through auctions or catalog sales […]."* (Mazahir *et al.* 2011:100) • *"[…] refurbishes the item and offers it for sale […]."* (Mukhopadhyay & Setaputra, 2006:718) • *"[…] resold […] after […] refurbishment […]."* (Srivastava & Srivastava, 2006:525, 530) • *"[…] sell these products as refurbished […]."* (Piplani & Saraswat, 2012:1424)

Source: Compiled by the researcher

Table 5.26 presents the activities/processes associated with refurbishment, including the activities/processes before refurbishment, the activities during refurbishment and the activities/processes after refurbishment, which will be mentioned and explained below.

Like repair, the *activities before* refurbishment mostly involve other RL processes, including *collection, transportation, receiving, inspection* (evaluation) and *sorting* (product classification). All these RL processes involve product flows, which explains *handling* as an important activity before refurbishment. Additionally, like repair, *storage* of product returns might be necessary before these products are transported to other facilities, for the purpose of volume consolidation to save transportation costs and reduce refurbishment costs. While most activities before refurbishment involve product flows, authorisation and instructions as activities before refurbishment involve

information flows. Since refurbishment requires authorisation (characteristic), receiving *authorisation* for refurbishment can be an important activity before returned products can be refurbished. Additionally, due to the complexity of refurbishment (general characteristic), pre-refurbishment activities can involve the provision of *instructions* (e.g. instruction manuals) to staff before refurbishment can be performed.

The *activities during refurbishment*, including disassembly/dismantling, refining, renovating, cleaning, treatment, repairing/fixing, restoring, parts replacement, testing, reworking, upgrading and assembly, can associate with product type and condition as (influenced by) characteristics of refurbishment. For example, refurbishment of computers and cell phones can involve *testing, disassembly, repairing/fixing, restoring, parts replacement, upgrade* and *assembly*, while *vehicles* can also include *treatment, renovation, reworking, restoration* and *cleaning*. Additionally, refurbishment of returned products in defective/faulty condition can involve *testing* and *fixing/repair*, used products in outdated condition can involve *parts replacement* and *rework*, and products in damaged condition may require *restoration* and *cleaning*. Essentially, all activities during refurbishment involve product flows.

Finally, several *activities/processes* can take place *after* refurbishment, including retesting, repackaging, back to inventory, storage, packaging, shipping, transportation, redistribution, remarketing and reselling. *Retesting* of a refurbished product may be needed to ensure that the product is fit for resale. Additionally, the refurbished product can be *repackaged, placed back in inventory, stored* and *packed* for *shipment* and *transportation* to the next location (e.g. initial facility) or *redistribution* to markets, involving product flows in refurbishment. Furthermore, like repair, refurbishment can include remarketing activities, involving information flows, and reselling activities, involving cash flows, which can point to the economic and market-related outcomes (such as profits and demand satisfaction) of refurbishment (section 5.6.4.5).

In the next section, the facilities/locations in refurbishment will be explored.

5.6.4.3 Facilities/locations in refurbishment as a disposition option for consumer returns

Various facilities/locations associate with refurbishment as a disposition option for consumer returns, which will be identified and discussed in this section. Table 5.27 provides an overview of the findings related to the *facilities/locations in refurbishment* as a disposition option for consumer returns, including details on the facilities, sources to support the mentioned facilities and key quotations to support the discussion of the findings.

Table 5.27 Findings related to the facilities/locations in refurbishment as a disposition option

FACILITIES / LOCATIONS	SUPPORTING SOURCES	KEY QUOTATIONS
Warehouses	None	• *"Products that may be refurbished are shipped to a warehouse […] and then they are refurbished […]."* (Barker & Zabinsky, 2008:257) • *"Used items are […] brought to a warehouse facility where […] refurbishing occurs."* (Konstantaras *et al.* 2010:453) • *"Some warehouses, however, may dedicate their space for […] refurbishment […]."* (Min & Ko, 2008:179) • *"At warehouses […] returned products should be inspected for quality failure, sorted for […] refurbishment, stored […] and then shipped […]."* (Min & Ko, 2008:179)
CRCs	None	• *"[…] centralized [sic] return centers where returned products are […] sorted for refurbishment […] and shipped […]."* (Min *et al.* 2006:58)
Collection facilities	None	• *"[…] refurbished products are treated in collection center [sic]."* (Dhib *et al.* 2016:376) • *"[…] refurbishing activities […] may be carried out […] at collection centers [sic] […]."* (Srivastava & Srivastava, 2006:528)
Processing facilities	None	• *"Processing facility […] functionalities include […] refurbishing […]."* (Assavapokee & Wongthatsanekorn, 2012:137) • *"[…] the central processing facility […] refurbishes […]."* (Ruiz-Benítez *et al.* 2014:56)
Disassembly facilities	None	• *"[…] refurbishing quantity cannot exceed the capacity of the disassembly site […]."* (Kim *et al.* 2006:284)
Repair facilities	None	• *"[…] repair facilities, returned products should be inspected for quality failure, sorted for […] refurbishment, stored […] and then shipped […]."* (Min & Ko, 2008:179) • *"[…] products are inspected for […] refurbishment […] and shipped to […] repair depots […]."* (Min *et al.* 2006:58) • *"[…] repair facilities where returned products […] were […] refurbished […]."* (Min & Ko, 2008:176) • *"Repair […] center […] for […] refurbishing returned products."* (Srivastava & Srivastava, 2006:530) • *"[…] repair […] centres […] that […] refurbish goods […]."* (Turrisi *et al.* 2013:567)
Service centres	None	• *"[…] refurbished components at their service center [sic] […]."* (Agarwal *et al.* 2016:5) • *"[…] refurbishment at service centres."* (Piplani & Saraswat, 2012:1428)
Workshops	None	• *"[…] refurbishment of PCs is a very common practice carried out in informal or semi-formal workshops."* (De Oliveira *et al.* 2012:1607)
Recovery centres	None	• *"[…] recovery centers [sic] are sufficient to refurbish […]."* (Gobbi, 2011:789)
Refurbishment facilities	Bernon and Cullen (2007:49 Kim *et al.* (2006:284)	• *"[…] refurbishing take place at the refurbishing site."* (Gu & Tagaras, 2014:5156) • *"[…] refurbishing center [sic] for a more complex refurbishing process."* (Ruiz-Benítez *et al.* 2014:55) • *"[…] refurbish center [sic]: A rework facility using appropriate level of technology and skills for […] refurbishing returned products."* (Srivastava & Srivastava, 2006:530) • *"[…] refurbishing centres […] that […] refurbish goods […]."* (Turrisi *et al.* 2013:567)
Redistribution facilities	None	• *"[…] reverse distribution center [sic] […] refurbishes […] if necessary."* (Zuluaga *et al.* 2016:2) • *"Redistribution locations are responsible for the distribution of refurbished products to the second customers."* (El-Sayed *et al.* 2010:425)
Secondary market retail stores	None	• *"[…] retail stores (so called secondary market) who sell refurbished […] handsets […]."* (Das & Dutta, 2013:727) • *"[…] refurbished and sold through a couple of newly developed clearance stores."* (Bernon & Cullen 2007:49)
Markets	Agarwal *et al.* (2016:5) Agrawal *et al.* (2016a:935) Bernon and Cullen (2007:49) Das and Dutta (2013:721) De Oliveira *et al.* (2012:1597, 1606) Janse *et al.* (2010:510) Kannan *et al.* (2016:9) Keh *et al.* (2012:31) Kumar and Putnam (2008:308) Mukhopadhyay and Setaputra (2006:719) Ponce-cueto *et al.* (2011:107) Rogers *et al.* (2012:107) Shaharudin *et al.* (2015:7) Srivastava and Srivastava (2006:525) Tan and Kumar (2006:337) Vahabzadeh *et al.* (2015:335)	• *"[…] refurbish and resell in secondary market."* (Agrawal *et al.* 2016b:98) • *"[…] effective refurbishment […] through traditional and emerging novel secondary […] to market."* (Bernon & Cullen, 2007:52) • *"[…] parts are shipped to the secondhand market after refurbishing operations."* (Ene & Öztürk, 2015:287) • *"[…] refurbishes […] after which they are reintroduced into the marketplace."* (Ruiz-Benítez *et al.* 2014:56) • *"[…] create and exploit the markets for refurbished […] goods."* (Jayaraman *et al.* 2008:412) • *"Demand of refurbished products and components occurring from the secondary market […]."* (Kannan *et al.* 2016:6) • *"Refurbished products are kept […] and are later sold […] in a secondary market at a reduced price."* (Konstantaras *et al.* 2010:452) • *"[…] refurbished, it is sold through auctions or catalog [sic] sales […]."* (Mazahir *et al.* 2011:100) • *"Refurbishing […] before entering the markets."* (Subhashini, 2016:9) • *"A consumer who purchases a refurbished laptop […] are good examples of selling on the secondary market […]."* (Rogers *et al.* 2013:45)

Source: Compiled by the researcher

Table 5.27 shows the *facilities/locations* used for the refurbishment option include (1) traditional FL facilities (such as warehouses), (2) RL process facilities (such as CRCs, collection, processing, and disassembly facilities), (3) recovery facilities (such as repair facilities, service centres, workshops, recovery centres and refurbishment facilities), (4) exit facilities (such as redistribution facilities), and (5) market locations. The functionalities of these facilities and locations can be described in terms of the activities/processes in refurbishment as a disposition option (see section 5.6.4.2).

The *traditional FL facilities* used for repair can include warehouses, which can perform (1) processes/activities before refurbishment, including receiving products from consumers, inspection, sorting, authorisation, instructions, handling and storage of returned products before shipment to other facilities for refurbishment, or (2) activities during refurbishment (e.g. testing, treatment and cleaning). Evidently, organisations can combine FL operations alongside refurbishment activities in their existing warehouses.

Additionally, RL process facilities, including CRCs and collection, processing and disassembly facilities can be used for refurbishment activities/processes. *CRCs* can be the only RL facility responsible for processes/activities before refurbishment, for example, collection, transportation, receiving, evaluation, authorisation, sorting, storage and shipment. Therefore, CRCs can be regarded as first-tier (or initial) facilities in refurbishment. In contrast, *collection facilities*, *processing facilities* and *disassembly facilities* can be used for activities during refurbishment. Consequently, these RL process facilities can be second tier facilities that represent product flows in refurbishment, excluding information and cash flow activities.

Like repair, the *recovery facilities* that can be used for refurbishment include repair facilities, service centres, workshops, recovery centres, and refurbishment facilities. *Repair facilities* represent the only recovery facilities that can perform activities/processes before refurbishment, including inspection, sorting, handling, storage and shipment to other facilities for refurbishment. Alternatively, repair facilities can perform activities during refurbishment, like *service centres*, *workshops*, *recovery centres*, and refurbishment facilities. Consequently, the same facilities that can be used for repair operations can be used for refurbishment. However, *refurbishment facilities* specialise in refurbishment activities, possessing the necessary expertise, skills and technology required (characteristics) for effective refurbishment operations (see section 5.6.4.1).

In terms of *exit facilities*, *redistribution facilities* can perform activities during and after refurbishment, implying that some redistribution facilities specialise in recovery activities. However, redistribution facilities represent the only facilities in refurbishment with the function of redistributing refurbished products to secondary market retail stores and markets as locations in

refurbishment. *Secondary market stores* can perform activities after redistribution, including remarketing and reselling of refurbished products on the secondary markets. Consequently, refurbished products are predominantly destined for *secondary markets*, emphasising the higher recovery rate of direct reuse and repair options that involve sales in the primary markets (section 5.6.2 and 5.6.3).

In the next section, the parties in refurbishment will be analysed and discussed.

5.6.4.4 Parties involved in refurbishment as a disposition option for consumer returns

In this section, the parties that can be involved in refurbishment will be identified and discussed. Table 5.28 provides an overview of the findings related to the *parties in refurbishment* as a disposition option for consumer returns, including details on the parties, sources to support the mentioned parties and key quotations to support the discussion of the findings.

Table 5.28 Findings related to the parties in refurbishment as a disposition option

PARTIES	SUPPORTING SOURCES	KEY QUOTATIONS
Consumers	Agrawal *et al.* (2016a:21) Alinovi *et al.* (2012:1243) Chan *et al.* (2012:1321) Guarnieri *et al.* (2016:1108) Konstantaras *et al.* (2010:454) Kumar and Putnam (2008:308) Min and Ko (2008:176, 177) Morgan *et al.* (2016:305) Mukhopadhyay and Setaputra (2006:726) Skinner *et al.* (2008:521) Tan and Kumar (2006:337)	• *"[…] consumer returns increase the maximum supply of new and refurbished units […]."* (Reimann, 2016:51, 52) • *"[…] refurbishing: […] according to […] customer demand […]."* (Keh *et al.* 2012:31) • *"[…] distribution of refurbished products to the second customers."* (El-Sayed *et al.* 2010:425) • *"[…] refurbished items which can be sold to some customers […]."* (Assavapokee & Wongthatsanekorn, 2012:134) • *"[…] shipping refurbished products and/or components to online customers […]."* (Assavapokee & Wongthatsanekorn, 2012:137) • *"They are held until a customer order is received, and then they are refurbished to fill the order […]."* (Barker & Zabinsky, 2008:257) • *"A consumer who purchases a refurbished laptop […]."* (Rogers *et al.* 2013:45) • *"Refurbishing […] before delivery to the consumer […]."* (Selvi & Kayar, 2016:17) • *"[…] refurbishment […] of the return of products by customers."* (Bernon & Cullen, 2007:50)
Retailers	Mafakheri and Nasiri (2013:193)	• *"[…] retailers and considerable effort has to be undertaken to rapidly refurbish the returned product […]."* (De Leeuw *et al.* 2016:711) • *"[…] products from retailers or end-customers were […] refurbished […]."* (Min & Ko, 2008:176) • *"[…] product demands at the retailers are satisfied through the refurbishment."* (Piplani & Saraswat, 2012:1430) • *"[…] retailer can refurbish and resell consumer returns […]."* (Reimann, 2016:32) • *"[…] to refurbish […] consumer returns, the retailer will strengthen its bargaining position […]."* (Reimann, 2016:52) • *"[…] retailers […] do not have specialist technical expertise in terms of product refurbishment […]."* (Bernon & Cullen, 2007:54)
Staff	None	• *"[…] dedicated […] personnel and refurbishment […]."* (Gobbi, 2011:785) • *"[…] reverse logistics manager […] is charged with collecting electronics for refurbishing […]."* (Guarnieri *et al.* 2016:1111) • *"Employees tasked with […] refurbishing items."* (Stock & Mulki, 2009:49)
Third parties	Chan *et al.* (2012:1321) Dowlatshahi (2010a:1367) Sheu and Gao (2014:324) Srivastava (2008:536)	• *"[…] collectors would transport those parts […] for […] refurbishing."* (Chan *et al.* 2012:1321) • *"[…] products are […] sorted for […] refurbishment […] and shipped to […] third-party logistics provider's repair depots […]."* (Min et al. 2006:58) • *"[…] third parties for reverse logistics […] the following activities are to be further outsourced […] refurbishment […]."* (Janse *et al.* 2010:510) • *"3PRL provider […] carries out […] refurbishing […]."* (Agarwal *et al.* 2016:5) • *"[…] LSP is providing […] the refurbishment […]."* Janse *et al.* 2010:509) • *"The 4PL will then refurbish the returned product […]"* (Mukhopadhyay & Setaputra, 2006:719) • *"A partnership also existed with regard to refurbishment, and this was done through a third-party specialist organisation […]."* (Bernon & Cullen, 2007: 49) • *"[…] jobbers who would carry out the refurbishment […]."* (Bernon & Cullen, 2007:49) • *"RSP then assumes the ownership of the returned goods and refurbishes the item and*

PARTIES	SUPPORTING SOURCES	KEY QUOTATIONS
		offers it for sale […].” (Mukhopadhyay & Setaputra, 2006:718) • *“Refurbished products […] are acquired by brokers.”* (Gobbi, 2011:782) • *The customers for these refurbished parts […] could be the secondary markets such as dealers, resellers […].”* (Tan & Kumar, 2006:337)

Source: Compiled by the researcher

Table 5.28 shows that several parties, including consumers, retailers, staff and third parties, can play various roles in refurbishment as a disposition option for consumer returns, which will be briefly described in the following paragraphs.

Consumer can play primary roles in refurbishment with (1) *original consumers* responsible for supplying (returning) products for refurbishment, and (2) *second consumers* creating a demand for refurbished products, and ordering, buying and receiving refurbished products. Consequently, consumers can contribute to the outcomes of refurbishment, including economic outcomes (such as profitability through buying), environmental outcomes (such as reducing waste by supplying products) and market-related outcomes (such as increasing sales), which will be explored in section 5.6.4.5.

Similarly, *retailers* can play various roles in refurbishment, including (1) receiving consumer returns for refurbishment, (2) selecting refurbishment as a disposition option, (3) developing skills/expertise to perform inhouse refurbishment, (4) outsource refurbishment to third parties, (5) (re)sell refurbished products and (6) creating a demand for refurbished products. Evidently, retailers in refurbishment include the original retailer of the returned product for refurbishment and the second retailer that buy and resell refurbished products. Furthermore, original retailers can employ *staff* to perform activities before and during refurbishment. Particularly, *RL managers* can be responsible for activities before refurbishment, including collection and transportation of products for refurbishment, and specialised *refurbishment staff* (with the skills and expertise) can be responsible for activities during refurbishment (e.g. disassembly, refining, renovating, treatment, repairing/fixing, restoring, parts replacement, testing, reworking, upgrading and assembly).

The roles of *third parties* in refurbishment can include activities before, during and after refurbishment and buying of refurbished products. Particularly, *collectors* can be responsible for activities before refurbishment, including collection and transportation of products for refurbishment. Additionally, *3P(R)L providers*, *LSPs*, *4PL providers* and *third-party refurbish specialists* can be outsourced parties that provide facilities and expertise to perform refurbishment activities on behalf of retailers. Some third parties operate in the secondary markets performing activities during and after refurbishment. For instance, *jobbers* and *recovery service providers (RSPs)* can perform activities during refurbishment and *RSPs* can perform activities after refurbishment, including

reselling of refurbished products. Finally, *brokers*, *dealers* and *resellers* can buy refurbished products from other third parties or retailers for resale in secondary markets. Some of these parties' associate with the exit options in the disposition process, which will be discussed in section 5.6.5.

In the next section, the significance of refurbishment as a disposition option for consumer returns will be explored through the outcomes.

5.6.4.5 Outcomes of refurbishment as a disposition option for consumer returns

The refurbishment outcomes were divided into categories, including economic, product-related, environmental and market-related outcomes. Table 5.29 provides an overview of the findings related to the *outcomes of refurbishment* as a disposition option for consumer returns, including detail on the categories, outcomes, sources to support the outcomes and key quotations to support the discussion of the findings.

Table 5.29 Findings related to the outcomes of refurbishment as a disposition option

CATEGORIES	SUBCATEGORIES	SUPPORTING SOURCES	KEY QUOTATIONS
Economic outcomes	***Economic benefits and profitability***	Agarwal *et al.* (2016:5) Jayaraman (2006:997) Jayaraman *et al.* (2008:413) Mafakheri and Nasiri (2013:188, 193) Mukhopadhyay and Setaputra (2011:5319) Reimann (2016:41) Srivastava and Srivastava (2006:542) Vahabzadeh (2015:336)	• *"Revenue […] is generated by selling the refurbished products […]."* (Kannan *et al.* 2016:9) • *"[…] re-sells refurbished products creates an additional source of income."* (Dowlatshahi, 2010a:1368) • *"[…] the cost of refurbishing is more than compensated for by the profit generated by the sale of the products."* (Piplani & Saraswat, 2012:1424) • *"[…] the profits increase as sales increase and as more used units are collected for refurbishing […]."* (Konstantaras *et al.* 2010:461) • *"[…] refurbished […] options can provide significant […] economic benefits […]."* (Serrato *et al.* 2007:4290) • *"[…] refurbishment […] of the product […] a significant return on investment."* (Weeks *et al.* 2010:1090)
	Cost saving	None	• *"[…] a refurbished product […] firms will spend less on the recovery costs […]."* (Mukhopadhyay & Setaputra, 2011:5319) • *"[…] refurbishing option […] reduced overall supply cost […]."* (Reimann, 2016:52)
	Cash/value recovery	Jayaraman (2006:989)	• *"This was very important from a financial point of view since refurbishment allowed additional cash recovery."* (Bernon & Cullen, 2007:48) • *"[…] refurbishment process that enabled significant cash recovery after taking into account the costs of the reverse logistics process."* (Bernon & Cullen, 2007:50) • *"[…] refurbished […] and getting additional value out of an asset."* (Rogers *et al.* 2013:45) • *"[…] refurbishing cost […] is acceptable because of […] high resale value."* (Chan *et al.* 2012:1327) • *"[…] refurbishment process […] aim at recovering value […]."* (Gobbi, 2011:783) • *"[…] refurbishment […] to recapture value."* (Lau & Wang, 2009:456)
Product-related outcomes	***Working / Like new products***	Srivastava and Srivastava (2006:529)	• *"After refurbishing process, 'as new' parts are stocked as part inventory […]."* (Kim *et al.* 2006:281) • *"[…] refurbish goods in order to make them almost "as good as new" […]."* (Turrisi *et al.* 2013:567)
	Increase quality and new warranty	Gobbi (2011:773) Konstantaras *et al.* (2010:452) Sasikumar and Kannan (2008a:159) Mazahir *et al.* (2011:100)	• *"[…] refurbishing is to increase the quality of the returned products […]."* (Chan *et al.* 2012:1324) • *"Quality standards […] are achieved through refurbishing […]."* (Choi *et al.* 2007:764) • *"[…] refurbishing will […] ensure quality and provide the required warranty […]."* (Das & Chowdhury, 2012:216) • *"[…] refurbished […] back to a specified quality level […]."* (Jayaraman *et al.* 2006:982) • *"Refurbished […] the same guarantees as new products […]."* (Keh *et al.* 2012:31) • *"Product refurbishing […] increase the life and quality of the product."* (Selvi & Kayar, 2016:17)
	Extend product lifecycle	Singhry (2015:121)	• *"Refurbishing restores the […] used products and extends their service-life."* (Konstantaras *et al.* 2010:452)

CATEGORIES	SUBCATEGORIES	SUPPORTING SOURCES	KEY QUOTATIONS
			• *"Product refurbishing […] increase the life […] of the product."* (Selvi & Kayar, 2016:17) • *"[…] returned products can be […] refurbished […] thus, extending their useful life."* (Shaik & Abdul-Kader, 2014:92)
	Product recovery for reuse	None	• *"Product recovery activities such as […] refurbishing […]."* (Barker & Zabinsky, 2011:558) • *"[…] recovery of goods […] in […] refurbishment […]."* (Bernon & Cullen, 2007:50)
Environmental outcomes	***Environmental benefits and performance***	Ponce-cueto *et al.* (2011:106)	• *"[…] environmental perspective supports sound practices, such as […] refurbishing […]."* (Beh *et al.* 2016:6) • *"[…] green and ecologically friendly, because […] refurbishing […] a product […]."* (Hsu *et al.* 2016:95) • *"[…] refurbishing, […] allow […] environmental gains."* (Lai *et al.* 2013:110) • *"[…] environmental performance of a reverse logistics from the perspective of refurbished products."* (Mafakheri & Nasiri, 2013:193) • *"[…] refurbished […] provide significant environmental […] benefits […]."* (Serrato *et al.* 2007:4290)
	Environmental protection and waste reduction	None	• *"[…] product refurbishment […] minimise […] waste into the environment […]."* (Badenhorst & Nel, 2012:82) • *"[…] refurbishing […] a product instead of throwing it in a landfill protects the environment."* (Hsu *et al.* 2016:95) • *"[…] refurbishment, […] to achieve the goals of […] protecting the environment […]."* (Sheu & Gao, 2014:324)
	Comply with environmental laws	Srivastava and Srivastava (2006:542)	*"[…] response to environmental pressure to […] refurbish […]."* (Jayaraman, 2006:997)
	Reduce natural resource usage	None	• *"[…] refurbishment […] to achieve the goals of saving resources […]."* (Sheu & Gao, 2014:324)
Market-related outcomes	***Market benefits and competitiveness***	None	• *"[…] refurbishing […] to obtain good market impact […]."* (Das & Chowdhury, 2012:216) • *"[…] refurbished […] products in direct competition with […] new products."* (Prahinski & Kocabasoglu, 2006:526) • *"[…] refurbishment […] enhancing competitiveness."* (Sheu & Gao, 2014:324)
	Increase sales	None	• *"[…] refurbishing option […] benefit from […] increased sales […]."* (Reimann, 2016:52) • *"[…] sales increase and as more used units are collected for refurbishing […]."* (Konstantaras *et al.* 2010:461)
	Satisfy demand	Keh *et al.* (2012:31) Piplani and Saraswat (2012:1430) Srivastava and Srivastava (2006:542)	• *"Consumer awareness and social acceptability […] will motivate them to buy refurbished […]."* (Agrawal *et al.* 2016a:21) • *"[…] customer order is received, and then they are refurbished to fill the order […]."* (Barker & Zabinsky, 2008:257) • *"[…] refurbished […] and then returned to the supply chain to satisfy future demands."* (Jayaraman *et al.* 2008:424) • *"Demand of refurbished products […] from the secondary market."* (Kannan *et al.* 2016:6) • *"[…] demand from people […] who buy refurbished equipment […]."* (Luitel *et al.* 2014:88) • *"[…] demand for the refurbished item […]."* (Mukhopadhyay & Setaputra, 2006:720) • *"Customer demand is satisfied by both new and refurbished products."* (Mukhopadhyay & Setaputra, 2011:5319)
	Customer service/satisfaction	None	• *"[…] refurbishment ensures that the customer will be satisfied."* (Morgan *et al.* 2016:305) • *"[…] improve services provided to customers as regards […] refurbishing returned products […]."* (Alinovi *et al.* 2012:1243)

Source: Compiled by the researcher

Table 5.29 shows the outcomes of refurbishment can include economic, product-related, environmental and market-related outcomes, indicating that refurbishment as a disposition option for consumers can add value to the RL process.

The *economic outcomes* of refurbishment include economic benefits, profitability, cost savings, cash and value recovery, representing the cash flows in the refurbishment option. The *economic benefits* of refurbishment can be realised through *revenue/income/profits* of reselling refurbished products and receiving a return on investment for expenses related to refurbishment. Therefore, the expertise,

skills resources and investment requirements (characteristics) for refurbishment (see section 5.6.4.1) can be justified through profits and return on investment through sales of refurbished products. Additionally, *cost savings* in refurbishment may be realised through recovery activities by avoiding purchasing costs of new products/parts. Furthermore, the *cash* or *value recovery* from refurbishment activities can contribute to cost savings and economic benefits associated with refurbishment. Particularly, refurbishment allow for (1) cash recovery of RL costs, (2) additional value out of assets and (3) high resale value of returned products.

Relating to product flows, the *product-related outcomes* in refurbishment include working and like new products, increase in quality and a new warranty, extend the product life and product recovery for reuse. Therefore, through refurbishment a used/defective/damaged/outdated returned product can be restored to a *working* and *good as new* product with improved *quality* and a *new warranty,* which *extends the product life* through reselling the refurbished product. Essentially, like the repair option (see sections 5.6.3.5) the returned *product* is *recovered* through refurbishment.

Refurbishment involves various *environmental outcomes,* which include environmental benefits and performance, environmental protection and waste reduction, comply with environmental laws and save natural resources. In terms of the *environmental benefits,* refurbishment can be viewed as a green and environmentally friendly disposition option, which enhances an organisation's environmental *performance.* Additionally, through refurbishment *waste* can be *reduced* by preventing returned products from entering landfills, resulting in *environmental protection.* Additionally, refurbishment can allow organisations to *comply with environmental laws* or *regulations,* which emphasise the influence of legislation (characteristic) on choosing refurbishment as a disposition option (see section 5.6.4.1). Furthermore, refurbishment can *save natural resources,* which emphasise the potential production cost savings (purchasing costs) associated with refurbishment.

The *market-related outcomes* of refurbishment include market benefits and competitiveness, an increase in sales, satisfy demand and customer service/satisfaction. In contrast to repair (section 5.6.3.5), refurbishment allow for greater *market benefits* and can enhance an organisation's competitiveness in the market. Particularly, refurbished products can compete with new products, confirming the product-related outcomes of higher quality, new warranty and like new products. Evidently, by selling refurbished products alongside new products, organisations can *increase their sales,* contributing to the profitability associated with refurbishment and cash inflows. Finally, some consumers/markets may also demand refurbished products, leading to *demand satisfaction* and *increase customer service/satisfaction.*

From the discussion above follows that the refurbishment disposition option is favourable due to various economic, product-related, environmental and market-related benefits, which can motivate online retailers to develop expertise, invest in resources and skilled staff as refurbishment requirements. In the next section, the description and conceptual framework of refurbishment will be given.

5.6.4.6 Description and conceptual framework of refurbishment as a disposition option for consumer returns

Based on the findings presented in section 5.6.4, refurbishment can be an important disposition option in the disposition process of consumer returns, and will be described as follows:

> Refurbishment as a disposition option for consumer returns can be described as a complex disposition option that (1) requires expertise, skilled staff, investments, resources, equipment, technology and authorisation, (2) involves costs, time, technology and product design, and (3) can be influenced by product type, quality and condition, return type and regulations. The activities/processes of refurbishment can be classified as activities/processes (1) before refurbishment, including collection, transportation, receiving, inspection, sorting, handling, storage (product flows) authorisation and instructions (information flows), (2) during refurbishment, including disassembly/dismantling, refining, renovating, cleaning, treatment, repairing/fixing, restoring, parts replacement, testing, reworking, upgrading and assembly (product flows), and (3) after refurbishment, including retesting, repackaging, back to inventory, storage, packaging, shipping, transportation, redistribution (product flows), remarketing (information flow) and reselling (cash flow), which can be performed by refurbishment staff of the online retailer and/or other third parties in traditional FL facilities (warehouses), RL process facilities (CRCs, collection, processing and disassembly facilities), recovery facilities (repair facilities, service centres, workshops, recovery centres and refurbishment facilities) and exit facilities (redistribution facilities).
>
> The aims of the refurbishment option are to (1) recover value from used/damaged/defective/outdated returned products received from original consumers, (2) restore products to a like new condition and increase the quality of the product, and (3) resell and redistribute refurbished products to second consumers in the secondary markets or other second market retailers. Refurbishment as a disposition option can result in (1) economic outcomes (economic benefits, profitability, cost savings, cash and value recovery), (2) product-related outcomes (working and like new products, increase in quality and a new warranty, extend the product life and product recovery) (3) environmental outcomes (environmental benefits and performance, environmental protection and waste reduction, comply with environmental laws and save natural resources), and (4) market-related outcomes (market benefits and competitiveness, an increase in sales, satisfy demand and customer service/satisfaction).

Figure 5.10 provides a conceptual framework for refurbishment as a disposition option that may apply to consumer returns in online retailing. Particularly, the framework provides a basic overview of refurbishment as a disposition option, illustrating the parties, facilities/locations, flows, characteristics and activities. Particularly, the framework illustrates that the refurbishment option starts with the original consumer, online retailer and third party, performing activities before refurbishment that involve information (authorisation and instructions) and product (collection, transportation, receiving, inspection, sorting, storage and handling) flows. Additionally, the framework shows that the returned products from consumers can be directed to FL/RL facilities and/or recovery facilities (owned by the online retailers and/or third parties) for further refurbishment operations. In the facilities (of online retailers and third parties) the cash, information and product

flows with related characteristics, activities during refurbishment and activities after refurbishment continues.

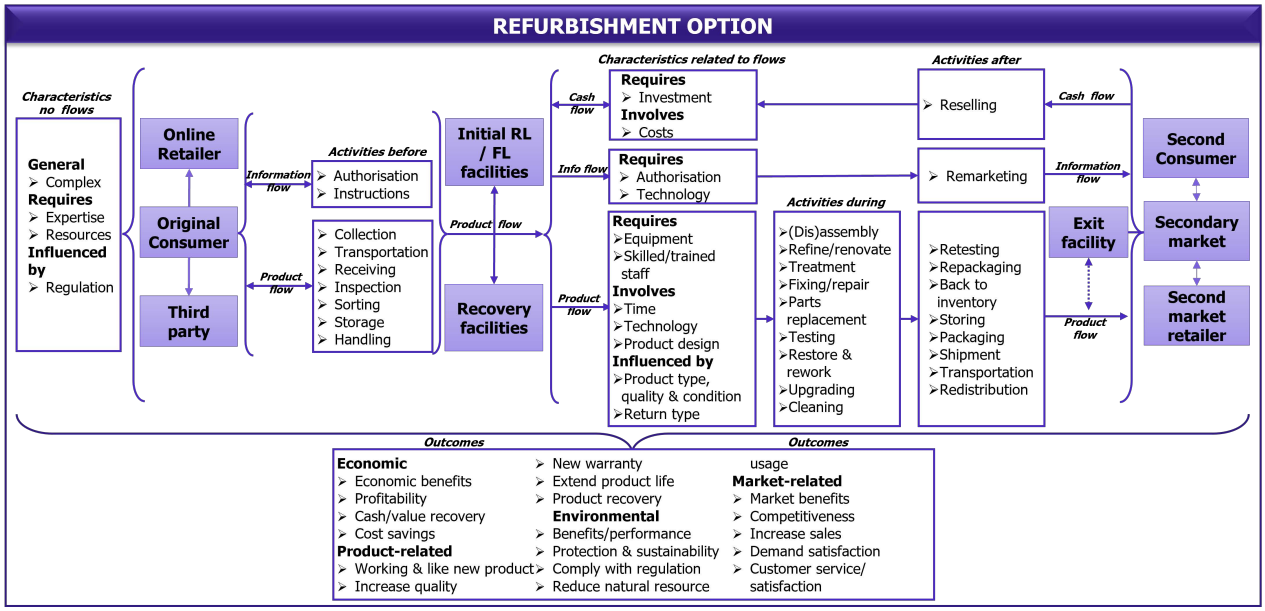


Figure 5.10 Conceptual framework of refurbishment as a disposition option
Source: Compiled by the researcher

Furthermore, the framework shows that the refurbished products can either be delivered from FL/RL and recovery facilities to exit facilities for redistribution to markets or can directly be redistributed to the markets. The markets can include secondary markets that may include second market retailers that purchase refurbished products from the original retailers (or third party) and resell refurbished products to second consumers on the secondary markets. Alternatively, refurbished products can be remarketed, resold and redistributed directly to second consumers on the secondary market. Regardless of the approach, refurbishment results in information outflow through remarketing, product outflow through redistribution to the second consumer/second market retailers and cash inflows to the original retailer. Additionally, the framework presents the refurbishment characteristics unrelated to flows. Finally, the framework illustrates the various economic, product-related, environmental and market-related outcomes of refurbishment, which can be realised through successful implementation and execution of refurbishment as a disposition option for consumer returns

In the next section, the final category of exit options in the disposition process of consumer returns will be discussed.

5.6.5 Exit options in the disposition process of consumer returns

The final category in the disposition process focusses on additional exit options or alternatives, some of which were mentioned in the disposition options (such as secondary markets or selling to third parties). Essentially, the focus of this section is on alternative options for online retailers (except for

outsourcing) in dealing with consumer returns, which exclude direct reuse and product recovery (repair and refurbishment) options.

As mentioned in section 4.2, some exit options, including selling as scrap, destroy and donate, lacked sufficient findings in RL literature, and were subsequently excluded from the findings. However, this study recognises that these exit options may apply to consumer returns in online retailing. The exit options identified in the coding framework (Appendix A.2) with sufficient RL literature findings, included (1) selling in the secondary markets, (2) ship to a vendor and (3) selling to third parties. The findings related to each of these mentioned exit options will be presented and discussed in the rest of the section.

5.6.5.1 Selling in secondary markets as an exit option for consumer returns

Selling in secondary markets are one of the alternatives in the RL product disposition process (Agrawal *et al.* 2016b:95), which mostly relates to used consumer product returns that cannot be resold in the primary market (original market). The secondary market is not a single marketplace, but the name for the network of companies that buy and sell product that cannot be sold, as new in the primary channel (Rogers *et al.* 2013:46).

The categories of *selling in secondary markets* as an exit option for consumer returns identified from the QCA of RL literature included (1) characteristics of selling in secondary markets, (2) activities/processes for selling in secondary markets, (3) secondary market options/locations, (4) parties involved in secondary markets, and (5) outcomes of selling in secondary markets. Table 5.30 provides an overview of the findings related to *selling in secondary markets* as an exit option for consumer returns, including detail on the categories, related subcategories, sources to support the subcategories and key quotations to support the discussion of the findings.

Table 5.30 Findings related to selling in secondary markets as an exit option

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
Characteristics	***Important***	None	• *"[…] secondary market can play an important role in the success of RL […]."* (Agrawal *et al.* 2015:77)
	Complex	Agrawal *et al.* (2015:77)	• *"[…] selling through secondary markets can be more complicated than marketing new products."* (Rogers *et al.* 2012:113)
	Involves network design	None	• *"[…] secondary markets are also considered while designing the RL network."* (Agrawal *et al.* 2015:83) • *"A company needs to have a […] plan, complete with a network of secondary market partners […]."* (Rogers *et al.* 2013:46) • *"[…] reverse logistics network for choosing the physical locations, facilities, and transportation links to […] secondary markets."* (Sasikumar *et al.* 2010:1223)
	Involves global operations	None	• *"Second-life retailing has an important international dimension."* (Beh *et al.* 2016:19)
	Involves risks	Rogers *et al.* (2013:46)	• *"Suppliers are often concerned about brand equity, and this can constrain product entry to the secondary market."* (Rogers *et al.* 2012:113) • *"[…] because the secondary markets can be nonstandard channels, they need to be understood before risking brand cannibalization [sic] and other risks."* (Rogers *et al.* 2012:116)
	Involves discounted/	Beh *et al.* (2016:16)	• *"[…] returns are usually […] sold at a lower price in a secondary market."* (De

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
	lower prices	Ruiz-Benítez *et al.* (2014:55) Srivastava and Srivastava (2006:530)	Leeuw *et al.* 2016:718) • *"[…] sold in a secondary market at a fraction of the cost of using original products […]."* (García-Rodríguez *et al.* 2013:585) • *"[…] product return […] is sold in the secondary market at a discount."* (Lieckens & Vandaele, 2012:24) • *"[…] products […] to the secondary markets, where they are sold for 30% to 50% discount comparing with new product price."* (Sasikumar *et al.* 2010:1224, 1225)
	Influenced by product condition	Assavapokee and Wongthatsanekorn (2012:134) De Oliveira *et al.* (2012:1597) Gobbi (2011:781) Kumar and Putnam (2008:308) Mazahir *et al.* (2011:100) Mutha and Pokharel (2009:334) Orboobadi (2009:834) Ponce-cueto *et al.* (2011:107) Srivastava and Srivastava (2006:530) Yu and Solvang (2016:4, 5)	• *"[…] secondary markets […] indicate that these products […] go back to the market for the second time as used."* (Genchev, 2009:146) • *"[…] products which are relatively new and in good condition […] can be easily absorbed by the secondary market […]."* (Kannan *et al.* 2016:5) • *"Sell on secondary markets: Products that are in good operational condition […]."* (Genchev, 2009:146) • *"[…] damage is […] sold to secondary markets […]."* (Olorunniwo & Li, 2010:454) • *"Sell on secondary markets: Products […] which are packed in containers that have been damaged/compromised or had the manufacturer's seal broken […]."* (Genchev, 2009:146) • *"[…] refurbishment […] and sell in secondary markets […]."* (Bernon & Cullen, 2007:49) • *"[…] that may be repaired/refurbished before being sold on the second-hand market."* (De Oliveira *et al.* 2012:1597) • *"A consumer who purchases a refurbished laptop, […] on the secondary market […]."* (Rogers *et al.* 2013:45)
	Influenced by product and industry type	Hahler and Fleischmann (2013:3) Mazahir *et al.* (2011:100)	• *"[…] form of retailing in the apparel aftermarket."* (Abraham, 2011:221) • *"[…] computer that can be […] sold in secondary markets. Washing machines and tumble dryers constitute another example."* (Alumur *et al.* 2012:67) • *"[…] seasonal products such as winter apparel […] are sold on the secondary market […]."* (Beh *et al.* 2016:15) • *"[…] selling radiators in secondary markets."* (Chan *et al.* 2012:1326) • *"[…] used appliances […] sold on the second-hand market."* (De Oliveira *et al.* 2012:1597) • *"[…] piece of equipment […] sold in a secondary market […]."* (García-Rodríguez *et al.* 2013:585) • *"[…] large number of mobiles are being diverted to secondary markets."* (Ponce-cueto *et al.* 2011:112) • *"[…] cameras […] and cell phones that are […] resold in secondary markets."* (Kumar & Putnam, 2008:308) • *"[…] tires are sold […] in the secondary markets […]."* (Sasikumar *et al.* 2010:1224)
	Influenced by organisational capabilities and preferences	None	• *"[…] use of secondary markets facilitates the processing of the items that a firm is unable or unwilling to process itself."* (Dowlatshahi, 2010a:1370) • *"It may be more advantageous to transport some products to secondary markets […] if the processing capability lies outside the company's core distinctive competency."* (Dowlatshahi, 2010a:1376)
	Influenced by manufacturer specifications	None	• *"[…] the products […] can be sold to the secondary market, if they are not with the compliance of the original manufacturer […]."* (Chan *et al.* 2012:1321)
	Influenced by return volume	None	• *"[…] companies with significant return volumes, "factory outlet" stores have emerged […]."* (Bernon *et al.* 2011:492)
	Influenced by return type and product life cycle	Ponce-cueto *et al.* (2011:108)	• *"[…] end-of-use computer that can be […] sold in secondary markets."* (Alumur *et al.* 2012:67) • *"EoU products may flow into secondary markets […]."* (Gobbi, 2011:770) • *"[…] after the end of the selling period, returns are […] sold […] in a secondary market."* (De Leeuw *et al.* 2016:718)
Activities/ processes	***Collection***	Ponce-cueto *et al.* (2011:107)	• *"[…] are collected and resold in secondary markets."* (Kumar & Putnam, 2008:308)
	Transportation	Sasikumar *et al.* (2010:1223, 1225)	• *"[…] transport some products to secondary markets."* (Dowlatshahi, 2010a:1376) • *"[…] moves products back to […] secondary markets […]."* (Hsu *et al.* 2009:518) • *"[…] a product return is […] shipped […] after which it is sold in the secondary market […]."* (Lieckens & Vandaele, 2012:24)
	Processing	None	• *"Products with reuse capabilities may be processed […] in secondary markets."* (Dowlatshahi, 2010a:1376)
	Disassembly	None	• *"[…] dismantled units […] to fulfill demands from secondary markets […]."* (Assavapokee & Wongthatsanekorn, 2012:137)
	Parts retrieval	None	• *The materials or parts derived from […] units […] to fulfill demands from secondary markets […]."* (Assavapokee & Wongthatsanekorn, 2012:137)
	Repackaging	None	• *"[…] repackaging process takes place before […] second-hand market […]."* (Ponce-cueto *et al.* 2011:108)
	Storage	None	• *"[…] units will be stored in the warehouse and will be used to fulfill demands from secondary markets […]."* (Assavapokee & Wongthatsanekorn, 2012:137) • *"[…] stored […] for resale in secondary markets."* (Ponce-cueto *et al.* 2011:107)
	Remarketing	None	• *"[…] Marketing […] secondary markets for the recovered products."* (Orboobadi,

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
			2009:834)
	(Re)distribution	None	*"[…] through redistribution […] products may be sold […] in the secondary markets."* (Agrawal *et al.* 2016a:935) • *"[…] some of these returned […] goods could then be distributed to secondary markets […]."* (Beh *et al.* 2016:6)
Options/ locations	***Factory outlet stores***	Beh *et al.* (2016:3, 6) Hsu *et al.* (2009:518) Rogers *et al.* (2013:45)	• *"[…] selling through the secondary market such as factory outlet store […]."* (Agrawal *et al.* 2015:86) • *"[…] "factory outlet" stores […] where dedicated shops sell return and obsolete stock […]."* (Bernon *et al.* 2011:492) • *"[…] sell the product in places such as […] low-priced outlets […]."* (Rogers *et al.* 2012:112) • *"[…] remote factory discount outlet […]."* (Lee & Rhee, 2007:215) • *"Second's market […] outlet for sale of repaired and discounted goods."* (Srivastava & Srivastava, 2006:530)
	Clearance stores	None	• *"[…] sold through a couple of newly developed clearance stores."* (Bernon & Cullen, 2007:49)
	Online marketplaces	De Oliveira *et al.* (2012:1597) Khor and Udin (2012:7)	• *"[…] online marketplaces, such as, ebay, new disposition routes have appeared […]."* (Bernon *et al.* 2011:492) • *"[…] different channel such as an online sale in the e-marketplace, e.g., sale at eBay and Amazon.com […]."* (Lee & Rhee 2007:215)
	Catalogue sales	None	• *"[…] the equipment is refurbished, it is sold through […] catalog [sic] sales."* (Mazahir *et al.* 2011:100)
	Online webstores	None	• *"[…] secondary markets such as […] online websites […]."* (Beh *et al.* 2016:6) • *"Another firm established a direct on-line selling operation […]."* (Genchev *et al.* 2011:255)
	Auctions	Rogers *et al.* (2013:46)	• *"[…] secondary markets such as […] auction sites […]."* (Beh *et al.* 2016:6) • *"[…] the equipment is refurbished, it is sold through auctions […]."* (Mazahir *et al.* 2011:100)
	Flea markets	Brix-Asala *et al.* (2016:3)	• *"[…] sell the product in places such as ''[…] flea markets […]."* (Rogers *et al.* 2012:112)
	Pawn shops	None	• *"[…] sell the product in places such as […], pawn shops, […]."* (Rogers *et al.* 2012:112)
	Value/ off-price retailers	Lee and Rhee (2007:215) Rogers *et al.* (2012:112)	• *"[…] that is sold to these off-price retailers. […] means that they are sold on the secondary market […]."* (Beh *et al.* 2016:15) • *"[…] secondary market through […] value retailers […]."* (Rogers *et al.* 2013:46)
	Overseas markets	None	• *"[…] sell the product […] overseas."* (Rogers *et al.* 2012:112) • *"[…] secondary market […] where the product is shipped offshore […]."* (Rogers *et al.* 2013:45)
Parties	***Consumers***	None	• *"[…] find secondary markets/customers for returned products."* (Genchev *et al.* 2011:254) • *"Customers tend to visit stores frequently to view and purchase […] the low price point […] in the range of its 'second life'."* (Beh *et al.* 2016:16, 19) • *"Second-life retailing […] meeting different customer niche needs."* (Beh *et al.* 2016:16, 19) • *"A consumer who purchases […] on the secondary market […]."* (Rogers *et al.* 2013:45) • *"[…] the used products from customers […] to secondary markets."* (Sasikumar *et al.* 2010:1223)
	Retailers	None	• *"Sales in the aftermarket […] with aftermarket retailers […]."* (Abraham, 2011:221) • *"The secondary market customers include […] retailers who buy used products […]."* (Assavapokee & Wongthatsanekorn, 2012:134) • *"At disposition, retailers […] key choice is re-presenting the goods to the market through […] alternative distribution […]."* (Beh *et al.* 2016:6) • *"Through the reverse supply chain, second-life retailing offers […] traditional retailers an alternative market […]."* (Beh *et al.* 2016:6, 19) • *"[…] sale […] through off-price retailers […]."* (Lee & Rhee, 2007:215) • *"[…] products […] can be sold in the secondary markets by the retailers directly."* (Mutha & Pokharel, 2009:337) • *"[…] sell the product in places such as […] value retailers […]."* (Rogers *et al.* 2012:112)
	Staff/ departments	None	• *"A separate sales force is assigned to find secondary markets/customers for returned products."* (Genchev *et al.* 2011:254) • "*Sell on secondary markets […]. The term ''secondary'' is used by […] personnel to indicate that these products have already been sold as new once, and now go back to the market for the second time as used."* (Genchev, 2009:146) • *"Selling the already processed return requires close coordination with the corporate sales department."* (Genchev, 2009:146)
	Wholesalers	None	• *The secondary market customers include wholesalers […] who buy used products […]."* (Assavapokee & Wongthatsanekorn, 2012:134)
	Suppliers	None	• *"Through the reverse supply chain, second-life retailing offers brand suppliers […] an alternative market […]."* (Beh *et al.* 2016:19) • *"Suppliers are often concerned about brand equity, and this can constrain product entry to the secondary market."* (Rogers *et al.* 2012:113)

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
	Third parties	None	• *"[…] jobbers who […] sell in secondary markets."* (Bernon & Cullen, 2007:49) • *"Brokers […] sell the product to companies who will sell the product in places such as ''dollar'' stores, flea markets […]."* (Rogers *et al.* 2012:112)
Outcomes	***Economic outcomes***	Chan *et al.* (2012:1326) Genchev (2009:146) Rogers *et al.* (2012:116) Rogers *et al.* (2013:45, 46)	• *"[…] selling through the secondary market […] can be more profitable […]."* (Agrawal, *et al.* 2015:86) • *"[…] secondary markets […] as to maximize [sic] its profits."* (Alumur *et al.* 2012:68) • *"[…] returned product also can be re-sold in secondary channels and generate revenue."* (Hsu *et al.* 2016:102) • *"Economic and environmental costs are reduced through reusing goods […] into secondary markets."* (Beh *et al.* 2016:17, 19) • *"[…] new disposition routes have […] vastly improved asset values for returns."* (Bernon *et al.* 2011:492) • *"[…] selling on the secondary market and getting additional value out of an asset."* (Rogers *et al.* 2013:45) • *"[…] secondary market […] will […] recover as much value as possible […]."* (Rogers *et al.* 2013: 46) • *"[…] added value of recovery is the main driver […] to serve the secondary markets […]."* (Sasikumar *et al.* 2010:1224)
	Product-related outcomes	None	• *"[…] creating a second life for the goods."* (Beh *et al.* 2016:6) • *"[…] products may flow into secondary markets, prolonging the life cycle […]."* (Gobbi, 2011:770)
	Environmental outcomes	None	• *"[…] products may flow into secondary markets […] delaying the moment the product becomes waste."* (Gobbi, 2011:770) • *"[…] secondary markets […] and the environment through reduced waste." (*Beh *et al.* 2016:19) • *"[…] secondary markets […] divert a large number of products from landfills […] resulting in substantial environmental […] benefit."* (Rogers *et al.* 2013:45) • *"[…] enhancing sustainability through goods being sold on at secondary markets."* (Beh *et al.* 2016:22)
	Market-related outcomes	None	• *"[…] second-life retailing […] contributing to […] trust and improved customer service."* (Beh *et al.* 2016:17) • *"[…] fulfill demands from secondary markets […]."* (Assavapokee & Wongthatsanekorn, 2012:137) • *"[…] demand for used modules in the secondary markets."* (Mutha & Pokharel, 2009:334) • *"[…] an alternative market, enabling them to […] meeting different customer niche needs."* (Beh *et al.* 2016:19)
	Social outcomes	None	• *"[…] second-life retailing […] contributing to increased […] reputation […]."* (Beh *et al.* 2016:17) • *"[…] secondary markets […] create numerous jobs […]."* (Rogers *et al.* 2013:45) • *"[…] secondary markets […] brings about a positive contribution to society […]."* (Beh *et al.* 2016: 23)

Source: Compiled by the researcher

Table 5.30 shows that selling in secondary markets as an exit option involves various characteristics, secondary market options, activities/processes, parties and outcomes, which will be discussed in the subsequent sections and concluded with a description and conceptual framework.

5.6.5.1.1 Characteristics of selling in secondary markets as an exit option for consumer returns

The characteristics of selling in secondary markets as an exit option can include general, involve and influenced by characteristics. Particularly, the *general characteristics* relates to the importance and complexity of selling in secondary markets. Secondary markets can be *important* for successful RL, offering organisations alternative options to recover value from returned products. However, selling in secondary markets can be more *complicated* than sales in primary markets, which may stem from the *involve characteristics* of network design, global operations and risks. Specifically, using primary markets, established facilities can be used for RL processes, while secondary markets involve different facilities and require additional *network design* and strategies. Additionally, secondary

markets can involve overseas markets with *global operations,* which can add to the complexity of effective selling in secondary markets. The *risks* of selling in secondary markets include supplier constraints to enter secondary markets by protecting brand equity and preventing brand cannibalisation (new and recovered products compete). Moreover, selling in secondary markets involve *discounted/lower prices,* indicating that secondary markets can be less profitable than selling returned products on the primary market.

Like other disposition options, selling in secondary markets contains various *influenced by characteristics,* including product condition, product or industry type, organisational capabilities and preferences, manufacturer specifications, return volume, return type and selling period. While the *product condition* mostly influences the selection of other disposition options, selling in secondary markets can be appropriate for products in any condition. For example, returned products can be in (1) no-recovery condition, involving products in relatively new (e.g. only damaged packaging or manufacturer seal broken), good and used conditions, (2) recovery condition, involving products in damaged/defective condition, and (3) post-recovery condition, involving products in repaired and refurbished condition. Consequently, the product condition along with product type can influence the activities/processes associated with selling in secondary markets. For example, returned electronic products in recovery condition need disassembly and parts retrieval. Moreover, certain *product* or *industry types,* including apparel, household appliances, computers, cell phones and car parts (such as tires and radiators), can be more suitable for the selection of selling in secondary markets. Consequently, an online retailer that operates in the apparel, electronics, cell phone, computer and/or automotive industry can utilise secondary markets as an exit option.

Furthermore, selling in secondary markets can be selected as an exit option if *organisations lack capabilities* or are *unwilling* to obtain value from returned products through recovery operations. Additionally, returned products outside *manufacturer specifications* can influence the selection of selling in secondary markets, which may be associated with relatively new products with broken manufacturing seals (see preceding paragraph). Moreover, *higher return volumes* can complicate returned product handling in established facilities, making selling in secondary markets a more suitable option in the disposition process of consumer returns. While products can be in any condition, selling in secondary markets can be more suitable for *EoU returns* or products at the *end* of their *selling period* (e.g. clothing). Therefore, if an online retailer receives returns of new/unused clothing from consumers but the clothing is at the end of their selling period, direct reuse and selling on the primary market might be less attractive.

5.6.5.1.2 Activities/processes of selling in secondary markets

In contrast to other disposition options (reuse, repair and refurbishment), the activities/processes of selling in secondary markets can only be classified as activities/processes *before* selling[16] in secondary markets, which mostly entail product flows (except remarketing).

Mostly, the activities/processes of selling in secondary markets involve various RL processes, including *collection, transportation, processing* and *redistribution,* emphasising the links between the disposition process and other pre- and post-receipt RL processes. Relating to the recovered condition and product types (influenced by characteristics), selling in secondary markets can involve recovery activities like *disassembly* and *parts retrieval*. Similarly, the *repackaging* activity can be performed for relatively new returned products with damaged packaging or products in recovered. Evidently, selling in secondary markets might involve any activities associated with the repair and refurbishment options since products in repaired and refurbished condition can be appropriate for selling in secondary markets (see section 5.6.5.1.1).

Additionally, returned products can be *stored* in facilities before *redistribution* to secondary markets for selling in secondary markets. Finally, as the only information flow activity, *remarketing* can be important for returned products in recovered condition, emphasising the importance of remarketing as an activity after repair and refurbishment (see sections 5.6.3 and 5.6.4).

5.6.5.1.3 Secondary market options/locations and parties

Table 5.30 shows that several *secondary market options/locations* can be used for selling in secondary markets, including factory shops, clearance stores, online marketplaces, catalogue sales, online retailing platforms, auctions, flea markets, pawn shops, value retailers and overseas markets. Evidently, online retailers selecting selling in secondary markets as an exit option for consumer returns can opt to sell returned products to secondary market retail stores, like *factory shops* and *clearance stores,* or can keep in familiar territory through online selling, using *online marketplaces, catalogue sales* and other *online retailing* platforms. Consequently, using an online platform as a secondary market option can be important for (primary market) online retailers since they can use existing resources and capabilities for online selling in secondary markets.

Other options, including *auctions* (also online potential), *flea markets, pawn shops* and *value retailers*, emphasise discounted prices (involve characteristic) and products in used condition

[16] Reselling was excluded as an activity since the exit option involves selling in secondary markets.

(influenced by characteristic) associated with selling in secondary markets. Lastly, the overseas market option emphasises the complexity (general characteristic), global operations and risks (involvement characteristics) of selling in secondary markets (see section 5.6.5.1.1).

Closely related to the secondary market options/locations, selling in secondary markets can involve various *parties*, including consumers, retailers, staff/departments, wholesalers, suppliers and third parties. Like other disposition options (repair and refurbish), *consumers* as parties of selling in secondary markets can be classified as original and second consumers with opposite roles. Particularly, *original consumers* can act as suppliers for selling in secondary markets by returning products purchased on the primary market. In contrast, *second consumers* can establish a demand for and buy used/recovered products in secondary markets. Likewise, *retailers* can be classified as original retailers and second market retailers. While *original retailers* can be sellers of recovered/used products (returned by original consumers) to second consumers or other parties (e.g. third parties or other retailers) in secondary markets, *second market retailers* can act as second consumers creating demand for and purchase returned/recovered products from original retailers as well as act as suppliers/sellers of returned/recovered products to second consumers. Evidently, both consumers and retailers can be involved in the product and cash flows of selling in secondary markets.

Additionally, retailers can employ and allocate roles to *staff/departments* for selling in secondary markets, which may include (1) identifying returned products appropriate for secondary markets (e.g. the responsibility of inspectors or sorters in RL department) and (2) marketing and sales of returned/recovered products in the secondary markets (e.g. the responsibility of the sales department/staff). Therefore, staff, employed by original retailers can be responsible for disposition decisions (choosing selling in secondary markets as an exit option), while staff employed by the original or second market retailers can perform remarketing activities for effective selling in secondary markets.

Like second market retailers, *wholesalers* can be secondary market customers and represent organisations that buy used/recovered from original retailers and resell these products to second retailers or second consumers. Associating with the risks (involve characteristic) and manufacturer specifications (influenced by characteristic) of selling in secondary markets, original brand *suppliers* (from the original SC) can be concerned with brand cannibalisation or protecting brand equity, which might hamper efforts for selling in secondary markets. Nevertheless, suppliers (manufacturers) can drive selling in secondary markets with strict manufacturer specifications (like broken manufacturer seals), preventing resale in primary markets (see section 5.6.5.1.1).

Finally, the *third parties* that operate in secondary markets include brokers and jobbers, acting, like second market retailers and wholesalers, as buyers and suppliers in secondary markets. However, brokers and jobbers are third-party buyers of returned products that can perform recovery operations (such as repair), and form part of the other exit option of selling to third-party buyers, which will be discussed in section 5.6.5.3.

5.6.5.1.4 Outcomes of selling in secondary markets as an exit option for consumer returns

Table 5.30 shows that selling in secondary markets can be beneficial in terms of various economic, product-related, environmental, market-related and social outcomes. Specifically, the *economic outcomes* of secondary markets include profits/revenue, cost savings and asset/value recovery. The *profitability* of selling in secondary markets relates to the *revenue* obtained through the sales of used/recovered products. Furthermore, the *cost savings* of selling in secondary markets relate to the environmental outcome of preventing returned product disposal, resulting in savings of disposal costs (e.g. transporting products to landfills). Lastly, *asset/value recovery* emphasise the importance of selling in secondary markets since organisations can recover value from returned products that cannot be sold in primary markets. Evidently, economic outcomes can represent cash flows in secondary markets.

Closely related to the economic outcomes of costs savings and asset/value recovery, the *product-related outcome* of selling in secondary markets includes *extending the* returned *product's life*. Since selling in secondary markets associate with EoU returns and products at the end of their selling periods, selling in secondary markets can extend the use of the product. Subsequently, the *environmental outcomes* of secondary markets relate to *waste reduction*, *environmental benefits* and *sustainable practices*. Essentially, by selling returned/recovered products in secondary markets can prevent these products from entering the landfills, which can enhance an organisation's environmental performance.

The *market-related outcomes* of secondary markets include improved customer trust and service, and *satisfaction of demand* and *consumer needs*. For example, a fashion online retailer that stock designer clothes can sell returned clothes (at the end of their selling period) through a second online store offering the same designer clothes at a discount, which can enhance *consumer trust* and *service* and *satisfy the demand* of consumers who cannot afford to designer clothes at full prices. Evidently, selling in secondary markets can enable retailers to meet various niche consumer needs.

Finally, selling in secondary markets can, uniquely, result in *social outcomes*, which can involve *improved social performance*, *positive contribution* to the *society* and *job creation*. Therefore, selling

in secondary markets can improve the corporate image and reputation of retailers by contributing to the national economy of the country through job offerings, linking with environmental sustainability and satisfying the demand of niche consumer needs. Essentially, selling in secondary markets holistically offer various benefits for organisations, the environment, consumers and society.

5.6.5.1.5 Description and conceptual framework of selling in secondary markets as an exit option for consumer returns

Based on the findings presented in section 5.6.5.1, selling in secondary markets can be an important exit option in the disposition process of consumer returns, and will be described as follows:

> Selling in secondary markets as an exit disposition option for consumer returns can be described as an important and complex exit option that (1) involves network design, global operations, risks and discounted/lower prices, and (2) can be influenced by product condition, product or industry type, organisational capabilities and preferences, manufacturer specifications, return volume, return type and selling period. The activities/processes of selling in secondary markets involve collection from the original consumer, transportation, processing, disassembly, parts retrieval, repackaging, storage, remarketing and redistribution before returned/recovered products can be sold by the original online retailer to second consumers or other parties in secondary markets, which can include factory shops, clearance stores, online marketplaces, catalogue sales, online platforms, auctions, flea markets, pawn shops or overseas markets. Selling in secondary markets as an exit option can result in (1) economic outcomes (economic benefits, profitability, cost savings and asset/value recovery), (2) product-related outcome (extend the product life), (3) environmental outcomes (waste reduction, environmental benefits and sustainable practices), (4) market-related outcomes (customer trust and service, and satisfaction of demand and consumer needs), and (5) social outcomes (social performance, positive contribution to the society and job creation).

Figure 5.11 provides a conceptual framework for selling in secondary markets as an exit option that may apply to consumer returns in online retailing.

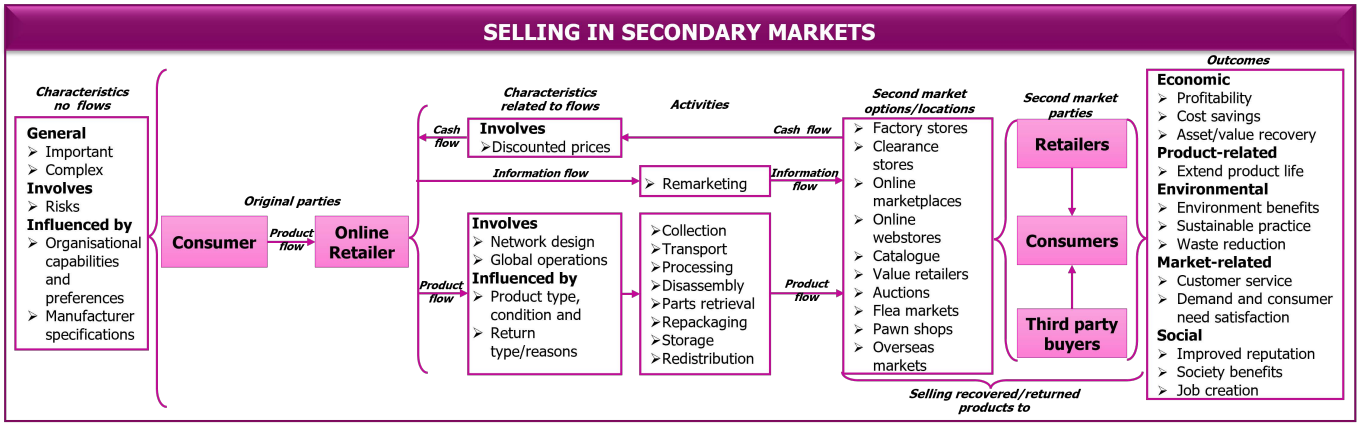


Figure 5.11 Conceptual framework of selling in secondary markets as an exit option
Source: Compiled by the researcher

Figure 5.11 provides a basic overview of selling in secondary markets as an exit option in the disposition process, illustrating the original and second market parties, flows, characteristics, activities, secondary market options and outcomes. Particularly, the framework illustrates that selling in secondary markets starts with the original consumers returning products to the original online retailer. Additionally, the flows of selling in secondary markets involve cash, information and product flows with related characteristics and activities. Once the activities are completed, product

outflows and cash inflows continue with selling returned/recovered products in secondary markets (through various options) to second retailers, consumers or other third parties. Finally, the framework demonstrates the characteristics unrelated to flows as well as the outcomes of selling in secondary markets.

In the next section, the second disposition exit option of shipping to the vendor is discussed.

5.6.5.2 Ship to a vendor as an exit option for consumer returns

Ship to a vendor mainly relates to a retailer returning a consumer return directly to the supplier/manufacturer of the product. Although manufacturers as a party are excluded from the study, the possibility of shipping to a vendor (as an exit disposition option) still exists for an online retailer who deals with consumer returns. In the rest of this section, vendor will be used as a term, representing any organisation (manufacturer, supplier or wholesaler) that supplied the product to the retailer, which was purchased and returned by the consumer to the retailer. Despite limited findings (from the QCA of RL literature), the ship to a vendor exit option included several categories, namely the (1) characteristics of ship to a vendor, (2) activities related to ship to a vendor, (3) facilities in ship to a vendor, (4) parties involved in ship to a vendor, and (5) outcomes of ship to a vendor.

Table 5.31 provides an overview of the findings related to the *ship to a vendor as an exit option for consumer returns*, including detail on the categories, related subcategories, sources to support the subcategories and key quotations to support the discussion of the findings.

Table 5.31 Findings related to ship to a vendor as an exit option for consumer returns

CATEGORIES	SUBCATEGORIES	SUPPORTING SOURCES	KEY QUOTATIONS
Characteristics	***High priority***	None	*"[…] back to manufacturers/suppliers is considered the highest priority when disposition options are discussed […]."* (Genchev, 2009:146)
	Back to origin	None	• *"[…] sent to the […] vendor or to the point of origin where it's been produced […]."* (Rajagopal *et al.* 2015:41)
	Involves costs	None	• *"[…] returned to the vendor along with the assessed shipping and handling fee […]."* (Hsu *et al.* 2009:521) • *"[…] the vendor must bear the cost of returned goods […] as well as the packaging and shipping costs if paid by the retailer […]."* (Asdecker, 2015:3) • *"[…] firm may be able to return the item to the vendor (RTV) and recover the purchase cost […]."* (Rogers *et al.* 2012:112) • *"[…] the costs associated with the returned item to the manufacturer/vendor."* (Ruiz-Benitez & Muriel, 2014:573)
	Involves credits/ refunds	Genchev (2009:146) Jayaraman *et al.* (2008:415) Rogers *et al.* (2012:108)	• *"[…] return the items for full credit back to the supplier […]."* (Rogers *et al.* 2013:46) • *""[…] items returned to vendors for credits […]."* (Stock & Mulki, 2009:53) • *"Merchandise identified as vendor refundable […]."* (Hsu *et al.* 2009:521)
	Involves contracts or service agreements	Rogers *et al.* (2013:44)	• *"[…] contractual obligations with the vendor […]."* (Gonçalves & Silva, 2016:71) • "*According to preestablished service level agreements […] send vendors the […] return product […]."* (Genchev, 2009:146) • *"[…] merchandise that is bought with the agreement that it can be returned to the vendor […]."* (Hsu *et al.* 2009:522) • *"[…] contractual arrangements in place with key suppliers and vendors […]."* (Jack *et al.* 2010:242) • *"Depending on the agreement with the supplier, the firm may be able to return*

CATEGORIES	SUBCATEGORIES	SUPPORTING SOURCES	KEY QUOTATIONS
			the item to the vendor […].” (Rogers *et al.* 2012:112)
	Involves negotiations	None	• *“[…] vendor agreements need to be strategically negotiated […]”* (Rogers *et al.* 2013:44) • *“[…] negotiate with the vendors […].”* (Hsu *et al.* 2009:517) • *“How the vendor wants to handle damages is already set during contract negotiations […].”* (Hsu *et al.* 2009:521)
	Involves information sharing	None	• *“[…] push these inventories out to […] the vendors […] rely on sharing information […].”* (Hsu *et al.* 2009:517) • *“[…] the relationship with vendors is a key to more efficient information sharing […].”* (Hsu *et al.* 2009:523)
	Involves relationships	Hsu *et al.* (2009:523)	• *“[…] the relationship between the retailer and the manufacturer/vendor.”* (Ruiz-Benitez & Muriel, 2014:573) • *“[…] vendor or the retailer driving the relationship.”* (Hsu *et al.* 2009:525)
	Influenced by contractual conditions and manufacturer requirements	Li *et al.* (2016:225)	• *“[…] depending on the type […] of the product […] the relationship between the retailer and the manufacturer/vendor.”* (Ruiz-Benitez & Muriel, 2014:573) • *“[…] based on the condition of the returned product, contractual obligations with the vendor […].”* (Gonçalves & Silva, 2016:71) • *“[…] negotiate with the vendors […] depending on the […] extent of damage to the returned product.”* (Hsu *et al.* 2009:517) • *“[…] depending on the […] condition of the product […] the retailer and the manufacturer/vendor.”* (Ruiz-Benitez & Muriel, 2014:573) • *“[…] new merchandise […] may be sent back to the manufacturer […].”* (Rogers *et al.* 2012:108) • *“[…] send vendors the […] product that is still factory sealed […].”* (Genchev, 2009:146) • *“[…] send vendors the […] product that is dead on arrival (DOA); and […] defective […].”* (Genchev, 2009:146) • *“Defective returns are usually initiated by end consumers […] can be directly shipped to the vendor […].”* (Genchev, 2009:146) • *“If the item is in good condition, with no apparent damage, it will often go back to the […] manufacturer […] to keep strict quality control and high standards […].”* (Ruiz-Benitez & Muriel, 2014:573)
	Influenced by party power in the SC	None	• *“Large retailers normally transfer […] the costs associated with the returned item to the manufacturer/vendor.”* (Ruiz-Benitez & Muriel, 2014:573)
	Influenced by stock rotation and replenishment	None	• “*Stock rotation and replenishment policies impact the number of items returned to vendors […].”* (Stock & Mulki, 2009:53)
Activities/ processes associated with secondary markets	***Communication and information sharing***	None	• *“[…] information sharing is needed in the communication between vendors, […] retail stores, and CRC.”* (Hsu *et al.* 2009:523)
	Authorisation	None	• *“[…] authorization [sic] […] from the vendor.”* (Hsu *et al.* 2009:515)
	Scanning	None	• *“Vendor refundable items are scanned into a box.”* (Hsu *et al.* 2009:521-522)
	Inspection	None	• *“[…] item will not return [...] until the manufacturer inspects the product.”* (Ruiz-Benitez & Muriel, 2014:573)
	Processing	None	• *“[…] return to vendor (RTV) […] major part of the processing in handling RTVs is done at the store.”* (Hsu *et al.* 2009:522)
	Repackaging	None	• *“[…] the vendor must bear the cost of […] the packaging […].”* (Asdecker, 2015:3) • *“[…] vendors for processing or repackaging it […].”* (Hsu *et al.* 2009:517)
	Picking	None	• *“[…] picks and scans merchandise for a particular RTV […].”* (Hsu *et al.* 2009:522)
	Handling	None	• *“[…] returned to the vendor along with […] handling […].”* (Hsu *et al.* 2009:521) • *“[…] to return the item to the vendor (RTV), and […] handling the product […].”* (Rogers *et al.* 2012:112)
	Packing	None	• *“Merchandise […] is packed and returned to the vendor […].”* (Hsu *et al.* 2009:521)
	Consolidation	None	• *“[…] consolidation […] for processing […] the vendor does not have to deal with one or two cartons from each of hundreds of stores.”* (Hsu *et al.* 2009:522)
	Transportation/ distribution	None	• *“[…] the returned products are transported to the manufacturing facilities […].”* (Li *et al.* 2016:225) • *“[…] moves products back to upstream suppliers, i.e. vendors […].”* (Hsu *et al.* 2009: 518) • *“When the freight is in-transit back to the vendor, it is moved out of […] inventory […].”* (Hsu *et al.* 2009:522) • *“[…] the vendor must bear […] the distribution costs […].”* (Asdecker, 2015:3)
Facilities	***Retail stores***	None	• *“The major part of the processing in handling RTVs is done at the store […].”* (Hsu *et al.* 2009:522) • *“[…] communication between vendors, […] retail stores and CRC.”* (Hsu *et al.* 2009:523) • *“[…] number of items returned to vendors […] at the retail location.”* (Stock & Mulki, 2009:53)
	Distribution Centres	None	• *“DC may be sent back to the manufacturer’s DC for credit […].”* (Rogers *et al.*

CATEGORIES	SUBCATEGORIES	SUPPORTING SOURCES	KEY QUOTATIONS
	(DCs)		2012:108) • *"[…] contract negotiations that take place in the parent company of the individual DC […] and the vendors/manufacturers."* (Hsu *et al.* 2009:523)
	Centralised Return Centres (CRCs)	None	• *"The vendors want to use the CRC as a consolidation center [sic] […]."* (Hsu *et al.* 2009:522) • *"CRC ships accommodations back to the vendor […]."* (Hsu *et al.* 2009:523)
	Manufacturing facilities	None	• *"[…] returned products are transported to the manufacturing facilities […]."* (Li *et al.* 2016:225)
Parties	***Consumers***	None	• *"[…] returns are usually initiated by end consumers […] can be directly shipped to the vendor […]."* (Genchev, 2009:146)
	Retailers	None	• *"[…] a retailer's first choice of disposition is to return the items for full credit back to the supplier."* (Rogers *et al.* 2013:46) • *"Retailer […] agrees to carry a particular vendor's product(s) […] as vendor refundable […]."* (Hsu *et al.* 2009:521) • *"[…] effort the retailer invests in handling reverse logistics is partially determined by […] vendor […] relationship."* (Hsu *et al.* 2009:525) • *"[…] the relationship between the retailer and the manufacturer/vendor."* (Ruiz-Benitez & Muriel, 2014:573) • *"[…] retailers send returned products back […]."* (Jayaraman *et al.* 2008:415) • *"[…] vendor must bear […] the packaging and shipping costs if paid by the retailer."* (Asdecker, 2015:3) • *"Large retailers normally transfer […] the costs associated with the returned item to the manufacturer/vendor."* (Ruiz-Benitez & Muriel, 2014:573)
	Staff/ departments	None	• *"[…] knowledge exchange between supervisors and sorters, information sharing is needed in the communication between vendors […]."* (Hsu *et al.* 2009:523)
	Vendors (suppliers/ manufacturers)	Badenhorst (2013:2) Jayaraman *et al.* (2008:415)	*"[…] returned to the manufacturer for […] refurbishment […]."* (Beh *et al.* 2016:6) • *"[…] the vendor must bear the cost of returned goods […]."* (Genchev, 2009:146) • "*Merchandise identified as vendor refundable […]."* (Hsu *et al.* 2009:521) • *"[…] for full credit back to the supplier."* (Rogers *et al.* 2013:46) • *"[…] merchandise […] sent back to the manufacturer's DC […]."* (Rogers *et al.* 2012:108) • *"Supplier agreements must specifically address what should happen with returned products"* (Rogers *et al.* 2013:44) • *"[…] manufacturer […] keep strict quality control and high standards, the item will not return to the retail shelf until the manufacturer inspects the product."* (Ruiz-Benitez & Muriel, 2014:573) • *"[…] returns back to the manufacturer, who incurs most of the logistics costs associated with the return."* (Ruiz-Benitez & Muriel, 2014:573)
	Distributors	None	• *"[…] send returned products back to suppliers and distributors […]."* (Jayaraman *et al.* 2008:415)
Outcomes	***Economic***	None	• *"[…] return the item to the vendor […] and recover the purchase cost, […]."* (Rogers *et al.* 2012:112) • *"[…] a retailer's first choice of disposition is to return the items for full credit back to the supplier."* (Rogers *et al.* 2013:46) • *"[…] shipped back to the vendor for full recovery […]."* (Hsu *et al.* 2009:515)
	Product-related	None	• *"[…] returned to the manufacturer for […] refurbishment […]."* (Beh *et al.* 2016:6)

Source: Compiled by the researcher

Table 5.31 shows that ship to a vendor as an exit option involves various characteristics, activities/processes, facilities, parties and outcomes, which will be discussed in the subsequent sections and concluded with a description and conceptual framework.

5.6.5.2.1 Characteristics of ship to a vendor as an exit option for consumer returns

The characteristics of ship to a vendor as an exit option can include general, involve and influenced by characteristics. The *general characteristics* of ship to a vendor include high priority and back to origin. Particularly, ship to a vendor can be a *high priority* for the retailer since consumer returns become the responsibility of the vendor, emphasising the characteristic of *back to origin* (product

returned to the point of supply or production). Additionally, ship to a vendor as an exit option associates with various *involvement characteristics,* including costs, credits/refunds, contracts or service agreements, negotiations, information sharing and relationships. The involvement of *costs* and *credits/refunds* emphasise the high priority attributed by the retailer in selecting ship to a vendor. Specifically, the vendor becomes responsible for RL costs, including packaging costs, shipping costs and handling costs, and providing refunds/credits to retailers, which covers at least retailer purchasing costs.

Additionally, ship to a vendor relates to SC relationship between the retailer and vendor, involving contracts or service level agreements (SLA), negotiations, sharing of information and partnership relationships. The *contracts or SLAs* dictate the conditions of ship to the vendor, which can include return type, product type, product condition, reimbursements (e.g. credits/refunds) and party responsibilities (e.g. paying costs). Furthermore, in creating these contracts, *negotiations* are needed to specify party responsibility and costs regarding consumer returns. Consequently, ship to a vendor involves *information sharing* and a *relationship* between the vendor and retailer. In section 6.4 (chapter 6) the strategies and practices related to supply chain integration (SCI) and relationships between retailers and other SC parties in RL will be further explored.

Ship to a vendor as an exit option involve a few *influenced by characteristics*, including, contractual conditions, manufacturer requirements, party power in the SC, and stock rotation and replenishment. Particularly, *contractual conditions* can influence the return type, product type and product condition that can be shipped to the vendor. For example, the contract can stipulate that B2C returns of new/unused/unopened without apparent damage printer ink or B2C returns of DOA (dead-on-arrival) electronic products can be shipped to the vendor. Similarly, some *manufacturers requirements* of strict quality controls and high standards can influence the selection of ship to a vendor as an exit option, meaning that some retailers must select ship to vendor as an exit option without a choice. Moreover, *party power in the SC* can influence party responsibilities in ship to a vendor, for example, a large retailer can be more powerful in the SC and dictate that the vendor must be responsible for all RL costs associated with ship to a vendor as an exit option. Apart from manufacturer requirements, *stock rotation* and *replenishment* requirements can influence the selection of ship to a vendor. For instance, the retailer may select direct reuse of new/unused products due to stock levels and replenishment requirements instead of selecting ship to a vendor as an exit option.

5.6.5.2.2 Activities/processes in ship to a vendor as an exit option for consumer returns

Like selling in secondary markets, all activities/processes in ship to a vendor must take place before returned products arrive the vendor. Additionally, the activities/processes in ship to a vendor include (1) information flow activities, including, communication and information sharing, authorisation and scanning, and (2) product flow activities, including, inspection, processing, repackaging, picking, handling, packing, consolidation and transportation/distribution.

In terms of the *information flow activities, communication* and *information sharing* must take place between the retailer and the vendor regarding the shipment of a consumer return to the vendor, which emphasise the involve characteristic of information sharing in ship to a vendor. Additionally, the retailer might request *authorisation* from the vendor before selecting ship to a vendor as an option, which might be a stipulation in the contractual agreements (involve and influenced by characteristics). Receiving authorisation can enable the retailer to *scan* the products that must be shipped to the vendor.

Regarding the *product flow activities* of ship to the vendor, some manufacturers might perform returned product *inspections* at retailer locations before accepting consumer returns from retailers. Evidently, authorisation might only be given after the manufacturer inspected the product. Other product flow activities, including *processing, repackaging, picking, handling, packing, consolidation* and *transportation/distribution*, can be the responsibility of the retailer. However, vendors might be responsible for carrying the costs of some activities, for example, packaging, handling and transportation costs, representing cash flows in ship to a vendor. Furthermore, the vendor might request that the retailer consolidate returns before shipment to the vendor for the purpose of reducing transportation costs.

Essentially, all activities emphasise the significance of contractual agreements, negotiations, partnership relationships and manufacturer requirements as characteristics of ship to a vendor as an exit option (section 5.6.5.2.1).

5.6.5.2.3 Facilities used in ship to a vendor as an exit option for consumer returns

Table 5.31 shows that the facilities used for ship to a vendor include retail stores, DCs, CRCs and manufacturing facilities. Therefore, ship to the vendor option include traditional FL facilities/locations, RL process facilities and destination facilities. For the FL facilities/locations, the use of *retail stores* emphasises that multi/omnichannel retailers receive consumer returns, perform return processing activities before shipment to the vendor. Furthermore, both the retailer and vendor can use their standard *DCs* in ship to a vendor. Specifically, retailer DCs can be used to perform the

activities in ship to a vendor (e.g. authorisation, scanning, handling and consolidation) and vendor DCs represent destinations that receive consumer returns from retailer DCs, emphasising transportation and distribution activities in ship to a vendor. However, DCs may also be used as locations for negotiations and the establishment of SLAs (involve characteristics of ship to a vendor).

While retail stores can be used by multi/omnichannel retailers, online retailers can use dedicated *RL process facilities*, like *CRCs*, to perform activities/processes in ship to a vendor. CRCs might be ideal locations for consolidation activities, avoiding space constraints that might be a problem in retail stores or DCs used for forward sales and operations. Finally, like the DCs of vendors, *manufacturer facilities* can be used as *destination facilities* in ship to a vendor, emphasising the general characteristic of back to the origin in ship to a vendor (see section 5.6.5.2.1).

Essentially, the facilities emphasise that most of the RL processes and activities for ship to a vendor occur at retailer facilities/locations, which will be further emphasised in the next section.

5.6.5.2.4 Parties and outcomes of ship to a vendor as an exit option for consumer returns

Table 5.31 shows the *parties* in ship to a vendor include consumers, retailers, staff/departments, vendors and distributors. *Consumers* play secondary roles in ship to a vendor option by being responsible for returning new or defective/damaged products to retailers. Therefore, consumers can be viewed as suppliers in the reverse supply chain (RSC) of ship to a vendor.

In contrast, *retailers* play primary roles in ship to a vendor by (1) selecting ship to a vendor as an exit option for consumer returns, (2) performing processes and activities in ship to a vendor, (3) engaging in negotiations and establishing agreements with vendors, and (4) charging vendors with RL costs. Additionally, *staff* (such as supervisors/managers) employed by retailers can be responsible for communication and information sharing activities with the vendors/suppliers regarding the consumer returns. Therefore, staff can be involved in maintaining relationships with vendors and ensuring that contract stipulations are followed.

Like retailers, *vendors (suppliers/manufacturers)* play primary roles in ship to a vendor by (1) setting the terms for SLAs (such as authorisation and product condition), (2) performing inspections (if required by the manufacturer) at retailer locations, (3) paying RL costs and issuing refunds/credits for consumer returns, and (4) receiving consumer returns from retailers. Additionally, vendors represent the destination party in the ship to a vendor option and can be responsible for product recovery disposition options for damaged/defective B2C returns.

Finally, retailers can use *distributors* in the ship to a vendor exit option, making them responsible for transportation and distribution activities in ship to a vendor. Essentially, the ship to a vendor option emphasises a basic RSC, involving a point-of-consumption (consumers), point-of-sale (retailers) and point-of-origin (vendors).

Since the focus of the study is on retailers and consumer returns, the *outcomes* of ship to a vendor associate with the benefits that retailers can realise in ship to a vendor. Consequently, the outcomes of ship to a vendor were limited to economic and product-related outcomes. The *economic outcomes* of ship to a vendor relate to *full economic recovery* through credits/refunds and payment of RL costs by the vendor. Consequently, the general characteristic of a high priority (see section 5.6.5.2.1) can demonstrate the economic benefits of selecting a ship to a vendor as an exit option, enabling retailers to *avoid RL costs*. Similarly, the *product-related outcome* relates to product recovery, meaning that retailers can avoid the selection of costly disposition options, like refurbishment, by selecting ship to a vendor as an exit option for consumer returns.

Consequently, all outcomes of ship to a vendor relate to the ability of retailers to push consumer returns to vendors, avoiding RL costs and product recovery activities in the disposition process. However, based on the discussion of all previous disposition and exit options (see from section 5.6.2), ship to a vendor involves the least number of outcomes for the retailer, emphasising the importance of correct disposition decisions. The disposition strategies and practices for effective disposition decisions will be explore in-depth in section 6.6.

5.6.5.2.5 Description and conceptual framework of ship to a vendor as an exit option for consumer returns

Based on the findings presented in section 5.6.5.2, ship to a vendor can be an important exit option in the disposition process of consumer returns, and will be described as follows:

> Ship to a vendor as an exit disposition option for consumer returns can be described as a high priority and back to the origin exit option that (1) involves costs, credits/refunds, contracts and SLAs, negotiations, information sharing and relationships, and (2) can be influenced contractual conditions, manufacturer requirements, party power in the SC, and stock rotation and replenishment. The activities of ship to a vendor can include the (1) information flow activities of communication and information sharing, authorisation and scanning, and (2) product flow activities of inspection, processing, repackaging, picking, handling, packing, consolidation and transportation/distribution, mostly performed by the online retailer (except inspection) in FL or RL facilities (such as DCs and CRCs) for the shipment of returned products (using distributors) to the DCs or facilities of vendors. The aim of ship to a vendor as an exit option is to return consumer product returns to vendors for full credit and reimbursement of RL costs, resulting in the economic outcomes of full economic recovery and avoidance of RL costs and product-related outcome of product recovery (without direct involvement in product recovery activities).

Figure 5.12 provides a conceptual framework for ship to a vendor as an exit option that may apply to consumer returns in online retailing.

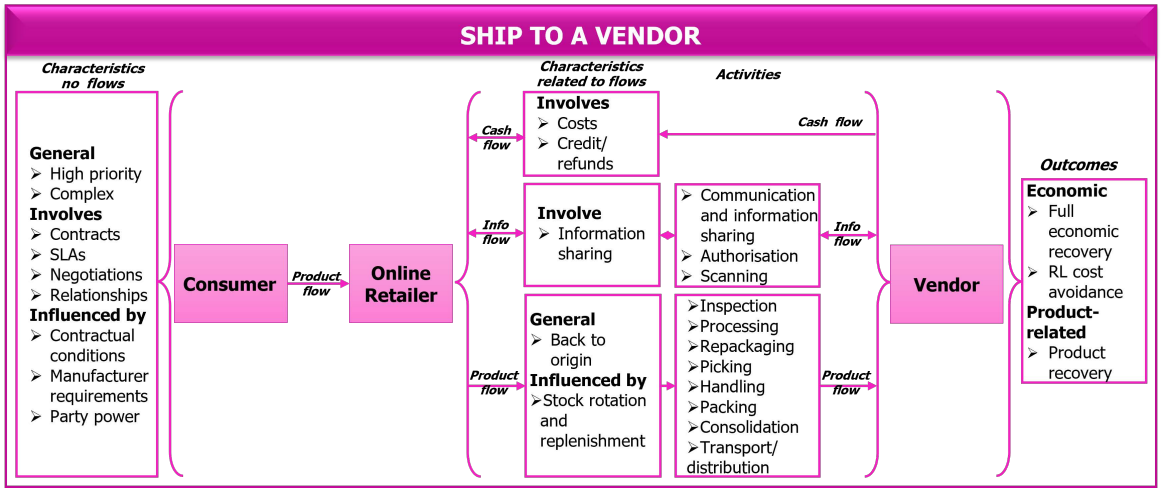


Figure 5.12 Conceptual framework of ship to a vendor as an exit option
Source: Compiled by the researcher

Figure 5.12 provides a basic overview of ship to a vendor as an exit option in the disposition process, illustrating the parties, flows, characteristics, activities and outcomes. Particularly, the framework illustrates that ship to a vendor starts with original consumer returning a product to the online retailer. Additionally, the flows of ship to a vendor involve cash, information and product flows with related characteristics and activities. Once the activities are completed, product outflows and cash inflows continue with shipping the returned product to the vendor and receiving a credit/refund and reimbursement of RL costs from the vendor. Finally, the framework demonstrates the characteristics unrelated to flows as well as the outcomes of ship to a vendor.

In the next section, the final potential exit option of selling to third-party buyers is explored.

5.6.5.3 Selling to third-party (3P) buyers as an exit option for consumer returns

Selling to third-party (3P) buyers is the final potential exit options included in this study for consumer returns in online retailing. Several categories were identified from the QCA of RL literature, including (1) characteristics of selling to 3P buyers, (2) activities in selling to 3P buyers, (3) facilities used for selling to 3P buyers, (4) 3P buyer options, (5) other parties involved in selling to 3P buyers, and (6) outcomes of selling to 3P buyers. Each of these categories will be presented and discussed in subsections below.

Table 5.32 provides an overview of the findings related to *selling to 3P buyers* as an exit option for consumer returns, including detail on the categories, related subcategories, sources to support the subcategories and key quotations to support the discussion of the findings.

Table 5.32 Findings related to selling to third-party buyers as an exit option

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
Characteristics	***Complex***	None	• *"[…] the choice of salvage broker is complicated by the fact that there are different levels of salvage brokers […]."* (Rogers *et al.* 2012:113)
	Involves specialised parties	Efendigil *et al.* (2008:271)	• *"Specialized [sic] reverse chain players – jobbers […]."* (Cline *et al.* 2015:281) • *"[…] sell the product to a specialty broker, such as one that specializes [sic] […]."* (Prahinski & Kocabasoglu, 2006:422)
	Involves reasons	None	• *"Salvage dealers or brokers […] for products, […] that for one reason or another cannot be sold in the primary retail channel."* (Rogers *et al.* 2012:112) • *"[…] broker or salvage dealer is taking the unwanted inventory away and solving a problem for the seller."* (Rogers *et al.* 2012:112) • *"[…] dealing with a small number of salvage dealers, the retailers simplify their disposition process […]."* (Rogers *et al.* 2012:113) • *"[…] sell to jobbers because they are not allowed, by licensing regulation, to sell it directly to end consumers."* (Hsu *et al.* 2009:522) • *"After the second markdown, designer merchandise is returned to the CRC for resale to jobbers."* (Hsu *et al.* 2009:521)
	Involves decisions	None	• *"[…] decisions must be made: which type of firm, international or domestic, how the actual broker should be selected, and how to get the product to the broker."* (Rogers *et al.* 2012:113)
	Involves risks	None	• *"[…] selling the returned products to brokers […] are concerned about the loss of "brand equity"."* (Stock & Mulki, 2009:39) • *"By selling the items to a broker […] the firm gives up a degree of control over the future of the item […]and the items may end up in retail locations that may damage brand equity."* (Rogers *et al.* 2012:112) • *"[…] farther removed a salvage dealer is from a firm, the less confidence the firm has that the salvage dealer will correctly follow their instructions."* (Rogers *et al.* 2012:113)
	Involves lower prices	None	• *"[…] resell at a lower value to a salvage house […]."* (Asdecker, 2015:3) • *"[…] third-party firms […] resell them to […] at a fraction of the original price."* (Dowlatshahi, 2010a:1367) • *"[…] jobbers from re-selling its products at a lower price."* (Efendigil *et al.* 2008:272) • *"[…] sold to jobbers based on a set price, which is a percentage of the cost."* (Hsu *et al.* 2009:522) • *"[…] the broker can buy product for less than the seller's original cost."* (Rogers *et al.* 2012:112) • *"[…] brokers […] sell individual pallets to other dealers […]. At each stage in the process, the price increases […]."* (Rogers *et al.* 2012:113) • *"[…] salvage broker will typically buy in bulk […] a small fraction of the product's original cost."* (Rogers *et al.* 2013:46) • *"[…] selling the returned products to brokers […] in […] lower prices […]."* (Stock & Mulki, 2009:39)
	Involves selling platforms and auctions	None	• *"[…] web site created for qualified jobbers. A jobber would log into the web site to view available lots."* (Hsu *et al.* 2009:522) • *"[…] sold to jobber are sold […] by opening the possibility of auctioning lots […]."* (Hsu *et al.* 2009:526) • *"[…] salvaged to third-party brokers through an auction […]."* (Ferguson *et al.* 2011:774)
	Involves value-added services	None	• *"[…] offers a variety of value-added services, particularly for smaller jobbers […] the fee for these value-added services is nominal."* (Hsu *et al.* 2009:522)
	Involves demand information sharing	None	• *"[…] dealers can provide feedback on consumer demand […] based on their records […] information may as well be obtained from the retailers."* (Das & Chowdhury, 2012:214) • *"[…] jobbers need to provide information on their demands via emails […]."* (Hsu *et al.* 2009:523)
	Involves negotiations	None	• *"[…] spot price negotiated based on the jobber taking a "job lot"."* (Bernon *et al.* 2011:492)
	Involves partnerships/contracts	None	• *"[…] partnerships with brokers […]."* (Keh *et al.* 2012:31) • *"[…] brokers might, for example, contract with a retailer […]."* (Rogers *et al.* 2012:113)
	Influenced by product volumes	None	• *"Salvage dealers […] deal in large product quantities."* (Rogers *et al.* 2012:113, 114) • *"[…] salvage broker will typically buy in bulk such as a trailer load […]as low as 10 percent of the wholesale price […]."* (Rogers *et al.* 2013:46) *"Jobbers […] purchase return products […] in small job lots."* (Bernon *et al.* 2011:492) • *"Lot sizes may also have an impact on sales to jobbers."* (Hsu *et al.* 2009:523)
	Influenced by product types	None	• *"The dealer could either resell the vehicle to the secondary market […]."* (Chan *et al.* 2012:1323) • *"[…] equipment is delivered directly to the dealers […]."* (De Oliveira *et al.* 2012:1602) • *"[…] third-party firms are willing to […] refurbish […] the medical devices […]."* (Dowlatshahi, 2010a:1367) • *"[…] designer merchandise is returned to the CRC for resale to jobbers."* (Hsu *et al.* 2009:521) • *"[…] a car […] could be dismantled and have all the good parts that could be reused sold to a third-party company […]."* (Jayaraman, 2006:996) • *"[…] sell the individual mechatronic devices to core brokers […]."* (Sundin & Dunbäck, 2013:6)

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
	Influenced by product condition	None	• *"[…] sell the product to a specialty broker […] that specializes [sic] […] defective items […]."* (Prahinski & Kocabasoglu, 2006:422) • *"Products that required more intensive repair were either written off […] or sold to jobbers […]."* (Bernon and Cullen, 2007:49) • *"[…] by the jobbers […] damage returns […]."* (Hsu *et al.* 2009:521) • *"Used products […] sales to brokers […]."* (Keh *et al.* 2012:31) • *"[…] dealers […] selling […] second quality products […]."* (Das & Chowdhury, 2012:214) • *"[…] dealers […] selling recovered/second quality products […]."* (Das & Chowdhury, 2012:214) • *"Refurbished products […] are acquired by brokers […]."* (Gobbi, 2011:781) • *"[…] customers for these refurbished parts represents […] dealers […]."* (Tan & Kumar, 2006:337)
Activities/ processes	***Processing and sorting***	None	• *"[…] subjected to the initial processing […] to be sold to the dealers."* (Kinobe *et al.* 2015:89) • *"All merchandise for jobbers is […] sorted."* (Hsu *et al.* 2009:522) • *"[…] sorted […] to be sold to the dealers."* (Kinobe *et al.* 2015:89)
	De-branding	None	• *"[…] labeling [sic] […] is removed before it is salvaged. This becomes a branding issue.* (Hsu *et al.* 2009:522)
	Remarketing	Gobbi (2011:781, 785)	• *"Remarketing […] activities with […] brokers […]."* (Janse *et al.* 2010:504) • *"One way of doing this is to make it easy for the jobbers to see what merchandise is available by posting lots on a secure web site."* (Hsu *et al.* 2009:523)
	Ordering / bidding	None	• *"[…] take special orders from jobbers […]."* (Hsu *et al.* 2009:522) • *"[…] jobbers […] ready for bids."* (Hsu *et al.* 2009:523)
	Communication	None	• *"[…] two-way communications between jobbers and CRC […] the jobbers need to provide information on their demands via emails and/or faxes."* (Hsu *et al.* 2009:523)
	Dismantling	Jayaraman (2006:996)	• *"[…] dismantled and can then be recovered in […] parts sales to brokers […]."* (Keh *et al.* 2012:31)
	Cleaning, washing and drying	None	• *"[…] involving cleaning, washing and drying before […] sold to the dealers."* (Kinobe *et al.* 2015:89)
	Packaging	None	• *"[…] jobbers' desire, and how they would like it packaged."* (Hsu *et al.* 2009:523)
	Packing	None	• *"[…] before being packed to be sold to the dealers."* (Kinobe *et al.* 2015:89)
	Loading	None	• *"[…] loading is […] included in the price a jobber pays […]."* (Hsu *et al.* 2009:522)
	Shipping	None	• *"[…] jobbers can request special treatments. […] for international shipping […]."* (Hsu *et al.* 2009:522)
	Delivery	None	• *"[…] delivered directly to the dealers […]."* (De Oliveira *et al.* 2012:1602)
	Charging	None	• *"[…] so the merchandise is floor-ready when the jobber picks it up […] the fee for these value-added services […] is another source of revenue for the CRC."* (Hsu *et al.* 2009:522)
	Collection	None	• *"[…] the merchandise is floor-ready when the jobber picks it up […]."* (Hsu *et al.* 2009:522) • *"[…] salvage dealers […] collect larger volumes of product […]."* (Rogers *et al.* 2012:114) • *"[…] collection is provided mainly by […] private brokers […]."* (Zhou *et al.* 2007:64)
	Product evaluation / grading	None	• *"[…] dealers, who have their own grading systems by which they evaluate the supplied equipment."* (De Oliveira *et al.* 2012:1602)
	Product recovery activities	De Oliveira *et al.* (2012:1602) Dowlatshahi (2010a:1367)	• *"[…] jobbers who would carry out the refurbishment themselves […]."* (Bernon & Cullen, 2007:49) • *"[…] the jobber will undertake repair […]."* (Bernon *et al.* 2011:492) • *"The dealer could […] refurbish […]."* (Chan *et al.* 2012:1323) • *"[…] specific recovery companies (e.g. jobbers) […]."* (Efendigil *et al.* 2008:272)
	Trading and reselling by 3P buyers	Chan *et al.* 2012:1323) De Oliveira *et al.* (2012:1602) Dowlatshahi (2010a:1367) Efendigil *et al.* (2008:272) Gobbi (2011:785)	• *"Products that required more intensive repair were […] sold to jobbers who would […] sell in secondary markets."* (Bernon & Cullen, 2007:49) • *"Brokers […] are willing to buy almost any product in any condition. They, in turn, sell the product to companies who will sell the product in places such as ''dollar'' stores […]."* (Rogers *et al.* 2012:112) • *"Salvage dealers or brokers […] buying and selling product […]."* (Rogers *et al.* 2012:112) • *"[…] broker will turn around and sell that product to another broker or other secondary market […]."* (Rogers *et al.* 2013:46) • *"[…] "sold as seen" and the jobber will […] will either sell the products directly to customers or other intermediaries."* (Bernon *et al.* 2011:492) • *"Products that are sold to brokers are typically resold to third parties, such as low-priced value retailers […]."* (Prahinski & Kocabasoglu, 2006:422)
Facilities	***Retail stores***	None	• *"[…] the jobbers […] sales from the retail stores […]."* (Hsu *et al.* 2009:523) • *"[…] at the retail store, and a broker or salvage dealer is taking the unwanted inventory away […]."* (Rogers *et al.* 2012:112)
	DCs	None	• *"All merchandise for jobbers […] is sorted […] loading is done by DC […] employees."* (Hsu *et al.* 2009:522)
	Centralised Return Centres (CRCs)	None	• *"[…] merchandise is returned to the CRC for resale to jobbers."* (Hsu *et al.* 2009:521) • *"CRCs sell to jobbers […] when a product reaches salvage […] all labelling [sic] […] is removed before it is salvaged."* (Hsu *et al.* 2009:522) • *"The CRC may take special orders from jobbers for a customized [sic] lot size. The CRC*

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
			offers a variety of value-added services, particularly for smaller jobbers." (Hsu *et al.* 2009:522) • *"[…] customer return center [sic] […] partnerships with brokers […]."* (Keh *et al.* 2012:31)
	Secondary markets	Prahinski and Kocabasoglu (2006:422) Rogers *et al.* (2012:112) Tan and Kumar (2006:337)	• *"[…] jobbers […] sell in secondary markets."* (Bernon & Cullen, 2007:49) • *"The dealer could […] resell […] to the secondary market […]."* (Chan *et al.* 2012:1323) • *"[…] brokers that […] resell them in secondary markets."* (Gobbi, 2011:785) • *"[…] broker will […] sell […] to another broker or other secondary market […]."* (Rogers *et al.* 2013:46)
Third-party buyer options	***Salvage dealers/ brokers***	None	• *"[…] resell at a lower value to a salvage house […]."* (Asdecker, 2015:3) • *"Salvage dealers or brokers operate in the ''secondary market'' for products, buying and selling product […]."* (Rogers *et al.* 2012:112) • *"[…] salvage dealers receive product from multiple retailers, they collect larger volumes of product […]."* (Rogers *et al.* 2012:114) • *"One of the most common approaches to product disposition is through salvage brokers."* (Rogers *et al.* 2013:46)
	Jobbers	Efendigil *et al.* (2008:272)	• *"Specialized [sic] reverse chain players – jobbers […]."* (Cline *et al.* 2015:281) • *"[…] sold to jobbers who would carry out the refurbishment themselves and sell in secondary markets."* (Bernon & Cullen, 2007:49) • *"Jobbers, in this context, are tradesman or wholesalers that purchase return products from retailers in small job lots."* (Bernon *et al.* 2011:492) • *"[…] jobbers' demands in the secondary market […]."* (Hsu *et al.* 2009:518) • *"[…] pick-up by the jobber […] is another source of revenue […]."* (Hsu *et al.* 2009:522)
	General brokers	Sundin and Dunbäck (2013:6)	• *"[…] are salvaged to third-party brokers […]."* (Ferguson *et al.* 2011:774) • *"Refurbished products […] are acquired by brokers […]."* (Gobbi, 2011:782) • *"[…] selling the returned products to brokers."* (Stock & Mulki, 2009:39) • *"[…] brokers might then sell the truckloads to smaller-scale brokers […]."* (Rogers *et al.* 2012:113) • *"[…] recovery activities […] of brokers for recovered assets."* (Janse *et al.* 2010:504) • *"Products that are sold to brokers are typically resold to third parties […]."* (Prahinski & Kocabasoglu, 2006:422) • *"[…] company sells product to a salvage broker, that broker will turn around and sell that product to another broker […]."* (Rogers *et al.* 2013:46) • *"[…] brokers and companies motivated by economic profit."* (Zhou *et al.* 2007:64) • *"Brokers can be found who are willing to buy almost any product in any condition."* (Rogers *et al.* 2012:112) • *"[…] partnerships with brokers [..]."* (Keh *et al.* 2012:31)
	General dealers	None	• *"[…] dealers can provide feedback on consumer demand for a particular recovered product type […]."* (Das & Chowdhury, 2012:214) • *"[…] being packed to be sold to the dealers."* (Kinobe *et al.* 2015:88, 89) • *"[…] equipment is delivered directly to the dealers, who have their own grading systems […]."* (De Oliveira *et al.* 2012:1602) • *"The customers for these refurbished parts represents […] the secondary markets such as dealers […]."* (Tan & Kumar, 2006:337) • *"The dealer could […] resell […] to the secondary market […]."* (Chan *et al.* 2012:1323)
Other parties	***Consumers***	Prahinski and Kocabasoglu (2006:422) Rogers *et al.* (2013:46)	• *"[…] jobber will […] sell the products directly to customers […]."* (Bernon *et al.* 2011:492) • *"[…] brokers would […] sell the goods directly to end customers […]."* (Rogers *et al.* 2012:113) • *"[…] consumer demand […] for selling recovered/second quality products."* (Das & Chowdhury, 2012:214)
	Retailer	None	• *"[…] many retailers sold returns to "jobbers"."* (Bernon *et al.* 2011:492) • *"[…] retailers […] provide feedback on consumer demand […] based on their records for selling recovered/second quality products."* (Das & Chowdhury, 2012:214) • *"[…] brokers might, for example, contract with a retailer […]."* (Rogers *et al.* 2012:113) • *"[…] brokers are typically resold […] low-priced value retailers […]."* (Prahinski & Kocabasoglu, 2006:422) • *"[…] brokers would likely sell […] to secondary market retailers."* (Rogers *et al.* 2012:113)
	Employees/ staff	None	• *"[…] sales officers have access to all sales information when […] loading is done by […] employees […] is included in the price a jobber pays […]."* (Hsu *et al.* 2009:522)
Outcomes	***Economic***	None	• *"[…] jobber picks it up […] it is another source of revenue […]."* (Hsu *et al.* 2009:521) • *these value-added services […] is another source of revenue […]."* (Hsu *et al.* 2009:522) • *"It is more profitable for salvage merchandise to be sold to jobbers […]."* (Hsu *et al.* 2009:522) • *"[…] use jobbers as a cost cutting method for disposing of salvageable merchandise."* (Hsu *et al.* 2009:526) • *"[…] private brokers […] motivated by economic profit."* (Zhou *et al.* 2007:64) • *"[…] at each stage there was value addition in order to increase on the profits."* (Kinobe *et al.* 2015:88)

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
			• *"[…] the jobber will undertake repair […] to maximise the value."* (Bernon *et al.* 2011:492) • *"[…] recovery activities […] of brokers for recovered assets."* (Janse *et al.* 2010:504)
	Product-related	De Oliveira *et al.* (2012:1602)	• *"[…] salvaged to third-party brokers […]."* (Ferguson *et al.* 2011:774) • *"[…] products […] can then be recovered in […] sales to brokers […]."* (Keh *et al.* 2012:31)
	Market-related	None	• *"[…] dealers can provide feedback on consumer demand […]."* (Das & Chowdhury, 2012:214) • *"[…] jobbers' demands in the secondary market […]."* (Hsu *et al.* 2009:518)

Source: Compiled by the researcher

Table 5.32 shows that selling to 3P buyers as an exit option involves various characteristics, activities/processes, facilities, 3P buyer options, other parties and outcomes, which will be discussed in the subsequent sections and concluded with a description and conceptual framework.

5.6.5.3.1 Characteristics of selling to 3P buyers as an exit option for consumer returns

The characteristics of selling to 3P buyers as an exit option can include general, involve and influenced by characteristics. The *general characteristic* relates to the *complexity* of selling to 3P buyers. Particularly, various 3P buyers operate in secondary markets, which complicates the identification of appropriate 3P buyers to recover value from returned products. Additionally, the complexity of selling to 3P buyers can associate with a few involve and influenced by characteristics, which will be emphasised in the subsequent paragraphs.

The *involvement characteristics* of selling to 3P buyers include specialised 3P buyers, reasons, lower prices, decisions, risks, selling platforms and auctions, value-added services, demand information sharing, negotiations and partnerships/contracts. Specifically, selling to 3P buyers involve *specialised RL parties* who buy and resell consumer returns in secondary markets, forming an aftermarket SC. Furthermore, the selection of selling to 3P buyers as an exit option *involve reasons*, which can include (1) simplifying disposition for retailers, (2) assisting with unwanted consumer returns, (3) licencing regulations that prevent resale of returned products in primary markets, and (4) buying unsold returned products after several markdowns. Evidently, selling to 3P buyers as an exit option *involve lower* asking *prices*, often below cost price, indicating that less costs can be recovered than other exit options (i.e. selling in secondary markets and ship to a vendor).

Selling to 3P buyers *involve* various *decisions* about the (1) appropriate type of 3P buyer, (2) selection criteria of 3P buyers and (3) methods of getting the products to 3P buyers, which emphasise the complexity of selling to 3P buyers. Moreover, selling to 3P buyers can *involve* several *risks*, including a loss of control, a loss of brand equity and non-compliance of instructions, which add to the complexity of choosing appropriate 3P buyers. Consequently, organisations relinquish control by

allowing 3P buyers to take ownership of their products and engage in trading activities in secondary markets.

Relating to selling in secondary markets (section 5.6.5.1), selling to 3P buyers often *involve selling platforms*, like websites, and *auctions*, which can be used by retailers to sell consumer returns to 3P buyers. Using a website as a selling platform can be a viable exit option for online retailers since they already possess online capabilities and web-based technology for online sales. Furthermore, selling to 3P buyers can *involve value-added services*, for example, the retailer offers to wash, dry and package clothing for the 3P buyer for an added fee. The specific value-added services, which form part of the activities/processes in selling to 3P buyers will be discussed in section 5.6.5.3.2.

In terms of *demand information sharing*, retailers may request updates on consumer demands for the items sold by 3P buyer on the secondary markets and 3P buyers may provide information of their demands or requests to the retailers, emphasising the involvement of *negotiations* and *partnerships/contracts.* While negotiations can be short term, relating to the asking price for a batch of items, longer term partnerships or contracts can be created between retailers and 3P buyers. Evidently, like ship to a vendor (section 5.6.5.2), selling to 3P buyers can involve SC relationships and collaboration, which may reduce the need to continuously identify and select 3P buyers for selling consumer returns.

Adding to the complexity of selling to 3P buyers, the *influenced by characteristics* of selling to 3P buyers include product return volume, product type and product condition that influence the selection of the type of 3P buyer. For example, high *product return volume* for specific items can be more appropriate for salvage brokers or dealers that buy in bulk and lower product return volumes for a batch of items can be more appropriate for jobbers that buy in smaller job lots. Likewise, with *product types*, for example, vehicles and equipment can be sold to dealers and designer merchandise can be sold to jobbers. Furthermore, *product condition* might influence the appropriateness of 3P buyers, for example, damaged/defective products can be sold to jobbers or speciality brokers with product recovery capabilities and used and/or recovered (e.g. repaired or refurbished) products can be sold to general dealers and salvage brokers. Essentially, most characteristics relate to the careful selection of appropriate 3P buyers, making selling to 3P buyers a challenging exit option in the disposition process of consumer returns.

5.6.5.3.2 Activities/processes in selling to 3P buyers as an exit option for consumer returns

The activities/processes in selling to 3P buyers can take place before, during and after 3P buyers taken possession of purchased products. Specifically, the activities/processes before selling to 3P

buyers can be performed by retailers and 3P buyers, the activities/processes during selling to 3P byers can be the responsibility of the retailer, and the activities/processes after selling to 3P buyers can be the responsibility of the 3P buyers. Additionally, the activities/processes can be classified according to information, product and cash flows, which will be emphasised in the following discussions.

The *activities/processes before selling to 3P buyers* include the (1) product flow RL processes/activities of processing, sorting and de-branding and (2) information flow activities of remarketing, communication and ordering/bidding. *Processing* and *sorting* as RL processes take place after consumer returns arrive at the facility. Therefore, retailers can issue credit/refunds or ship exchanges to consumers and classify returned products according to disposition/exit options (e.g. grouping products in a selling to 3P buyer group). Additionally, retailers might *de-brand* products by removing labels, trademarks and serial numbers before remarketing, communication and ordering/bidding activities. Evidently, de-branding might reduce the risks (involvement characteristic) of selling to 3P buyers (see section 5.6.5.3.1). While other disposition/exit options normally conclude with *remarketing* and reselling[17] activities, remarketing starts in the early stages of selling to 3P buyers. Remarketing can involve advertising and placing returned products for sale on a web platform (e.g. online store) or auction (online or physical), enabling 3P buyers to *order* or *bid* for returned products. After successful purchase of returned products, the retailer and 3P buyer can *communicate* about arrangements/requirements for transfer of products from the retailer to the 3P buyer, directing the subsequent activities/processes.

Specifically, the *activities/processes during selling to 3P buyers* represent all operations that takes place at the retailer's location. Relating to the communication activity, 3P buyers might request some value-added services (identified as an involvement characteristic) to be performed by the retailers, which can include the product flow activities of dismantling, cleaning, washing, drying, packaging, packing, loading, shipping and delivery. These activities can associate with the 3P buyer requests, product condition and product type. For instance, a 3P buyer can request that the retailer *dismantle* (or disassemble) defective electronics or *wash, clean* and *dry* used clothing. Additionally, 3P buyers might request packaging and transportation as part of the value-added services, which can include *packing, loading, shipping* and *delivery* to the 3P buyer. Lastly, the retailer can *charge* 3P buyers a value-added service fee, which represents additional cash flows in selling to 3P buyers as an exit option.

[17] Like selling in secondary markets, selling by retailers are not included as an activity because selling to 3P buyers is the purpose of the exit option.

Finally, *activities/processes after selling to 3P buyers* represent the activities/processes performed by 3P buyers, which include the (1) product flow activities of collection, product evaluation/grading and product recovery, and (2) cash flow activities of trading and reselling. While some 3P buyers can request value-added activities related to delivery of purchased returned products, others might prefer to *collect* products from retailer facilities/locations. Additionally, 3P buyers can be responsible for other RL processes, including inspection to *evaluate* and *grade* purchased products and, if necessary, perform *product recovery* (disposition) activities. These activities/processes of selling to 3P buyers emphasise the general characteristic of specialised parties in RL, possessing the capabilities to recover value from used/damaged/defective products. The final activities involve *trading* and *reselling*, which relates to buying from retailers and selling purchased products in secondary markets for profit. Evidently, after returned products are sold to 3P buyers, cash flows continue with further trading between second market parties and/or reselling to consumers in secondary markets.

5.6.5.3.3 Facilities/locations in selling to 3P buyers as an exit option for consumer returns

Table 5.32 shows the *facilities/locations* used for the selling to 3P buyers as an exit option include (1) traditional FL facilities/locations (such as retail stores and DCs), (2) RL process facilities (such as CRCs), and (3) secondary market locations. Regarding *traditional FL facilities/locations*, the actual selling activity to 3P buyers can take place in *retail stores*, indicating that the product returns of multi/omnichannel retailers can be prepared for sales to 3P buyers, alongside new products for sale to consumers (in the primary market). Additionally, retailers (online-only and multi/omnichannel) can use standard DCs for selling to 3P buyers, indicating that retailers can combine FL activities (e.g. fulfilment of online orders from consumers) with selling to 3P buyer activities/processes.

Alternatively, retailers can use *RL facilities*, like *CRCs*, for the selling of product returns to 3P buyers. Since CRCs (centralised return centres) can be regarded as specialised RL facilities, various selling to 3P buyer activities/processes can be conducted, including de-branding (e.g. removal of labels), remarketing, communication, value-added activities (e.g. cleaning, drying, packing and loading) and charging (see section 5.6.5.3.2). Additionally, using CRCs can enhance relationships with 3P buyers through dedicated RL staff and activities. Consequently, using CRCs can be a viable option for online retailers to sell consumer returns to 3P buyers.

Finally, *secondary markets* can be regarded as destination locations in selling to 3P buyers. While retailers sell to 3P buyers as RL parties in the secondary markets, 3P buyers resell purchased products from retailers in the secondary market to other 3P buyers or consumers, which emphasise the trading activity of selling to 3P buyers. Therefore, like refurbishment and selling in secondary

markets (sections 5.6.4 and 5.6.5.1), selling to 3P buyers result in the final sale of returned/recovered products to second consumers in secondary markets.

5.6.5.3.4 3P buyer options and parties involved in selling to third-party buyers as an exit option for consumer returns

Table 5.32 indicates that several 3Ps can buy consumer returns from retailers, including salvage dealers/brokers, jobbers, general brokers and general dealers. *Salvage dealers/brokers* are 3P buyers that (1) operate in secondary markets, (2) engage in trading (buying and selling) activities, and (3) collect bulk quantities of product returns from various retailers. Therefore, salvage dealers/brokers buy large volumes of returned products at bulk discounts from retailers to obtain profits from reselling returned products at higher prices in secondary markets.

As specialised RL parties, *jobbers* can be described as 3P buyers that (1) buy products in smaller quantities (known as job lots) from retailers, (2) perform product disposition/recovery activities and (3) resell recovered/returned products as wholesalers in secondary markets. Additionally, jobbers create a demand for returned products and request value-added services from retailers, providing an additional source of income for retailers. *General brokers* share some characteristics with jobbers and salvage dealers/brokers. Particularly, general brokers can (1) buy recovered/returned products in larger quantities (truckloads) from retailers, (2) perform product disposition/recovery activities and (3) engage in trading activities by reselling the products in smaller quantities to other 3P buyers. General brokers can be viable 3P buyers for retailers since they buy returned products in any condition and can engage in partnership relationships (involve characteristic) with retailers.

Similarly, *general dealers* can be valuable in sharing information on secondary market demand with retailers, indicating that SC relationships can be created with general dealers. Additionally, general dealers can (1) request value-added services from retailers, like packing and delivery (activities during selling to 3P buyers), (2) buy recovered (e.g. repaired and refurbished) products from retailers, (3) perform product evaluation and grading (activities after selling to 3P buyers) and (4) resell recovered products in secondary markets.

Apart from 3P buyers, consumers, retailers and staff can play various roles in selling to 3P buyers as an exit option for consumer returns. Specifically, the *consumers* in selling to 3P buyers represent *second consumers*, playing the secondary roles of (1) creating demand for recovered/used products in secondary markets, (2) buying from 3P buyers in the secondary markets, and (3) provide a direct source of income for 3P buyers. While original consumers can be responsible for supplying returned products, the focus of selling to 3P buyers is the creation of an aftermarket/alternative SC with

original retailers as the main suppliers, 3P buyers as the wholesalers/retailers and second consumers as end users.

Retailers in selling to 3P buyers represent original retailers, playing primary roles, and second retailers, playing secondary roles. The roles of *original retailers* include (1) selecting selling to 3P buyers as an exit option in the disposition process, (2) selling returned products to 3P buyers, (3) sharing information, communicating and creating partnerships with 3P buyers, (4) performing de-branding, remarketing and charging activities, and (5) providing value-added services based on the requests of 3P buyers (also see section 5.6.5.3.2). S*econd retailers* can act as buyers in the secondary market, purchasing returned/recovered products from 3P buyers and providing an indirect source of income to original retailers. Moreover, original retailers employ *staff* responsible for selling returned/recovered products to 3P buyers and performing value-added activities. Therefore, staff can play primary roles in selling to 3P buyers by facilitating in value recovery activities, which will be further identified in the outcomes of selling to 3P buyers.

5.6.5.3.5 Outcomes of selling to 3P buyers as an exit option for consumer returns

Table 5.32 shows that certain economic, product-related and market-related outcomes can be realised in selling to 3P buyers as an exit option for consumer returns.

The *economic outcomes* of selling to 3P buyers include profits/revenue, cost savings and value/asset recovery. Specifically, *profits/revenue* relate to the selling of returned/recovered products to 3P buyers and performing value-added activities for 3P buyers. Additionally, *cost savings* relate to the selling of returned products to jobbers, which eliminates the need for retailers to perform costly product recovery (e.g. repair and refurbishment) activities. Consequently, jobbers not only provide an additional source of revenue by buying returned products and requesting value-added activities but also enable cost saving by performing repair and refurbishment on defective/damaged/outdated products (see section ss). While the economic outcomes of selling to 3P buyers can be beneficial for retailers, 3P buyers can also realise economic benefits through trading/reselling activities of returned/recovered products at higher prices in secondary markets. Additionally, jobbers and dealers can maximise *value* and *asset recovery* through recovery activities (like repair), emphasising the value of repair and refurbishment as disposition options in RL.

Accordingly, the *product-related outcomes* relate to repair and refurbishment activities (performed by retailers or 3P buyers), which enables *product recovery* and extending the product's life (see sections 5.6.3 and 5.6.4). Finally, the *market-related outcome* involves *demand satisfaction*, where retailers can directly satisfy the demand of 3P buyers and indirectly the demand of secondary market

buyers (other 3Ps and retailers) and/or second consumers. Essentially, the biggest motivation for engaging in selling to 3P buyers relate to the economic benefits that can be realised by retailers and 3P buyers, explaining their willingness to engage in partnerships (involve characteristic).

5.6.5.3.6 Description and conceptual framework of selling to 3P buyers as an exit option for consumer returns

Based on the findings presented in section 5.6.5.3, selling to 3P buyers can be an important exit option in the disposition process of consumer returns, and will be described as follows:

> Selling to third-party (3P) buyers as an exit option for consumer returns can be described as a complex exit option that (1) involves specialised RL parties, reasons, decisions, risks, lower prices, selling platforms and auctions, value-added services, demand information sharing, negotiations and partnerships/contracts, and (2) can be influenced by product return volume, product type and product condition. The activities/processes of selling to 3P buyers can be classified as activities/processes (1) selling to 3P buyers, including processing, sorting, de-branding (product flows), remarketing, communication and ordering/bidding (information flows), (2) during selling to 3P buyers, including dismantling, cleaning, washing, drying, packaging, packing, loading, shipping, delivery (product flows) and charging (cash flow), and (3) after selling to 3P buyers, including collection, product evaluation/grading, product recovery (product flows), trading and reselling (cash flows), which can be performed by the online retailer in FL/RL facilities (such as stores DCs and CRCs) and 3P buyers, operating in secondary markets. The aims of selling to 3P buyers are to recover value by reselling returned/recovered products to salvage dealers/brokers, jobbers, general brokers or general dealers, providing value-added services for 3P buyers, and establishing an aftermarket SC, involving trading between 3P buyers and reselling of returned/recovered products to second retailers and/or second consumers in secondary markets. Selling to 3P buyers as an exit option can result in (1) economic outcomes (profits/revenue, cost savings and value/asset recovery), (2) product-related outcome (product recovery), and (3) market-related outcome (demand satisfaction).

Figure 5.13 provides a conceptual framework of selling to third parties as an exit option in the disposition process that may apply to consumer returns in online retailing.

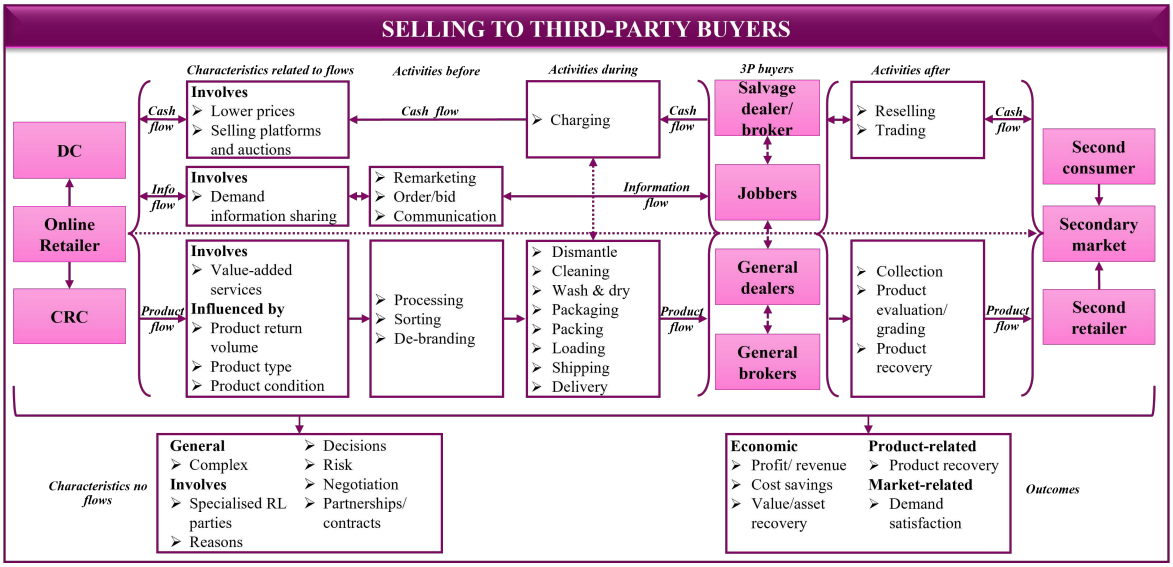


Figure 5.13 Conceptual framework of selling to 3P buyers as an exit option
Source: Compiled by the researcher

Figure 5.13 shows a basic overview of selling to 3P buyers as an exit option in the disposition process of consumer returns, illustrating the parties, facilities, flows, characteristics, activities and outcomes. Particularly, the framework illustrates that selling to 3P buyers starts with the original

online retailer using DCs or CRCs. Additionally, the framework indicates that cash, information and product flows with related characteristics and activities can occur in selling to 3P buyers. While the information flow activities during selling to 3P buyers can be performed by the online retailer and 3P buyers, the product and cash flow activities before and during selling to 3P buyers can be performed by the online retailer. Following the activities during selling to 3P buyers, the 3P buyers take possession of the products and perform activities after selling to 3P buyers, which involve cash and product flows. Once the activities are completed by the 3P buyers, product outflows and cash inflows continue with selling returned/recovered products in secondary markets to second retailers and/or second consumers. However, 3P buyers can also engage in trading with other 3P buyers (e.g. general dealer buys from jobber) before products are resold in secondary markets. Finally, the framework demonstrates the characteristics unrelated to flows and the outcomes of selling to 3P buyers.

In the next section, the overall conceptual framework and description of the disposition process for consumer returns and online retailing will be presented.

5.6.6 Overall description and conceptual framework of the disposition process of consumer returns

This section provides an overall description and conceptual framework of the disposition process of consumer returns. The description and framework included all parties, characteristics, activities and facilities of the general disposition process (section 5.6.1), as well as all outcomes mentioned throughout section 5.6. Furthermore, any characteristic and activity/process that occurred more than once in the findings (presented in section 5.6) were added to the overall description and framework. However, to simplify the overall description and framework, the activities/processes were described and illustrated in terms of flows, excluding the before, during and after activities/processes associated with various disposition/exit options (section 5.6.2 to 5.6.5). Likewise, the various parties and facilities/locations of the disposition and exit options were excluded to simplify the description and framework. Instead, the different disposition and exit options that can be selected in the disposition process are mentioned and illustrated.

Accordingly, the disposition process of consumer returns can be described as follows:

> The disposition process of consumer returns can be described as an important, complex and time-consuming RL process, which (1) requires skilled/trained staff, resources, equipment and technology, (2) involves costs, options/alternatives, routes, channels, destinations, markets, risks, discounted/lower prices, contracts, negotiations, information sharing and relationships/partnerships, (3) can be influenced by industry/organisation type, product type, condition, quality and characteristics, return type/reasons, return volume, manufacturer requirements/specifications, return policies and legislation, and (4) links with other pre- and post-receipt RL processes. The disposition process can include the (1) information flow activities of administration, scanning, communication and remarketing, (2) product flow processes/activities of collection, transportation, processing, sorting, inspection/product evaluation, disposition decisions, (re)testing, disassembly/ dismantling,

cleaning/washing, fixing/repair, treatment, replacement, restoration, upgrade, repackaging, restocking/return to inventory, storage, handling, packing, loading, shipment, redistribution and delivery, and (3) cash flow activities of trading, reselling and charging, which can be performed by the staff of online retailers and/or 3P(R)L providers in traditional FL facilities/locations (such as stores, warehouses and DCs), RL process facilities (such as collection facilities, CRCs, processing and disassembly facilities) and recovery facilities (such as recovery centres, repair and refurbishment facilities).

The aims of the disposition process can include (1) recovery of returned products through direct reuse, repair or refurbishment, (2) shipment of returned products back to vendors or original consumers, (3) reselling of returned/repaired products in primary markets, and (4) selling of returned/recovered/used products to second consumers, second retailers or 3P buyers in secondary markets. The disposition process can result in (1) economic outcomes (economic benefits, profitability, revenue, cost avoidance, savings and effectiveness, cash/cost and economic/value recovery and improved financial performance), (2) product-related outcomes (improve product quality, restore product to a working/functional condition, new warranty, extend the product's life and recover products/parts for reuse), (3) environmental outcomes (environmental benefits, performance, protection and sustainability, comply with environmental laws, and reduce waste and natural resource consumption), (4) market-related outcomes (market benefits, competitiveness, increase in sales, demand/supply/consumer need satisfaction, and customer trust, service and satisfaction), and (5) social outcomes (improve reputation, society benefits and job creation).

Based on the description, Figure 5.14 provides a conceptual framework of the disposition process in RL that may apply to consumer returns in online retailing.

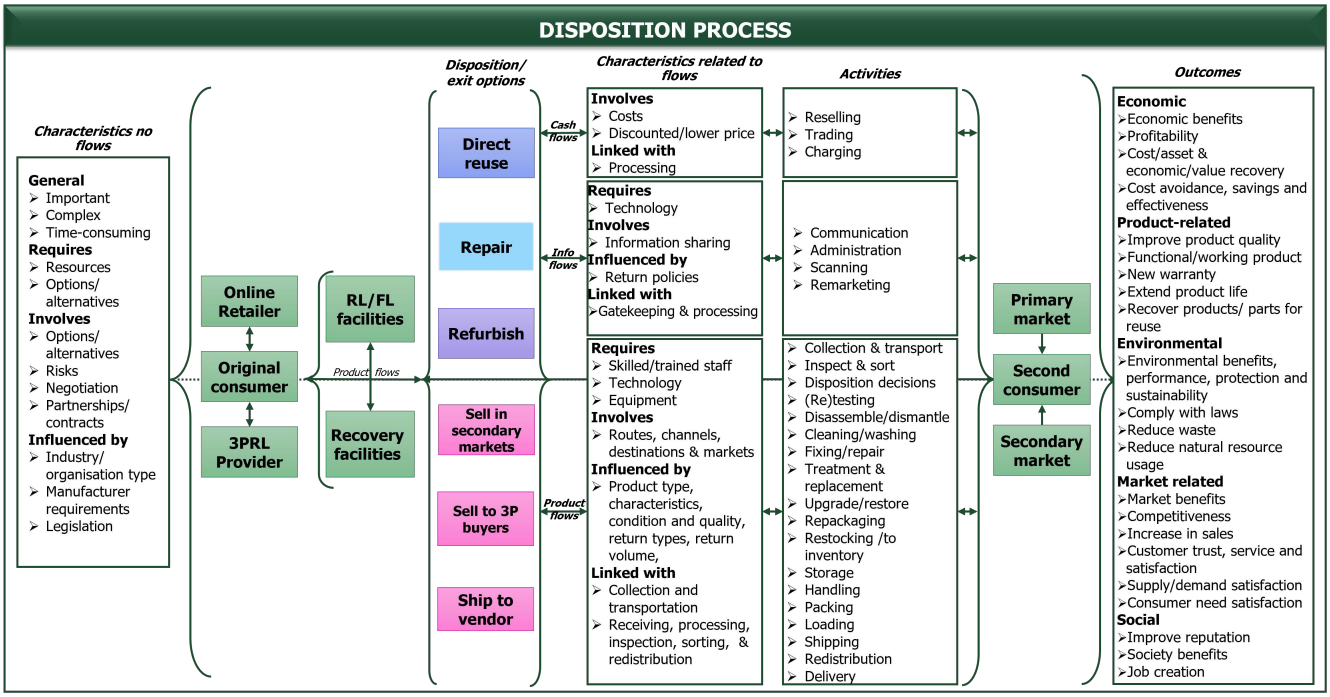


Figure 5.14 Conceptual framework of the disposition process for consumer returns
Source: Compiled by researcher

Figure 5.14 provides a basic overview of the disposition process of consumer returns, illustrating the parties, facilities, disposition/exit options, flows, characteristics, activities, markets and outcomes. Particularly, the framework illustrates that the disposition process starts with the original consumer, returning a product to the original online retailer or third-party provider. The product enters the RL/FL facility and/or recovery facility (depending on the options) for disposition operations. Additionally, the framework demonstrates the various disposition and exit options that can be selected in the disposition process as well as cash, information and product flows with related characteristics and activities. Once the activities are completed, the cash, information and product flows continue as products re-enter the markets, which can either be the primary market or secondary

market. Ultimately, the disposition process concludes with the second consumer purchasing and receiving the returned/recovered/used products. Finally, the framework demonstrates the characteristics unrelated to flows as well as the various outcomes of the disposition process. The practices related to the disposition process will be discussed in section 6.6.

In the next section, redistribution as the final post-receipt RL process of consumer returns, will be discussed and analysed.

5.7 REDISTRIBUTION PROCESS OF CONSUMER RETURNS

Redistribution was introduced in the disposition process, as a process responsible for activities to ship and deliver returned/recovered products to the markets. Like the disposition process, the categories identified from the QCA of RL literature for redistribution included (1) characteristics of redistribution, (2) activities in redistribution, (3) facilities/locations in redistribution, (4) parties involved in redistribution, and (5) outcomes of redistribution.

Table 5.33 provides an overview of the findings related to the *redistribution process of consumer returns*, including detail on the categories, related subcategories, sources to support the subcategories and key quotations to support the discussion of the findings.

Table 5.33 Findings related to the redistribution process of consumer returns

CATEGORIES	SUB-CATEGORIES	SUPPORTING SOURCES	KEY QUOTATIONS
Characteristics	***Exit of RL***	None	• *"[…] ends […] with their redistribution […]."* (Kongar *et al.* 2015:63) *"At the exit of reverse logistics […] is […] the redistribution process […]."* (Lhafiane *et al.* 2015b:399)
	Costly	None	• *"[…] redistribution […] Freight rates reported were […] rising."* (Abraham, 2011:221) • *"[…] expensive venture involving […] redistribution […]."* (Kinobe *et al.* 2015:88) • *"[…] shipping cost and […] how to minimize [sic] the redistribution process in cost […]."* (Lhafiane *et al.* 2015b:399) • *"[…] costly for a variety of reason that include […] and redistribution […]."* (Ruiz-Benítez *et al.* 2014:55)
	Time-consuming	None	• *"[…] how to minimize [sic] the redistribution process […] time."* (Lhafiane *et al.* 2015b:399)
	Requires speed	None	• *"[…] redistribute as quickly as possible […]."* (Khor & Udin, 2012:4) *"[…] value of returns is time-sensitive, key players in the reverse supply chain ought to […] focus on quick redistribution […]."* (Khor *et al.* 2016:104)
	Requires resources	None	• *"[…] resources to focus on quick redistribution […]."* (Khor *et al.* 2016:104)
	Involves technology	None	• *"[…] is marked by the system as 'Redistribute'."* (Kongar *et al.* 2015:60)
	Involves networks	None	• *"The re-distribution network […]."* (Abraham, 2011:221) • *"[…] network is developed, in which used products are […] redistributed […]."* (Sasikumar *et al.* 2010:1224)
	Involves product reuse	None	• *"[…] reuse of the product […] includes […] redistribution […]."* (Badenhorst & Van Zyl, 2015:147) • *"[…] product reuse concerns redistribution […]."* (Khor & Udin, 2013:73)
	Influenced by product type, condition and quality	El-Sayed *et al.* (2010:425) Genchev *et al.* (2011:254) Hernández *et al.* (2011:80) Janse *et al.* (2010:510) Khor and Udin (2012:4) Khor *et al.* (2016:104) Min and Ko (2008:176)	• *"Depending on the kind of product and its condition, redistribution […] varies from a hand carried bundle to a loaded cycle to an open truck."* (Abraham, 2011:221) • *"[…] different quality grades – for example, primary quality, which may be sold as a new product, and secondary quality, which may be sold only through certain channels […]."* (De Leeuw *et al.* 2016:716) • *"Based on the test results, it is decided whether they are eligible for […]*

CATEGORIES	SUB-CATEGORIES	SUPPORTING SOURCES	KEY QUOTATIONS
		Ruiz-Benítez *et al.* (2014:55) Selvi and Kayar (2016:17) Sharma *et al.* (2016:409)	*redistribution […].”* (Kongar *et al.* 2015:59) • *“[…] products into an ‘‘as good as new’’ condition […] can be redistributed in primary market […].”* (Das & Dutta, 2013:721) • *“[…] redistribution […] for example, primary quality, which may be sold as a new product […].”* (De Leeuw *et al.* 2016:716) • *“[…] redistribution of […] repaired, and refurbished products […].”* (Asdecker, 2015:3) • *“[…] redistribution of recovered products […].”* (Das, 2012:1438) • *“[…] repaired […] and then forwarded to the second customers […] through redistributors.”* (Soleimani & Govindan, 2014:491) • *“Reusable products need to be sold in the proper market through redistribution.”* (Agrawal *et al.* 2016a:935) • *“[…] used products are […] redistributed to the customer through secondary market.”* (Sasikumar *et al.* 2010:1224) • *“[…] redistribution […] of reuseable [sic], resalable […] materials.”* (Nikolaou *et al.* 2013:179)
	Influenced by return type	None	• *“[…] commercial and warranty returns […] and takes care of redistribution.”* (Janse *et al.* 2010:510)
	Influenced by demand		• *“Redistributors […] to the second markets based on the customers’ demands.”* (Soleimani & Govindan, 2014:491)
	Influenced by legislation	None	• *“[…] enacted the laws and programs for redistribution […].”* (Kongar *et al.* 2015:54)
	Linked to collection and transportation	Kinobe *et al.* (2015:88)	• *“[…] from procurement (collection) to […] and eventually to redistribution.”* (Bai & Sarkis, 2013:307) • *“[…] integrates the collection […] and redistribution […].”* (Das, 2012:1438) • *“[…] returns […] include collection […] and redistribution.”* (Ruiz-Benítez *et al.* 2014:55) • *“[…] collect […] for redistribution […].”* (Kongar *et al.* 2015:62) • *“[…] redistribution transportation varies […].”* (Abraham, 2011:221) • *“[…] transport to distribution centers [sic] […] for redistribution.”* (Kongar *et al.* 2015:62) • *“[…] returns […] include […] transportation […] and redistribution.”* (Ruiz-Benítez *et al.* 2014:55)
	Linked to receiving	None	• *“[…] receives […] products back […] and takes care of redistribution.”* (Janse *et al.* 2010:510)
	Linked to processing	None	• *“[…] returned goods for processing and re-distribution […].”* (Jayaraman *et al.* 2008:420) • *“[…] processed […] by marking them as ‘Redistribution’ […].”* (Kongar *et al.* 2015:61)
	Linked to inspection	Khor and Udin (2012:4) Kongar *et al.* (2015:61)	• *“[…] inspected and […] redistributed […].”* (Abraham, 2011:212) • *“[…] returned products […] were inspected […] for redistribution […].”* (Min & Ko, 2008:176)
	Linked to sorting	Abraham (2011:212)	• *“[…] sorted products are redistributed […].”* (Suyabatmaz *et al.* 2014:75) • *“[…] sorting […] and takes care of redistribution.”* (Janse *et al.* 2010:510) • *“[…] returns […] include […] sorting […] and redistribution.”* (Ruiz-Benítez *et al.* 2014:55)
	Linked to disposition	Sasikumar *et al.* (2010:1224)	• *“[…] product recovery […] and redistributed […].”* (Sasikumar *et al.* 2010:1224) • *“[…] redistribute them by considering disposition management rules […].”* (Hernández *et al.* 2011:80) • *“[…] suitable for reuse, redistribution, and/ or proper disposal.”* (Kongar *et al.* 2015:59) • *“[…] returned products […] were […] repaired and refurbished for redistribution […].”* (Min & Ko, 2008:176)
Activities	***Retesting***	None	• *“[…] the hub receives also repaired or refurbished products back, retests them again and takes care of redistribution.”* (Janse *et al.* 2010:510)
	Cleaning	None	• *“[…] cleaning […] and redistribution.”* (Ruiz-Benítez *et al.* 2014:55)
	Repackaging	Ruiz-Benítez *et al.* (2014:55)	• *“[…] redistribution […] packaged products […].”* (Abraham, 2011:221) • *“[…] redistributed […] after repackaging […].”* (Min *et al.* 2006:58)
	Relabelling	None	• *“[…] redistributed […] after […] re-labelling.”* (Min *et al.* 2006:58)
	Storage	None	• *“[…] storage […] and […] redistribution.”* (Bai & Sarkis, 2013:307)
	Packing and loading	None	• *“[…] distributors pack […] packaged products into cartons and load them on to trucks.”* (Abraham, 2011:221)
	Shipping	None	• *“[…] redistributed the shipment […].”* (Genchev *et al.* 2011:254) • *“[…] shipping […] the redistribution process.”* (Lhafiane *et al.* 2015b:399) • *“[…] shipping the […] products to new customers […].”* (Dowlatshahi, 2010b:4199)
	Delivery	None	• *“Redistribution: Delivering […] products […].”* (Selvi & Kayar, 2016:17)
	Remarketing	None	• *“[…] redistributed and marketed to a new target consumer.”* (Abraham, 2011:212) • *“[…] products could be remarketed […] through redistribution […].”* (Beh *et al.* 2016:22)
	Reselling	Badenhorst and Van Zyl	• *“Redistribution […] for resale […].”* (Agrawal *et al.* 2016c:43)

CATEGORIES	SUB-CATEGORIES	SUPPORTING SOURCES	KEY QUOTATIONS
		(2015:147) De Leeuw *et al.* (2016:716) Nikolaou *et al*. (2013:179)	• *"[…] products need to be sold […] through redistribution."* (Agrawal *et al.* 2016a:935) • *"[…] redistribution and sale of products."* (Kinobe *et al.* 2015:88)
Facilities/ locations	***Redistribution facilities***	Kumar *et al.* (2016:4)	• *"Redistribution locations are responsible for the distribution […]."* (El-Sayed *et al.* 2010:425) • *"[…] redistribution centers [sic] […] marked by the system as 'Redistribute'."* (Kongar *et al.* 2015:60)
	Retail stores	None	• *"[…] re-distribution […] in a […] retail outlets […]."* (Abraham, 2011:221) • *"[…] redistributed back to the stores […]."* (Beh *et al.* 2016:19)
	Warehouses	None	• *"[…] re-distribution […] keeps the goods in a room in […] a warehouse […]."* (Abraham, 2011:221)
	Distribution Centres (DCs)	None	• *"[…] distribution center [sic] is set within the given region to facilitate […] outbound distribution*." (Sheu, 2007:1444) • *"[…] to distribution centers [sic] […] for redistribution."* (Kongar *et al.* 2015:62)
	Centralised Return Centres (CRCs)	None	• *"[…] returns center [sic] accepted and redistributed the shipment […]."* (Genchev *et al.* 2011:254) • *"[…] centralized [sic] return centers [sic], some returned products […] may be redistributed […]."* (Min *et al.* 2006:58)
	Processing facilities	None	• *"[…] processing centres to inspect […] and redistribute […]."* (Khor & Udin, 2012:4)
	Disassembly facilities	None	• *"[…] from disassembly location for redistribution […]."* (Kumar *et al.* 2016:6) • *"[…] disassembly centers and then forwarded […] through redistributors […]."* (Soleimani & Govindan, 2014:491)
	Markets	Abraham (2011:221) Agrawal *et al.* (2016a:935) Agrawal *et al.* (2016c:43) Khor and Udin (2013:73) Selvi and Kayar (2016:17) Soleimani and Govindan (2014:491)	• *"[…] used products are […] redistributed to the customer through secondary market."* (Sasikumar *et al.* 2010:1224) • *"[…] additional markets for returns […] through redistribution."* (Beh *et al.* 2016:22) • *"[…] products into an ''as good as new'' condition can be redistributed in primary market […]."* (Das & Dutta, 2013:720, 721) • *"Redistributors […] to the second markets based on the customers' demands."* (Soleimani & Govindan, 2014:491)
Parties	***Consumers***	Abraham (2011:221) Agrawal *et al*. (2016a:935) Dowlatshahi (2010b:4199) Min *et al.* (2006:58) Sharma *et al.* (2016:409)	• *"[…] collected from the customers […] and redistributed into the market."* (Sasikumar *et al.* 2010:1225) • *"[…] returned products from […] end-customers […] for redistribution […]."* (Min & Ko, 2008:176) • *"Redistributors manage to send […] products to the second markets based on the customers' demands […]."* (Soleimani & Govindan, 2014:491) • *"[…] redistributed and marketed to a new target consumer […]."* (Abraham, 2011:221) • *"[…] redistribution […] and second customers […]."* (El-Sayed *et al.* 2010:424) • *"[…] redistributed to the customer through secondary market."* (Sasikumar *et al.* 2010:1224) • *"Redistribution […] products […] for resale to users."* (Agrawal *et al.* 2016c:43)
	Retailers	None	• *"[…] returned products from retailers […] for redistribution […]."* (Min & Ko, 2008:176) • *"The re-distribution network […] aftermarket retailers work individually."* (Abraham, 2011:221) • *"The re-distribution network […] retailers purchase reconditioned goods […]." (*Abraham, 2011:221) • *"[…] re-distribution […] in a […] retail outlets […]."* (Abraham, 2011:221)
	Suppliers	None	• *"Redistribution: Delivering reusable […] products to suppliers and their place in the market."* (Selvi & Kayar, 2016:17)
	Redistributors	None	• *"[…] redistribution transportation […] organized [sic] distributors pack […] and packaged products into cartons and load them on to trucks."* (Abraham, 2011:221) • *"[…] redistributors working from the collection of returned goods to the distribution of recovered products to the market."* (Chern *et al.* 2013:193) • *"[…] repaired flow exiting from disassembly location to all redistributors locations to be redistributed."* (El-Sayed *et al.* 2010:426) • *"Second customers can be supplied by redistributors […]."* (Soleimani & Govindan, 2014:490) • *"Redistributors manage to send […] products to the second markets based on the customers' demands."* (Soleimani & Govindan, 2014:491)
	Third parties	Abraham (2011:221)	• *"LSP […] takes care of redistribution."* (Janse *et al.* 2010:510) • *"[…] freight company […] to transport […] for redistribution […]."* (Kongar *et al.* 2015:62)
Outcomes	***Economic***	None	• *"[…] redistribution […] generates revenue […]."* (Khor *et al.* 2016:104) • *"[…] redistributed […] for the purpose of recapturing value […]."* (Beh *et al.* 2016:19) • *"[…] redistribution […] products were found to have the highest resale value."*

CATEGORIES	SUB-CATEGORIES	SUPPORTING SOURCES	KEY QUOTATIONS
			(Abraham, 2011:221) • *"[…] redistribute them […] will add value […]."* (Hernández *et al.* 2011:80)
	Product-related	Das (2012:1438)	• *"[…] redistribution to ensure that recovered products undergo extension of product lifecycle."* (Khor *et al.* 2016:104)
	Environmental	None	• *"[…] extend the lifecycle of […] products […] as redistribution […] reduces landfill disposal […]."* (Khor *et al.* 2016:104) • *"[…] enhancing sustainability, reducing waste […] through redistribution."* (Beh *et al.* 2016:22)
	Market-related	Soleimani and Govindan (2014:491)	• *"[…] redistributed […] to satisfy the demands of the customers."* (Das & Dutta, 2013:721) • *"[…] exploit additional markets […] through redistribution."* (Beh *et al.* 2016:22)

Source: Compiled by the researcher

Table 5.33 shows that the redistribution process involves various characteristics, activities, facilities/locations, parties and outcomes, which will be discussed in the subsequent sections and concluded with a description and conceptual framework.

5.7.1 Characteristics of the redistribution process of consumer returns

The redistribution process can involve various characteristics that can be classified as (1) general characteristics, (2) requirement characteristics, (3) involvement characteristics, (4) influenced by characteristics and (5) linked with characteristics.

The *general characteristics* describe the redistribution process as the exit of RL, costly and time-consuming. While the consumer return request (CRR) process can be classified as the start of the RL process (see section 4.4), redistribution can be classified as the *exit* of the RL process. Therefore, once returned/recovered products enter the market and gets delivered to the end user (second consumer), the RL process is completed. Furthermore, the redistribution process can be a *costly* due to transportation expenses (such as shopping costs and freight rates), indicating that redistribution costs can impact the ultimate economic, value or cost recovery that can be realised through disposition (see section 5.6.6). Nevertheless, without redistribution, no value can be recovered, making redistribution an important RL process. Lastly, redistribution can be *time-consuming*, which can associate with the activities and time it takes for returned/recovered products to be transported from facilities to the markets.

The *requirement characteristics* of the redistribution process include speed and resources. Although the redistribution process can be time-consuming, *speed* can be an important requirement because the demand for time-sensitive returned/recovered products can change (e.g. clothing goes out of fashion or a new model release of a smart phone). Furthermore, *resources* can be important for speedy redistribution, indicating that organisations must invest in resources that focus on enhancing redistribution efficiency and maximising value recovery.

The *involvement* characteristics of the redistribution process include technology, networks and product reuse. Since redistribution is the final RL process, *technology* can be important for updating inventory and tracking systems as returned/recovered products exit the facility and enter the markets. Furthermore, redistribution involves networks, covering the movement of returned/recovered products from facility locations to market/consumer locations. Consequently, redistribution involves *product reuse*, which relates to the delivery of returned/recovered products to consumers for consumption.

The *influenced by characteristics* of the redistribution process include product type, condition and quality, return type, demand and legislation, which can influence the type of transportation, market locations in redistribution and redistribution speed and activities. Specifically, *product type* and *condition* can influence the vehicle type used for redistribution. For example, smaller products in unused/new condition can be redistributed in small loads in a standard passenger vehicle and larger products in used/defective or damaged condition (e.g. fridge or furniture) must be redistributed on larger open trucks. Furthermore, *return type, product condition and quality* can influence market locations, redistribution speed and activities. For example, B2C (unwanted) returns of new/unused products can directly be redistributed to primary markets, ensuring speedy redistribution. In contrast, B2C and warranty returns of defective/damaged and/or poor-quality products must first be recovered (through repair or refurbishment), meaning that products must be resalable and reusable before redistribution to markets can take place. Consequently, the product condition can influence redistribution activities, for example, repaired and refurbished products need retesting, repackaging and relabelling before redistribution (see section 5.7.1), emphasising the time-consuming characteristics of redistribution. Furthermore, products in recovered and used condition can only be redistributed to secondary markets (see sections 5.6.4 and 5.6.5), requiring additional remarketing activities.

Similarly, market/product *demand* can influence the market location, redistribution activities and speed of redistribution. For example, if the demand for new condition returned products is higher in the secondary market, the redistribution process might exclude delivery in the primary market. Additionally, returned/recovered products with a lower market demand require storage and remarketing activities, adding to the time constraints in the redistribution process. Lastly, *legislation* can influence the market locations in redistribution, for example, consumer protection laws might stipulate that any returned product in a used can only be redistributed to secondary markets, excluding primary markets.

Finally, the *linked with characteristics* of the redistribution process involve links with a few *pre-receipt RL processes*, including collection and transportation, and all *post-receipt RL processes*,

including receiving, processing, inspection, sorting and disposition. Particularly, the links between redistribution and the *collection* and *transportation* processes in RL associate with the movement of returned products between locations. For example, products can be collected from consumers and transported to facilities for eventual redistribution to the markets. Additionally, returned/recovered products can be collected from facilities and transported to DCs for redistribution, emphasising the involvement of networks in redistribution. Consequently, the links between redistribution and pre-receipt RL processes associate with product flows in the RL process.

Likewise, redistribution can *link* with other *post-receipt RL processes* in terms of *receiving* returned products at facilities (product inflows), *processing*, *inspection*, *sorting* and *disposition* of returned products in facilities and *redistribution* of returned/recovered products from facilities (product outflows). However, the most significant link is between redistribution and disposition since the redistribution process entails the delivery of returned/recovered products to primary markets (direct reuse or repair disposition options) or secondary markets (repair and refurbish options). Additionally, redistribution forms part of the activities/processes of all disposition/exit options (except ship to a vendor) as illustrated throughout section 5.6. Essentially, all links between redistribution and other RL processes involve product flows, emphasising the main purpose of the redistribution process of consumer returns.

5.7.2 Activities in the redistribution process of consumer returns

Table 5.33 shows that the activities of the redistribution process can mostly be classified as product flow activities, with remarketing as the only information flow activity and reselling as the only cash flow activity. Consequently, the redistribution process involves various *product flow* activities, including retesting, cleaning, repackaging, relabelling, storage, packing, loading, shipping and delivery. While some of these activities can occur during disposition operations (see section 5.6.6), redistribution facilities or DCs can be responsible for preparing returned/recovered products for redistribution to the markets. Linking with the impact of product condition (influenced by characteristic) on redistribution (section 5.7.1), recovered (repaired or refurbished) and used products might need *retesting*, *cleaning*, *repackaging* and *relabelling.*

Moreover, slower-moving products might be stored before redistribution, emphasising the time-consuming nature of redistribution (general characteristic) and influence of market demand on redistribution activities (influenced by characteristic). The final few product flow activities represent the movement of products from the facilities to market locations, which can be regarded as the opposite of receiving activities (see section 5.3). While receiving entails inbound product flows into

facilities, redistribution entails outbound product flows, involving *packing* and *loading* onto vehicles, *shipment* from facilities and *delivery* to consumer/market locations.

Additionally, redistribution can include the *information flow activity* of *remarketing* and *cash flow* activity of *reselling*, indicating that the market locations of the redistribution process can include retail locations/facilities for remarketing and reselling activities before delivery to (online) second consumers. Evidently, redistribution may include two phases, namely redistribution from redistribution facilities to retail locations for remarketing and reselling of returned/recovered products, and again redistribution from retail locations to consumer locations, reemphasising the time-consuming nature of redistribution. The facilities and locations in redistribution will further be explored in the next section.

5.7.3 Facilities/locations in the redistribution process of consumer returns

Table 5.33 demonstrates that redistribution involves several facilities and locations, which can be classified as specialised facilities, traditional FL facilities/locations, RL process facilities and market locations. Although redistribution facilities can be regarded as exit facilities in the RL process, any other traditional FL or RL process facility that perform redistribution can be an exit facility since redistribution can be classified as the exit of the RL process (general characteristic). Therefore, *redistribution facilities* were classified as *specialised facilities* in the redistribution process, matching repair facilities used for repair activities and refurbishment facilities used for refurbishment activities (see sections 5.6.3.3 and 5.6.4.3). Additionally, redistribution facilities can be owned by specialised redistribution parties, like redistributors, performing various redistribution activities, like storage, packing, loading, shipment and delivery to markets (see section 5.7.4).

Traditional FL facilities/locations in redistribution can include retail stores, DCs and warehouses. As explained in the activities of redistribution (section 5.7.2), the redistribution process can involve delivery of returned/recovered products to retail locations, like *retail stores*, for remarketing and reselling. Additionally, *warehouses* can be used for the redistribution activity of storage, implying that warehouses can be responsible for packing, loading and shipment activities in redistribution. Similarly, *DCs* can be exit facilities responsible for redistribution of returned/recovered products to market locations. Using traditional facilities for redistribution indicates that organisations can combine FL distribution of new products with RL redistribution of returned/recovered products to market/consumer locations, which might reduce redistribution costs (e.g. using the same vehicle for new and used products).

Alternatively, RL facilities, like CRCs, processing facilities and disassembly facilities can be used for redistribution activities. Specifically, *CRCs* and *processing facilities* can be (1) initial facilities responsible for receiving, processing, inspecting/sorting and disposition of consumer returns and (2) exit facilities responsible for redistribution activities, including packing, loading, shipment and delivery to market locations. Evidently, using RL-specific facilities, like CRCs and processing facilities, for all post-receipt RL processes, emphasise the links between redistribution and other post-receipt RL processes and related product flows (see section 5.7.1). Similarly, using *disassembly facilities* for redistribution demonstrates the link between redistribution and the disposition process since disassembly facilities are mostly responsible for product recovery (e.g. repair or refurbishment) activities (sections 5.6.3.3 and 5.6.4.3). Additionally, using disassembly facilities in the redistribution process reemphasises that damaged/defective returned products must first be recovered before redistribution to markets can be possible (influenced by characteristic). Furthermore, disassembly facilities can either be (1) intermediary facilities, responsible for shipment of recovered products to exit facilities (e.g. DCs), or (2) exit facilities, responsible for final redistribution of recovered products to markets.

Accordingly, *markets* represent the destination locations that receive returned/recovered products through redistribution. Additionally, the market locations in redistribution can be influenced by various factors, like product condition, return type, market demand and legislation (see section 5.7.1). For instance, redistribution to the *primary market* can be appropriate for new/unused B2C (unwanted) returns, while redistribution to the secondary market can be appropriate for recovered products, good condition products based on market demand, or used products based on legislation. Finally, markets as destinations in redistribution emphasise the remarketing, reselling and delivery activities of redistribution and demonstrate consumers as the end parties in redistribution that ultimately receive returned/recovered for reuse (involve characteristic). In the next section, the various parties in redistribution will be discussed in more detail.

5.7.4 Parties involved in the redistribution process of consumer returns

Table 5.33 shows that redistribution involves several parties, including consumers, retailers, suppliers, redistributors and third parties, playing primary or secondary roles in the redistribution process. *Consumers* can play both secondary and primary roles in the redistribution process. Specifically, the *original consumer* plays a secondary role by acting as a supplier of new/unused or defective/damaged/used product for redistribution. Contrastingly, the *second consumer* plays primary roles in redistribution by (1) creating a demand for returned/recovered products, (2) buying returned/recovered products and (3) receiving returned/recovered products through redistribution.

Evidently, consumers can represent both be the parties of origin and parties of destination in the redistribution process.

Similarly, *retailers* in the redistribution process can represent original retailers and second retailers with various (mostly primary) roles in redistribution. For example, the *original retailer* receives product returns (from the original consumer) and perform other post-receipt RL processes (such as processing, inspection, sorting and disposition), before redistributing products (new/used/recovered) to the markets. Like second consumers, the *second retailer* can be buyers and receivers of returned/recovered products through redistribution. However, both the original and second retailer can own retail stores and be responsible for remarketing and reselling of returned/repaired products (see section 5.7.3), which can ultimately be redistributed (delivered) to second consumers. While retailers mostly play primary roles in redistribution, the possibility of outsourcing redistribution to third parties indicate that original retailers can play secondary roles in redistribution.

Suppliers in the redistribution process can be any intermediary party, like retailers, wholesalers or other sellers, operating in the primary or secondary markets that can be responsible for reselling and redistributing returned/recovered products to second consumers. Therefore, suppliers are mostly located in the markets, closer to consumers, mirroring a traditional forward SC. Evidently, the redistribution process represents an alternative SC, with original consumers as original suppliers, retailers/third parties as second suppliers and second consumers as end users.

Linking with redistribution facilities as specialised facilities (see section 5.7.3), *redistributors* can be regarded as specialists in the redistribution process. Subsequently, redistributors play primary roles by being responsible for various redistribution activities, including repackaging, packing, loading, shipment and delivery of returned/recovered products to the markets. Moreover, like original retailers, redistributors can be responsible for product return collection from original consumers, other post-receipt RL processes and ultimate redistribution to markets, implying that redistributors can be outsourced parties responsible for the entire RL process. Alternatively, redistributors can act as intermediaries or suppliers by receiving recovered products from disassembly facilities for redistribution to market locations. Furthermore, redistributors can play roles in considering factors that can influence redistribution (influenced by characteristics), for example, redistributing returned/recovered products to appropriate markets based on consumer demands.

Like redistributors, *third parties* can represent outsourced parties, performing some or all redistribution activities on behalf of retailers. For instance, *transporters* might only be responsible for the delivery activity in redistribution, emphasising the link between redistribution and the transportation process in RL (section 5.7.1). Alternatively, *3PL providers* can be responsible for the

entire redistribution process, which can include repackaging, relabelling, cleaning, storage, packing, loading, shipping, delivering, remarketing and reselling (section 5.7.2). Essentially, the potential of outsourcing redistribution to various parties emphasises the costly nature and speed and resource requirements of redistribution (general and requirement characteristics). In the next section, the outcomes of redistribution will be identified, which can demonstrate the importance of effective redistribution.

5.7.5 Outcomes in the redistribution process of consumer returns

Table 5.33 shows that the redistribution process can include economic, product-related, environmental and market-related outcomes. The *economic outcomes* of redistribution include *revenue* and *value recovery*, which can be realised through the remarketing, reselling and delivery of returned/recovered products to the markets. Evidently, redistribution represents the final RL process that can contribute to the recovery of value from consumer returns.

Similarly, the *product-related outcome* of redistribution includes the *extension of a product's live* through delivery of returned/recovered/used products to consumers for reuse and consumption. Subsequently, redistribution can include *environmental outcomes* by preventing returned products from entering landfills. Particularly, redistribution can enhance *environmental sustainability* and *reduce waste,* which can be valuable for the environmental performance of organisations.

Finally, the *market-related outcomes* of redistribution can include demand satisfaction and market expansion. The *satisfaction* of *consumer demand* emphasises the importance of considering market demand (influenced by characteristic) for redistribution to appropriate markets (see section 5.7.1). Additionally, redistribution can help organisations to exploit alternative markets (such as secondary markets), which enables *market expansion.* Expanding markets might increase sales and contribute to revenue (profitability) outcome of redistribution.

Essentially, redistribution as the final RL process of consumer returns can holistically provide various economic, product-related, environmental and market-related benefits through the redistribution of returned/recovered products to primary and secondary markets and ultimately to second consumers as end users in RL.

5.7.6 Description and conceptual framework of the redistribution process for consumer returns

Based on the findings presented in section 5.7, redistribution can be an important post-receipt RL process of consumer returns, and will be described as follows:

The redistribution process of consumer returns can be described as a costly, time-consuming and exit process in RL, which (1) requires speed and resources, (2) involves technology, networks and reuse, (3) can be influenced by product type, condition and quality, return type, market demand and legislation, and (4) can link with other pre- and post-receipt RL processes. The redistribution process can include the (1) product flow activities of retesting, cleaning, repackaging, relabelling, storage, packing, loading, shipping and delivery, (2) information flow activity of remarketing, and (3) cash flow activity of reselling, which can be performed by online retailers, redistributors, transporters and/or 3PL providers in specialised facilities (redistribution facilities), traditional FL facilities/locations (such as stores, warehouses and DCs), RL process facilities (such as CRCs and processing and disassembly facilities) and market locations. The aims of the redistribution process include preparing of returned/recovered products for remarketing, reselling and redelivery to suppliers/second retailers and/or second consumers in primary or secondary markets. The redistribution process can result in (1) economic outcomes (revenue and value recovery), (2) product-related outcome (extend the product's life), (3) environmental outcomes (environmental sustainability and waste reduction), and (4) market-related outcomes (demand satisfaction and market expansion).

Figure 5.15 provides a conceptual framework of the redistribution process that may apply to consumer returns in online retailing.

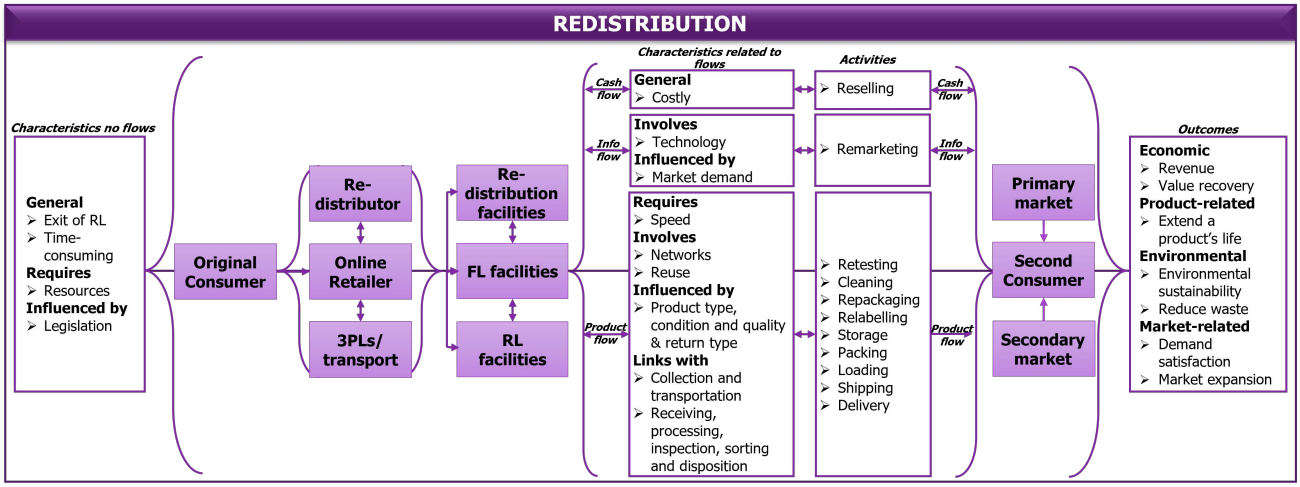


Figure 5.15 Conceptual framework of the redistribution process of consumer returns
Source: Compiled by the researcher

Figure 5.15 provides a basic overview of the redistribution process of consumer returns, illustrating the parties, facilities, flows, characteristics, activities, markets and outcomes. Particularly, the framework illustrates that the redistribution process starts with the original consumer, returning a product to the original online retailer or third-party provider. The returned product enters the FL, RL and/or redistribution facility for redistribution operations. Additionally, the framework demonstrates the cash, information and product flows with the related characteristics and activities of redistribution. Once the activities are completed, the cash, information and product flows continue as products re-enter the markets through redistribution, which can either be the primary market or secondary market. Ultimately, the redistribution process concludes with the second consumer purchasing and receiving the returned/recovered/used products in the primary or secondary market. Finally, the framework demonstrates the characteristics unrelated to flows as well as the outcomes of the redistribution process.

In the next section, the post-receipt RL processes are concluded with a conceptual framework and summary of findings.

5.8 CONCEPTUAL FRAMEWORK AND SUMMARY OF FINDINGS FOR THE POST-RECEIPT RL PROCESSES OF CONSUMER RETURNS

In this section, the findings and conclusions of the findings related to the post-receipt RL processes are given. Figure 5.16 illustrates a conceptual framework for the post-receipt RL processes based on the findings presented in chapter 5.

Clearly, the findings presented in chapter 5 shows that all post-receipt RL processes identified in the QCA findings of RL literature, including receiving, processing, inspection, sorting, disposition and redistribution, can apply to consumer returns in online retailing. Based on the findings, Figure 5.16, shows a conceptual framework for the post-receipt RL process of consumer returns that may apply to the online retailing industry. Particularly, the framework highlights the linkages between the post-receipt RL processes with shared and unique characteristics and activities. Furthermore, the framework demonstrates the parties and facilities/locations involved or associated with the post-receipt RL processes, followed by the outcomes (benefits) through the effective implementation and execution of the post-receipt RL processes.

Based on Figure 5.16 and the discussions given in chapter 5, Table 5.34 provides a summary of the findings and managerial implications for post-receipt RL processes of consumer returns in online retailing.

Table 5.34 Findings and managerial implications of the post-receipt RL processes

CATEGORIES	KEY FINDINGS	MANAGERIAL IMPLICATIONS
Shared characteristics	•All the post-receipt RL processes include general characteristics •Receiving, processing, inspection and sorting can be labour-intensive •Inspection, sorting and disposition process can be important post-receipt RL processes •Processing, inspection, sorting and disposition can be complex RL processes •All post-receipt RL processes, except receiving, can be time-consuming •All the post-receipt RL processes include involve characteristics •Processing, inspection, sorting and disposition involve costs •Receiving and redistribution involve technology (IT) •All the post-receipt RL processes include links with characteristics •All post-receipt RL processes link with pre- and post-receipt RL processes •All the post-receipt RL processes, except receiving, include require characteristics •Processing, inspection, sorting and disposition require skilled/trained staff •Processing, disposition and redistribution requires resources, IT and/or equipment •Processing and redistribution require speed •All the post-receipt RL processes, except receiving, include influenced by characteristics	•All the post-receipt RL processes (receiving, processing, inspection, sorting, disposition and redistribution) can be applicable to consumer returns in online retailing •Online retailers must allocate sufficient staff for effective receiving, processing, inspection and sorting processes in RL •Online retailer must pay more attention to inspection, sorting and disposition processes for the management of consumer returns •Online retailers must identify practices to streamline processing, inspection, sorting and disposition processes in RL •Time-saving strategies must be implemented for all post-receipt RL processes (except receiving) •Online retailers can use IT for effective receiving and redistribution processes in RL •Online retailers must develop cost saving strategies to manage processing, inspection, sorting and disposition processes in RL •Online retailers must pay attention to the links between pre- and post-receipt RL process to manage consumer returns effectively •Online retailers must invest in staff training and focus on developing staff skills for the effective management of processing, inspection, sorting and disposition processes in RL •Online retailers must invest in resources, IT and equipment to effectively manage processing, disposition and redistribution processes in RL •Online retailers must implement practices to enhance processing and redistribution speed in RL •Online retailers must consider the type of industry, organisation and/or channel for effective processing, inspection and disposition processes in RL

CATEGORIES	KEY FINDINGS	MANAGERIAL IMPLICATIONS
	•Processing, inspection and disposition can be influenced by industry, organisation or channel type •All the post-receipt RL processes, except receiving, can be influenced by product type, condition, quality and/or type of returns •Processing, inspection and disposition processes can be influenced by return policies •Disposition and redistribution processes can be influenced by legislation (laws)	•Online retailers must consider the product type, condition, quality and/or type of returns for the effective execution of post-receipt RL processes (except receiving) •Online retailers must consider their return policies for effective processing, inspection and disposition processes in RL •Legislation must be considered for compliant disposition and redistribution processes/activities
Unique characteristics	•The receiving process includes arrival and inbound flows (general characteristics) and involves documentation •Processing can be an internal and uncertain RL process (general characteristics) that (1) requires accuracy and economies of scale, (2) involves customer service and accounts, and (3) can be influenced by carrier service levels •Inspection and soring processes exclude unique characteristics •The disposition process involves options, routes, channels, destinations, markets, risks, discounted/lower prices, contracts, negotiations, information sharing and relationships/partnerships •The disposition process can be influenced by return volume and manufacturer specifications/requirements •The redistribution process can be described as costly and the exit process of RL (general characteristics) that (1) involves networks and product reuse and (2) can be influenced by market demand	•Online retailers must develop strategies to enhance visibility of the arrival and inbound flows of returned products for an effective receiving process in RL •Online retailers can use documentation for effective receiving processes •Online retailers must develop strategies to enhance internal capabilities for processing •Practices must be identified to reduce uncertainties in the processing of consumer returns •Online retailers must implement strategies to enhance processing accuracy and achieve economies of scale in the processing process in RL •Online retailers must focus on consumers in the processing process and develop service strategies •Online retailers can implement integration practices between processing and accounting staff for an effective processing process in RL •Customer service strategies Online retailers must pay attention to customer service and ac processing of returns in their customer service strategy •Carrier service levels must be considered for effective processing in RL •Online retailers can develop strategies to identify the most appropriate disposition/exit options for an effective disposition process in RL •Online retailers must develop strategies to mitigate risks in the disposition process •Product pricing strategies can be important for an effective disposition process in RL •Online retailers can implement supply chain integration (SCI) strategies to effectively manage the disposition process of consumer returns •Product return volume and manufacturer specifications/ requirements must be considered for an effective disposition process •Network design can be important for effective disposition and redistribution processes •Online retailers must identify strategies to reduce redistribution costs •RL exit strategies can be developed for the redistribution process of consumer returns •Online retailers can focus on product reuse for effective redistribution of consumer returns •Online retailers must consider market demand for an effective redistribution process
Unique activities	•The receiving process includes product registration and identification, (information flow activities), unloading returned products, arranging pallets and dispatching products/pallets into the facility (product flow activities) •The processing process includes data entry and tracking, authorisation, recordkeeping (information flow activities), issuing and verifying credits/refunds, claims settlements (cash flow activities), and product exchange (product flow activity) •The inspection process includes grading (product flow activity) •The sorting process includes updating of sorting information (information flow activities) and product separation (product flow activity) •The disposition process includes product fixing, treatment, parts replacement, upgrade and restore (product flow activities), and trading and charging (cash flow activities) •The redistribution process includes relabelling (product flow activity)	•For an effective receiving process in RL, online retailers can establish systems for product registration and identification activities •For an effective receiving process, sufficient space at the facility must be allocated to streamline returned product unloading, arrangement of pallets and dispatch into the facility •For an effective returns processing, online retailers can establish systems with capabilities to enter processing information, track, authorise, issue and verify refunds/credits, and settle claims •Integration with FL processes can facilitate effective product exchanges in the processing process of consumer returns •For an effective inspection process, online retailers can establish a returned product grading system •Online retailers can use information systems to effectively update sorting information •Sufficient space must be allocated in the facility to streamline returned product separation during the sorting process •For an effective disposition process, online retailers can consider the development of internal capabilities or selection of third parties with appropriate capabilities for the fixing, treatment, parts replacement, upgrade and restoration of returned products in defective/damaged/ used condition •For an effective disposition process, online retailers can implement cost recovery strategies that focus on the trading and charging activities of consumer returns •As a value-added or brand protection activity, online retailers can consider relabelling of returned products in the redistribution process
Shared activities	•All post-receipt RL processes include information flow activities •Receiving, processing and disposition includes	•For effective receiving, processes and disposition processes, online retailers can establish communication and information-sharing platforms

CATEGORIES	KEY FINDINGS	MANAGERIAL IMPLICATIONS
	communication and information sharing activities •Receiving, processing, inspection and sorting processes include the verification of product return information provided by consumers during CRR and gatekeeping (pre-receipt RL) processes •Receiving and disposition processes include administration and scanning activities •Disposition and redistribution processes include remarketing •All post-receipt RL processes include product flow activities •Receiving, inspection and sorting processes include organising, grouping and classing of returned products •Processing, inspection, sorting and disposition processes involve some form of disposition decision-making •All post-receipt RL processes include some form of returned product handling and movement •Inspection, sorting and disposition processes include product return evaluation and disassembly activities •Processing and disposition processes can include restocking or back to inventory activities •Inspection, sorting, disposition and redistribution processes include product return storage and (re)testing activities •Disposition and redistribution processes including cleaning, repackaging, packing, loading, shipping and delivery activities •Disposition and redistribution are the only post-receipt RL processes that include the cash inflow activity of reselling	•For streamlined receiving, processing, inspection and sorting processes, online retailers can establish an integrated information system for verification of product return information •To streamline the receiving and disposition process, online retailers can implement scanning solutions •The administration function must support receiving and disposition processes in RL •Online retailers must focus on remarketing strategies for effective disposition and redistribution processes •For effective, receiving, inspection and sorting processes, sufficient space at the receiving dock and within the facility must be allocated for organising, grouping and classing of returned products •Managers must be involved in the processing, inspection, sorting and disposition processes for effective disposition decision-making in RL •Appropriate material handling equipment and systems must be provided for a streamlined post-receipt RL process •For effective inspection, sorting and disposition processes, online retailers must appoint product specialist and technical staff for efficient product evaluation and disassembly activities •Inventory strategies must be implemented in the processing and disposition processes for effective return to inventory and restocking of resaleable product returns •Sufficient storage space must be allocated for returned product storage in the inspection, sorting, disposition and redistribution processes •Inspectors and/or technical staff can be appointed for sound testing and/or retesting of returned/recovered products in the inspection, sorting, disposition and redistribution processes •As value-added activities, online retailers can consider the cleaning and repackaging of returned/recovered products in the disposition and redistribution processes •For effective disposition and redistribution processes, online retailers must implement appropriate facility dispatch and transportation systems/strategies for the packing, loading, shipping and delivery of returned/recovered products •To maximise cost/value recovery, online retailers can implement a sales strategy for the reselling of returned/recovered products in the disposition and redistribution processes
Parties	•Various parties can be involved in post-receipt RL processes •Consumers can be classified as the (1) first (original) consumer responsible for supplying product returns and (2) second consumer responsible for creating a demand for and buying of returned/recovered products •The online retailer is responsible for receiving consumer returns and performing all or some post-receipt RL processes, including selling of returned/recovered products to 3P buyers (third parties), second retailers (other) and second consumers •Third parties can represent (1) outsourced service providers (e.g. 3P(R)Ls and 4PLs) responsible for all or some post-receipt RL processes, including reselling of returned/recovered products to second consumers and retailers, and (2) 3P buyers responsible for buying returned/used/recovered products, performing some post-receipt RL processes and trading and selling of returned/used/recovered products to second consumers or retailers •Other parties can represent (1) vendors (suppliers/manufacturers) responsible for accepting consumer returns from online retailers and performing some post-receipt RL processes, (2) second retailers responsible for buying returned/recovered from online retailers or 3P buyers and reselling of returned/recovered products to second consumers, and (3) specialised parties (e.g. repair vendors, refurbishment specialists and redistributors) responsible for product recovery and redistribution activities	•Online retailers can implement consumer integration (CI) initiatives and develop a customer relationship strategy for streamlined post-receipt RL processes •Online retailers must develop appropriate resale and remarketing strategies to stimulate the demand for and buying of returned/recovered products to second consumers •Online retailers must implement RL insourcing and/or outsourcing strategies for an effective post-receipt RL process •Online retailers that select a RL insourcing strategy must develop internal RL capabilities, implement a RL process strategy and allocate sufficient resources for an effective post-receipt RL process •Online retailers that select a partial or full RL outsourcing strategy must identify and select appropriate third-party service providers and implement subsequent SC integration (SCI) initiatives for an effective post-receipt RL process •Online retailers interested in selling returned/used/recovered products to 3P buyers and/or second retailers can implement an after-market sales strategy, create reselling agreements and implement SCI initiatives for effective disposition and redistribution processes •Online retailers interested in shipping consumer returns to vendors can establish supplier agreements and relationships with vendors to optimise economic/value recovery from consumer returns •Online retailers interested in selling returned/recovered products to second retailers can establish contractual agreements for effective •Online retailers that lack product recovery and/or redistribution capabilities can use specialists for effective disposition and redistribution processes
Facilities/locations	•Various facilities/locations can be used for post-receipt RL processes •Traditional forward logistics (FL) facilities/locations, including warehouses, DCs and stores, can be used for all or some post-receipt RL processes •RL process facilities, including centralised return centres (CRC) and collection, processing, inspection and disassembly facilities, can be used for all or some post-receipt RL processes •Recovery facilities, including repair and refurbishment facilities, service centres, workshops and recovery centres, can be used for some RL processes, including inspection,	•Facility and locations strategies and RL network design must be developed for post-receipt RL processes •Online retailers must identify appropriate facilities that can be used for post-receipt processes •Online retailers that select traditional FL facilities for post-receipt RL processes must effectively separate FL and RL processes and allocate sufficient space and staff resources for post-receipt RL processes •Online retailers with space constraints in traditional FL facilities can consider using RL process facilities for post-receipt RL processes •Online retailers can establish or use third-party recovery facilities to effectively perform inspection, sorting, disposition and redistribution processes

CATEGORIES	KEY FINDINGS	MANAGERIAL IMPLICATIONS
	sorting, disposition and redistribution processes •Exit facilities, including DCs and redistribution facilities, can be used for disposition and redistribution processes •Market locations can include primary and secondary markets that represent the destinations of returned/recovered/used products in disposition and redistribution processes	•Online retailers can use established DCs or use redistribution facilities for effective disposition and/or redistribution processes •Online retailers must identify appropriate market locations as destinations for disposition and redistribution processes
Process flows	•The post-receipt RL processes include cash, information and product flows •All post-receipt RL processes, except receiving, involve cash flows •Cash flows in the post-receipt RL process can include (1) cash outflows, relating to costs of RL processes and issuing credit/refunds in processing, and (2) cash inflows, relating to returning returned products to vendors for credit and cost recovery and selling returned/recovered/used products in the disposition and redistribution processes •All post-receipt RL processes involve information and product flows •Information flows can take place forward and backward between the post-receipt RL processes •Product flows mostly move forward in the post-receipt RL process, starting at receiving of consumer returns and concluding with final delivery of returned/recovered products to the markets	•Online retailers must focus on cash, information and product flows for effective post-receipt RL processes •Online retailers must minimise cash outflows and optimise cash inflows for cost-effective post-receipt RL processes •Online retailers must implement integrated information sharing strategies to optimise information flows in the post-receipt RL process •Online retailer must establish practices that streamline product flows in the post-receipt RL process
Outcomes	•The post-receipt RL processes, especially disposition and redistribution, can result in economic, product-related, environmental, market-related and social outcomes •Economic outcomes include various financial benefits, relating to profitability, cost avoidance, savings and effectiveness and economic recovery •Product-related outcomes include various product-related benefits, including improving the quality of returned products, restoring the functionality of returned products, extending the returned product's life, recover products/parts for reuse and creating new warranties for refurbished products •Environmental outcomes include various environmental benefits, relating to environmental performance, protection and sustainability, compliance to environmental legislation and reduction of waste and natural resource consumption •Market-related outcomes include various market-related benefits, including competitiveness, increase in sales, consumer trust, service and satisfaction, supply/demand/ need satisfaction and expansion of markets •Social outcomes include various social benefits, relating to improved reputation (or corporate image), benefits for the society and job creation	•The effective implementation and execution of post-receipt RL processes can result various benefits •Online retailers seeking economic benefits in the post-receipt RL process must identify and implement appropriate practices/strategies to maximise cost recovery and revenue from consumer returns •Online retailers seeking product-related benefits in the post-receipt RL process must identify and implement appropriate practices/strategies to extend the life of returned products and optimise product recovery for product reuse •Online retailers seeking environmental benefits in the post-receipt RL process must identify and implement appropriate practices/strategies to enhance environmental performance and sustainability and reduce waste and natural resource consumption •Online retailers seeking market-related benefits in the post-receipt RL process must identify and implement appropriate practices/strategies to enhance competitiveness, increase sales, improve consumer trust, service and satisfaction, enhance supply/demand/need satisfaction and expand markets •Online retailers seeking social benefits in the post-receipt RL process must identify and implement appropriate practices/strategies to improve corporate image and enhance benefits for the society

Source: Compiled by the researcher

Table 5.34 provides a detailed understanding of the post-receipt RL processes for consumer returns that can be applicable to online retailing. Additionally, each category included several managerial implications that online retailers can consider for the implementation and execution of post-receipt RL processes for the effective RLM of consumer returns. The findings presented in chapter 6 will contribute to the final framework for the RLM of consumer returns in online retailing, presented in chapter 9.

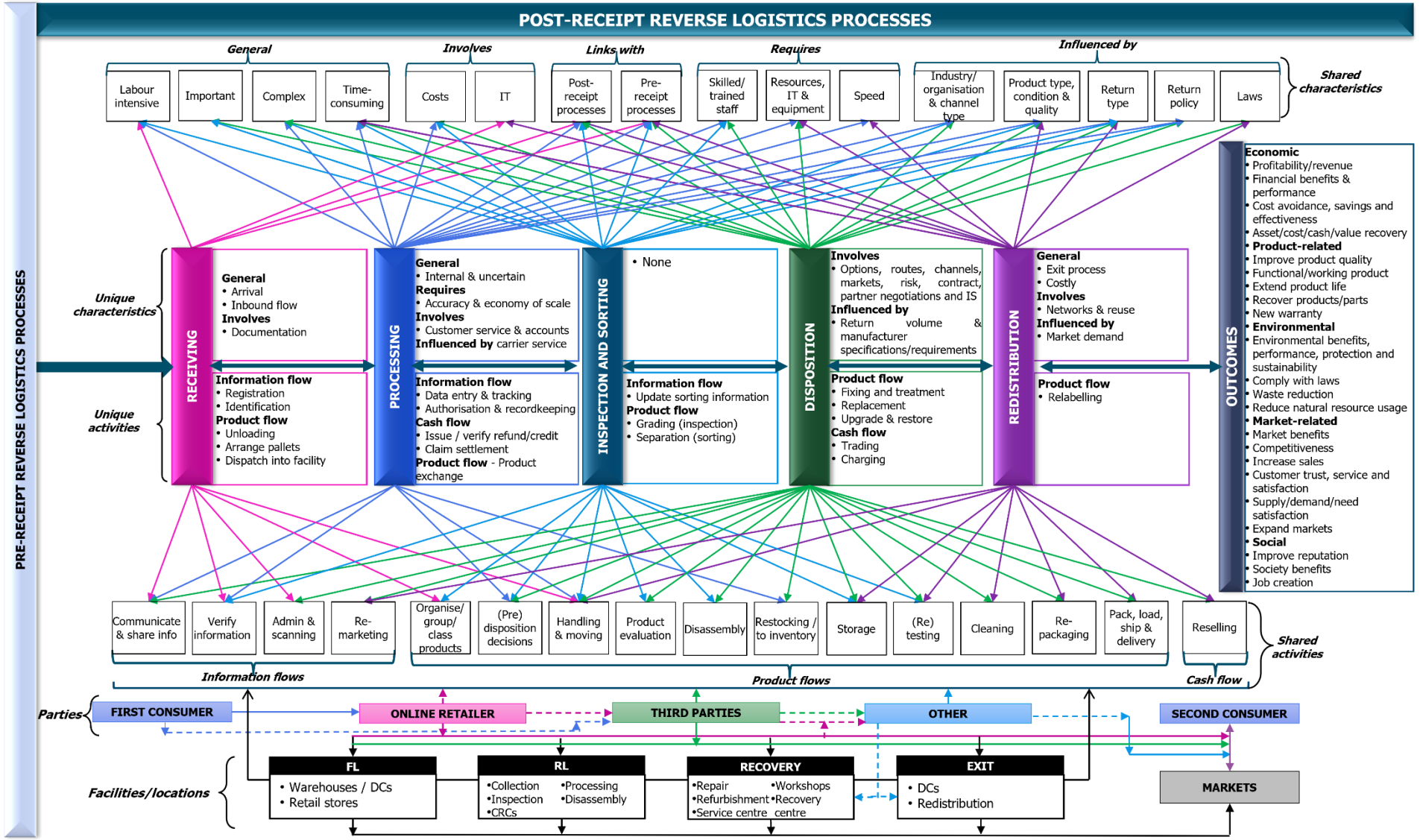


Figure 5.16 Conceptual framework for post-receipt RL processes of consumer returns
Source: Compiled by researcher

5.9 CONCLUSION

This chapter addressed the second secondary research objective of ***identifying and exploring RL literature for post-receipt RL processes of consumer returns (SRO-3)***. Especially, the objective was achieved through the QCA findings of RL literature for post-receipt RL processes of consumer returns, which included the development of conceptual frameworks, typology (summaries) of the findings and managerial implications for online retailers. Additionally, the findings in this chapter contributed to the primary objective of the study, which was to *develop a framework for the effective RLM of consumer returns in online retailing*.

The chapter started with the introduction and overview of the chapter (section 5.1), followed by an overview of the post-receipt RL processes (section 5.2), whereafter the receiving process (section 5.3), processing process (section 5.4), inspection and sorting processes (section 5.5), disposition process (section 5.6) and the redistribution process (section 5.7) of consumer returns were discussed and analysed. The chapter concluded with a conceptual framework and summary of findings for the post-receipt processes of consumer returns (section 5.8). The QCA findings of RL literature was presented as follows: (1) qualitative data tables, with overviews of the categories, subcategories, sources and key quotations, (2) discussion and interpretation of the findings presented in the qualitative data tables, (3) description and conceptual frameworks for each category, and (4) final conceptual framework and summary of findings in text tables for the main categories.

The main findings showed that (1) all the post-receipt RL processes can be applicable to consumer returns in online retailing, (2) all the post-receipt RL processes must be considered for managing consumer returns in online retailing, (3) appropriate strategies and practices must be developed and implemented for each post-receipt RL process based on shared and unique characteristics and activities, (4) online retailers must focus on the development of relationships and implementation of integration strategies with other parties involved in the post-receipt RL process, (5) facility/locations strategies and RL network design must be a priority for online retailers to effectively manage post-receipt RL processes, (4) online retailers must implement appropriate practices and strategies to streamline cash, information and product flows in the post-receipt RL process, and (5) online retailers must implement strategies and practices for the executive execution of post-receipt RL processes to realise optimum economic, product-related, environmental, market-related and social benefits.

In the next chapter (chapter 6), the QCA findings of RL literature for the RL practices to manage consumer returns will be presented, discussed and analysed.

Chapter 6 – QCA findings of RL literature for RL practices to manage consumer return

6.1 INTRODUCTION

RL and the management of consumer returns can be the most complicated challenge for online retailers (Davidavičienė & Al Majzoub, 2021:21), and most online retailers still need to implement practices to effectively manage consumer returns (Ashan & Rahman, 2021:3). Consequently, identifying and implementing RL practices to manage consumer returns effectively can be critical in online retailing.

Concluding the QCA findings of RL literature, this chapter (chapter 6) provides an in-depth discussion of all RL practices that can be implemented for the management of consumer returns. An overview of the presentation styles used for the QCA of RL literature findings was provided in chapter 4 (see section 4.2), which applied to chapter 6. In the research methodology section of chapter 1 (section 1.7, Figure 1.5), the research phases of the study were discussed. Chapter 6 forms part of second research phase of this study, as illustrated in Figure 5.1.

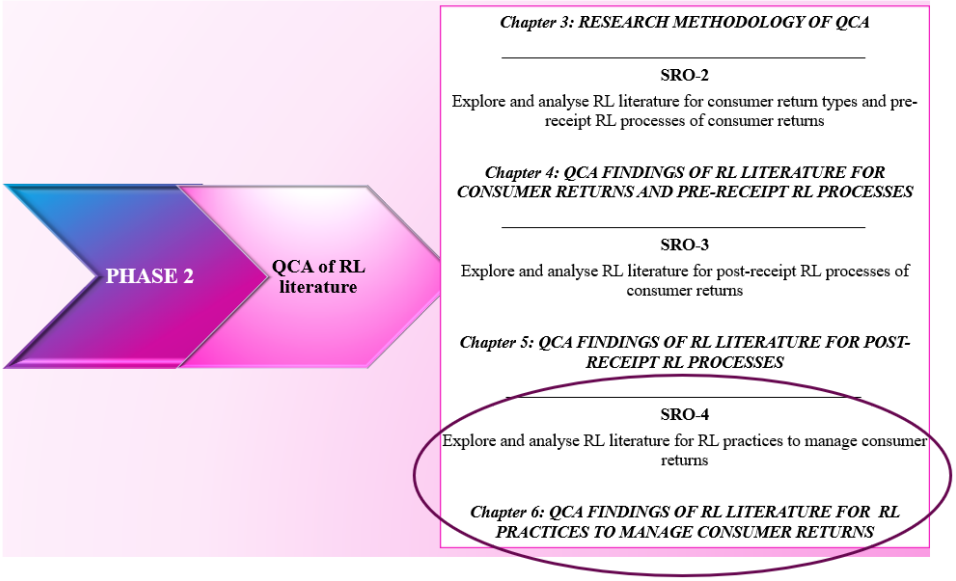


Figure 6.1 QCA of RL literature - Aim of chapter 6
Source: Compiled by the researcher

Figure 5.1 indicates that the aim of this chapter is to achieve the *fourth* secondary research objective, which is ***to identify and explore RL literature for RL practices to manage consumer returns (SRO-***

4). The QCA findings of RL literature for RL practices resulted in the development of a conceptual framework for the RL practices to manage consumer returns, typology of the findings and managerial implications. Additionally, separate frameworks, typology of findings and managerial implications were provided for each main practice category. The findings presented in this chapter contributes to the primary objective of the study, which was to *develop a framework for the effective reverse logistics management (RLM) of consumer returns in online retailing*. Therefore, important findings related to RL practices for the management of consumer returns are identified in this chapter, contributing to the final framework for the effective management of consumer returns in online retailing. Additionally, the findings of this chapter served as a basis for the interviews with industry experts, to determine if any of the RL practices identified in this chapter can be appropriate for the effective management of consumer returns in online retailing.

Figure 5.2 provides an overview of this chapter.

Figure 6.2 Overview of chapter 6
Source: Compiled by the researcher

Figure 5.2 provides an overview of chapter 6, starting with the introduction (section 5.1), followed by an overview of RL practices (section **Error! Reference source not found.**), where after the various RL practices are discussed and analysed, including information technology (IT) practices (section 6.3), integration practices (section 6.4), RL insourcing and outsourcing practices (section 6.5), RL

disposition practices (section 6.6), performance measurement (PM) practices (section 6.7), facility and location practices (section 6.8) and other RLM practices (section 6.9). Finally, the chapter will conclude with a conceptual framework and summary of findings for the RL practices for the management of consumer returns consumer returns (section 6.10) and the conclusion (section 5.9).

In the next section, an overview of RL practices included and excluded from the study is given.

6.2 OVERVIEW OF RL PRACTICES

In this section, an overview of the RL practices to manage consumer returns will be provided. Figure 4.3 (in chapter 4) demonstrated that RL practices covered 51% of the QCA findings of RL literature. Consequently, RL practices dominate the RL literature, emphasising the importance of identifying and implementing appropriate practices to manage RL effectively. Based on the coding framework of the QCA of RL literature (see Appendix A.2), the RL practices were structured into eleven main practice categories.

Figure 6.3 provides an overview of the distribution of the RL practices based on the results of the QCA of RL literature (see Appendix C.4 for quantitative results).

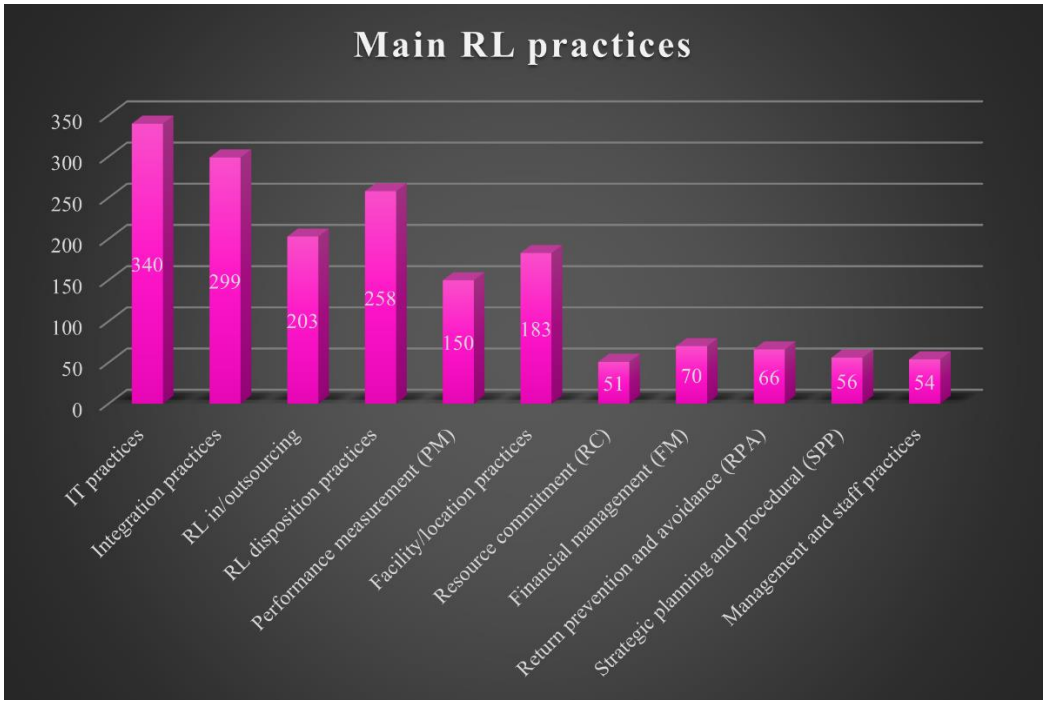


Figure 6.3 Distribution of main RL practice categories
Source: Compiled by researcher

Figure 6.3 shows a distribution for the main RL practice categories of the QCA of RL literature derived from code frequencies (total number of quotations assigned to code categories). Specifically, the bar chart shows that RL literature from the QCA focused on information technology (IT) (340 quotations), integration (299 quotations), RL disposition (259 quotations) and RL in/outsourcing practices (203 quotations) to a *high extent*, followed by facility/location (183 quotations) and performance measurement (PM) (150 quotations) practices to a *moderate extent*. In contrast, RL literature from the QCA focuses on resource commitment (RC) (51 quotations) and financial management (FM) (71 quotations), return prevention and avoidance (RPA) (66 quotations), strategic planning and procedure (SPP) (56 quotations) and management and staff practices (55 quotations) practices to a *limited extent*, which demonstrates a gap in RL literature.

Since RC, FM, RPA, SPP and management and staff practices represent limited findings, these practices were be combined in section 6.9 (other RLM practices) for a more even distribution of the main practice sections. Additionally, as part of the main QCA coding frame (Appendix A.2), some practice categories (e.g. IT and integration) consisted of sub-practice categories with quantitative results, which will be presented in the introduction of the main practice sections. Despite the distribution, all RL practices can be important for the management of consumer returns, which will be evident from the findings presented throughout this chapter.

In the rest of this section, an overview of the RL practices and related elements *included* in the QCA is provided, followed by a description of the RL practices and related elements *excluded* from the QCA.

6.2.1 RL practices and related elements included in the study

As mentioned in the introduction, the aim of this chapter was to identify the RL practices that can contribute to the final framework to manage consumer returns.

This study defines a RL practice as a "*a measure, requirement, strategy, decision-making element or activity that can be implemented for the effective management of consumer returns".* As part of the RL practices, this study focuses on the costs (strategies and requirements) of implementing RL practices and the resulting benefits (outcomes), which represents a cost-benefit analysis. This study defines the *costs* of RL practices as *"measures, strategies, requirements and decision-making elements/factors that can result in benefits"*. Additionally, this study defines the *benefits* of RL practices as *"outcomes that can be realised from implementing the costs of RL practices."*

As mentioned in the introduction of section **Error! Reference source not found.**, the RL practices included in this chapter are based on the *coding framework for the QCA of RL literature* (see Figure 6.3). However, smaller practice categories were combined for a more even distribution of the main RL practice sections. Based on the abovementioned definitions and main RL practice categories of the coding framework (Figure 6.3), the RL practices (in order of presentation) for the management of consumer returns included:

- *Information technology (IT) practices,* including (1) general IT strategies, requirements and outcomes, (2) Internet and web-based IT strategies, requirements and outcomes, (3) traditional logistics IT (TLIT) strategies, requirements and outcomes, (4) barcode and RFID IT strategies, requirements and outcomes, and (5) RL information technology (RLIT) strategies, requirements and outcomes (section 6.3)
- *Integration practices,* including (1) supply chain integration (SCI) strategies, requirements and outcomes, (2) consumer integration (CI) strategies, requirements and outcomes, and (3) cross-functional integration (CFI) strategies, requirements and outcomes (section 6.4)
- *RL in/outsourcing practices,* including (1) strategic considerations and analyses for RL in/outsourcing, (2) strategic decisions and strategies related to RL outsourcing, (3) requirements of RL in/outsourcing and (4) RL in/outsourcing outcomes (section 6.5)
- *RL disposition practices,* including (1) disposition strategies, (2) strategic understanding and analysis for disposition decisions, (3) RL disposition requirements, (4) RL disposition decision factors and (5) RL disposition outcomes (section 6.6)
- *Performance measurement (PM) practices,* including (1) PM strategies, (2) PM requirements, (3) PM elements for RL, and (4) PM outcomes (section 6.7)
- *Facility/location practices,* including (1) general facility/location strategies, decision factors, requirements and outcomes, (2) separate facility/location strategies, requirements and outcomes, (3) integrated facility/location strategies, requirements and outcomes, (4) centralisation strategies, requirements and outcomes, (5) decentralisation strategies, requirements and outcomes, and (6) centralised return centre (CRC) strategies, requirements and outcomes (section 6.8)
- *Other RLM practices,* including (1) resource commitment (RC) strategies, requirements and outcomes, and (2) financial management (FM) strategies, requirements and outcomes, (3) return prevention and avoidance (RPA) strategies, requirements and outcomes, (4) strategic planning and procedures (SPP) strategies, requirements and outcomes, and (5) management and staff strategies, requirements and outcomes (section 6.9)

In the next section, an overview of the RL practices and related elements excluded from the study will be provided.

6.2.2 RL practices and related elements excluded in the study

In section 1.6, the scope of this study briefly mentioned RL practices excluded from the study. Specifically, RL practices that fall outside of the scope of this study, include manufacturing and product design practices, environmental, green procurement and green logistics practices, waste management, recycling and remanufacturing practices or any RL practices unrelated to the management of consumer returns. Nevertheless, environmental outcomes (benefits) and practices related to relationships with manufacturers and disposition decisions that focus on all recovery strategies/decisions will be included for its potential importance in managing consumer returns effectively.

Additionally, the RL practices discussed in this chapter can be important for any type of organisation that deal directly or indirectly with consumer returns, including manufacturers, service providers, wholesalers and retailers, hence, the comprehensiveness of RL practices covered in this chapter. Accordingly, unlike chapters 4 and 5, the term "organisation" will be used instead of "online retailer" in the discussions and summaries of findings. Nevertheless, in chapter 8, the interview findings, the focus will be on the RL practices for online retailers (e.g. multi/omnichannel and online-only retailers), containing more retailer-specific practices for the effective management of consumer returns.

As mentioned in section **Error! Reference source not found.**, the focus of this chapter is on the strategies, requirements (costs) and outcomes (benefits) of RL practices, which means that unrelated categories/findings are excluded. Consequently, unlike chapters 4 and 5 (RL processes), characteristics, activities, facilities and parties as categories for RL practices are excluded in chapter 6. Essentially, all the RL practices discussed in this chapter must provide benefits for the effective management of consumer returns.

In the next section the first practice category, IT practices, will be explored, analysed and discussed.

6.3 INFORMATION TECHNOLOGY (IT) PRACTICES TO MANAGE CONSUMER RETURNS

According to Sasikumar and Kannan (2008b:234) and Jović *et al.* (2020:160) RLM requires specialised information systems for tracking and processing of returns. Additionally, Davidavičienė and Al Majzoub (2021:7) and Prakash and Barua (2015:611) indicated that investment in technology for RL can be a top management solution to address RL inefficiencies. Therefore, information technology (IT) can be an important RL practice to manage consumer returns.

Based on the coding frame of the QCA of RL literature (Appendix A.2), IT practices included (1) general IT practices (2) Internet or web-based technology, (3) traditional logistics information technologies (TLIT), (4) barcode and Radio Frequency Identification (RFID) technologies and (5) RL information technologies (RLIT).

Figure 6.4 provides an overview of the distribution of the IT practice categories from the QCA of RL literature (see Appendix C.4). Specifically, Figure 6.4 shows that general IT practices and RFID and barcode IT are evenly distributed throughout the QCA of RL literature (29% each), followed by traditional logistics IT (TLIT) for RL (21%). Evidently, literature mostly refer to IT in general (hereafter general IT practices) or RFID and barcode IT for RL. In contrast, RL information technology (RLIT) (11%) and Internet and web-based IT (10%) received limited attention, showing a gap in RL literature.

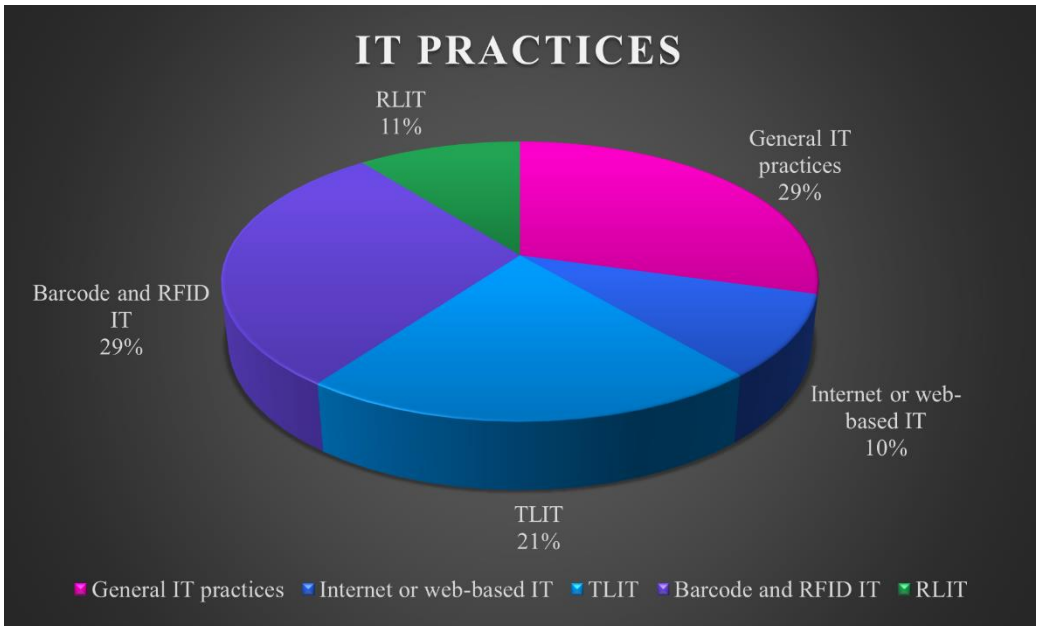


Figure 6.4 Distribution IT practices in RL
Source: Compiled by the researcher

In the subsequent sections an overview of the practices related to general (non-specific) IT for RL will be provided, followed by distinct IT categories (Internet or web-based IT, TLIT, barcode and RFID technologies and RLIT). This section concludes with a conceptual framework and summary of findings for IT practices to manage consumer returns.

6.3.1 General IT practices in RL

According to Olorunniwo and Li (2011:8) and De Leeuw *et al.* (2016:719), IT is vital for managing RL processes. Davidavičienė and Al Majzoub (2021:7) found that IT systems can be one of the most significant factors for the effective execution of consumer returns in online retailing. This demonstrates the importance of IT practices to manage consumer returns effectively. Based on the findings (identified from the QCA of RL literature) general IT in RL involve (1) strategies of general IT, (2) requirements of general IT and (2) outcomes of general IT, which will be presented and discussed in subsequent sections. The section will be concluded with a conceptual framework of general IT practices to manage consumer returns.

6.3.1.1 Strategies and requirements of general IT practices

General IT practices include general IT strategies and general IT requirements, which were categorised as economic, organisational and supply chain requirements. Table 6.1 provides an overview of the findings related to the *strategies and requirements of general IT* to manage consumer returns, including the categories, subcategories, supporting sources for the subcategories and key quotations that support both the subcategories and the discussion of the findings.

Table 6.1 Findings related to the strategies and requirements of general IT practices to manage consumer returns

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
General IT strategies	***Prioritise IT***	Bernon *et al.* (2011:494) Cheng and Lee (2010:1118) Hsu *et al.* (2009:518) Ravi and Shankar (2015:890) Toyasaki *et al.* (2013:1215)	• *"[…] visibility in RL, organisations can implement a variety of first-priority practices, such […] investing in state-of-the-art technology […]."* (Badenhorst, 2016:9) • *"[…] technology is the topmost priority solution to overcome RL adoption barriers […]."* (Prakash & Barua, 2015:611)
	Strategic considerations for general IT	None	• *"[…] compatibility with key trading partners should be an important consideration when adopting a new IS; a firm should not invest in technology or systems that are not compatible with key partners."* (Huscroft *et al.* 2013a:239)
	Strategic considerations related to IT types	Jayaraman *et al.* (2008:414) Lhafiane *et al.* (2015b:396) Ravi and Shankar (2015:890)	• *"[…] information technology, […] via a web portal."* (Lambert *et al.* 2011:566) • *"[…] application of IT (e.g., barcode readers, Radio-frequency Identification Devices (RFID), databases, robotics, visual pattern recognition, electronic markets and inter-organisational payment systems) […]."* (Toyasaki *et al.* 2013:1215) • *"[…] includes enterprise resource planning (ERP) systems and legacy systems; […] EDI, internet, satellite, bar code and scanning, and radio-frequency data communication; […] warehouse management systems, […] customized [sic] solutions integrating with ERP […]."* (Olorunniwo & Li, 2010:455)
	Strategic redesign, improvement and expansion of existing IT for RL	Bernon *et al.* (2011:495) Biehl *et al.* (2007:466)	• *"[…] for optimal reverse logistics efficiency and effectiveness, information systems […] must be redesigned or expanded to accommodate returns […]."* (Cheng & Lee, 2010:1117) • *"[…] improving information systems and technology for reverse logistics can be*

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
			deployed […].” (Lee & Lam, 2012:595)
	Continuous development of IT	Bernon *et al.* (2011:495)	• *“The continuing development of ICT offers opportunities […].”* (Bernon & Cullen, 2007:44)
	Strategic matching and combination of IT and resources	None	• *“[…] IT should be combined with additional, complimentary firm resources […].”* (Huscroft *et al.* 2013a:238) • *“[…] match resources to technologies […].”* (Sharif *et al.* 2012:2519)
	Strategic development and utilisation of IT competency and capabilities	Hong *et al.* (2008:184) Shaik and Abdul-Kader (2014:98)	• *“[…] high IT competency leads to the highest RL competency […].”* (Morgan *et al.* 2016:306) • *“The capabilities of IT can be utilized [sic] […] to manage its reverse logistics.”* (Bokade & Raut, 2013:44)
	Strategic development and implementation of a new/current IT infrastructure	Kongar *et al.* (2015:53) Sharif *et al.* (2012:2519) Beh *et al.* (2016:18)	• *“[…] developing and implementing appropriately fitting IT infrastructure to support RL processes.”* (Huscroft *et al.* 2013a:239) • *“[…] IT infrastructure to support RL processes […]”* (Huscroft *et al.* 2013a:239) • *“[…] existing IT infrastructure of the organisation […].”* (Jayaraman *et al.* 2008:414)
	Strategic development and use of integrative and compatible IT	Lambert *et al.* (2011:566) Sharif *et al.* (2012:2519)	• *“An integrated information system […] and coordinating system […] responsible of the overall performance and management of the RL system.”* (Lhafiane *et al.* 2015b:397) • *“IS that support RL processes should be compatible both within and between organizations [sic] […].”* (Huscroft *et al.* 2013a:232)
	Strategic development and use of IT with information management capability	Cheng and Lee (2010:1117) Sasikumar and Kannan (2008b:243) Shi *et al.* (2012:226)	• *“[…] information system has to manage information […].”* (Lambert *et al.* 2011:572) • *“[…] information about the related laws is the imported input […] to the information system of RL.”* (Shi *et al.* 2012:224)
	Perform a cost-benefit analysis	None	• *“[…] managers to take stock of the high costs involved in the reverse supply chain and realise that many of these costs can be mitigated through the use of sound information systems […].”* (Jayaraman *et al.* 2008:424)
	Strategic implementation and appropriate use of state-of-the-art and capable IT for RL	Badenhorst (2016:9) Jayaraman *et al.* (2008:410) Agrawal and Choudhary (2014:20) Bokade and Raut (2013:44) Hall *et al.* (2013:779)	• *“State of art technologies […] are necessary for successful RL programs.”* (Ravi & Shankar, 2015:890) • *“[…] information technology is also implemented to keep track of all information […].”* (Banomyong *et al.* 2008:39) • *“Appropriate use of IT can be an effective enabler […].”* (Huscroft *et al.* 2013a:231) • *“A capable IS allows a firm to […] share information with its customers […].”* (Sharif *et al.* 2012:2527)
	Implement efficient and effective IT	None	• *“[…] effective information technology (IT) is necessary to support the management of return flows.”* (Biehl *et al.* 2007:466) • *“[…] an efficient information and technological system is vital for supporting returns processes […].”* (De Leeuw *et al.* 2016:719)
	Implement real-time and responsive IT	Agrawal and Choudhary (2014:20) Morgan *et al.* (2016:295) Shi *et al.* (2012:226)	• *“[…] provided real-time information systems related to returned products.”* (Bernon & Cullen, 2007:51) • *“[…] IT use […] necessitates […] rapid timing/ processing […].”* (Olorunniwo & Li, 2011:8)
Economic requirements	***Investment***	Badenhorst (2016:9) Huscroft *et al.* (2013a:239) Jack *et al.* (2010:232) Lhafiane *et al.* (2015b:396) Shi *et al.* (2012:222) Subhashini (2016:10) Toyasaki *et al.* (2013:1214)	• *“[…] invest in RL technology is the top […] solution to overcome […] barriers […].”* (Prakash & Barua, 2015:611) • *Heavy degree of investment is needed for information and technological systems for facilitating returns […].”* (Ravi & Shankar, 2015:885) • *“[…] training of manpower on these technologies requires heavy degree of investment […].”* (Ravi & Shankar, 2015:885)
	Cost	None	• *“[…] costs for adopting IT solutions […] are two types of costs […] an initial capital cost and an operating cost. […] These costs can include hardware, software and personnel and training costs. The operating costs will include the costs of maintaining the servers, the cost of software upgrades.”* (Jayaraman *et al.* 2008:414)
Organisational requirements	***Management involvement***	Agrawal *et al.* (2016d:20) Ravi and Shankar (2015:890)	• *“[…] inform managers […] in developing and implementing appropriately fitting IT infrastructure […].”* (Huscroft *et al.* 2013a:239) • *“[…] managers to take stock of the high costs […] and realise that many of these costs can be mitigated through the use of sound information systems […].”* (Jayaraman *et al.* 2008:424)
	IT staff involvement	None	• *“[…] inform […] IT professionals in developing and implementing appropriately fitting IT infrastructure […].”* (Huscroft *et al.* 2013a:239)
	Staff training	None	• *“[…] training of manpower on these technologies requires heavy degree of investment […].”* (Ravi & Shankar, 2015:885)
Supply chain (SC) requirements	***Supply chain integration (SCI)***	Lau and Wang (2009:459)	• *“[…] required integration for supportive IS within supply-chain operations […].”* (Sharif *et al.* 2012:2519)
	Collaboration	Bernon and Cullen, (2007:51) Morgan *et al.* (2016:304)	• *“[…] information systems and through collaboration with supply chain partners.”* (Jayaraman *et al.* 2008:424)

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
	3(R)PL, 4PL and software providers	Sharif *et al.* (2012:2517)	• *"The ability of 3PLs to provide advanced information systems […]."* (Cheng & Lee, 2010:1118) • *"Collaboration with a third-party software provider […]."* (Bernon & Cullen, 2007:51) • *"[…] fourth party service providers work in a virtual supply chain and manages all the work through IT and communications tool […]."* (Agrawal *et al.* 2015:83) • *"The information systems and technology of 3PRL providers can also assist with problems in product returns […]."* (Badenhorst & van Zyl, 2015:153)

Source: Compiled by the researcher

Table 6.1 indicates that general IT practices involve several strategies and requirements, which will be discussed in subsequent sections.

6.3.1.1.1 Strategies of general IT practices in RL

General IT practices in RL involve several strategies, including (1) prioritising general IT, (2) strategic considerations for general IT, (3) strategic considerations related to the IT types, (4) strategic redesign, improvement and expansion of existing IT for RL, (5) continuous development of IT, (6) strategic development and implementation of a new/current IT infrastructure, (7) strategic matching and combining of IT and resources, (8) strategic development and utilisation of IT competency and capabilities, (9) strategic development and use of integrative and compatible IT, (10) strategic development and use of IT with information management capability, (11) performing a cost-benefit analysis, (12) strategic implementation and appropriate use of state-of-the-art and capable IT for RL, and (13) implementing efficient and effective, real-time and responsive.

Relating to the importance of IT for the efficiency and effectiveness of all business functions, organisations must *prioritise general IT* for RL. Therefore, general IT must be included in the organisation's strategic planning to address the barriers in RL (see section 6.3.1.2). Furthermore, before investing or implementing IT for RL, organisations must *strategically consider* the IT of SC partners to ensure compatibility of the IT solutions.

Other *strategic considerations* that can be important in IT practices *relate* to the *IT types* that can be used for RL. For instance, organisations can consider (1) Internet and web-based technologies (see section 6.3.2), (2) traditional forward logistics technologies, like Enterprise Resource Planning (ERP), Electronic Data Interchange (EDI), and Warehouse Management Systems (WMS) (section 6.3.3), (3) barcode and Radio Frequency Identification (RFID) technology (see section 6.3.4), and (4) reverse logistics information technology (RLIT) (see section 6.3.3), which will be discussed and analysed in subsequent sections. Nevertheless, IT solutions evolve, which means that organisations must consider the latest IT available on the market to manage consumer returns.

Alternatively, organisations may choose to *strategically redesign, improve and expand existing IT for RL*. However, organisations must *continuously develop IT*, ensuring that the general IT system addresses the chancing and uncertain RL environment. Furthermore, organisations must *match* and *combine IT* with *resources* for RL, demonstrating a link between IT practices and resource commitment (RC) practices (see section 6.9.1) to manage consumer returns. Similarly, organisations must *strategically develop* and *utilise IT competencies and capabilities,* which can contribute to intangible resources for RL (e.g. RL expertise and capabilities).

IT infrastructure can be important for RL, which means that organisations must *strategically develop* and *implement a new or current IT infrastructure* for managing consumer returns. Relating to the strategic considerations, organisations must *strategically develop* and *use integrative* and *compatible IT*, ensuring that RL information can be effectively shared internally (functions) and externally (SC parties). Similarly, organisations must strategically *develop* and *use IT* with *information management capabilities* to not only manage information but also enable inputs of information that can influence RL processes. For example, the IT system must be able to capture information about the Consumer Protection Act (CPA) of South Africa (2008:18), stipulating information about the return acceptance of defective/damaged products, which can be important for managing consumer returns.

As part of the general IT strategies, organisations must *perform* a *cost-benefit analysis* to identify the trade-offs between the costs and investment requirements of general IT and the potential benefits of implementation for RL. Therefore, analysing both the cost (strategies and requirements) and benefits (outcomes) of general IT can be important for the efficiency and effectiveness of RLM.

After the strategic considerations, development of current/new IT and IT infrastructure, matching of resources, and performing a cost-benefit analysis, organisations must *appropriately use* and *strategically implement state-of-the-art* and *capable IT* for RL. Particularly, organisations must *implement efficient* and *effective, real-time,* and *responsive* IT to effectively manage RL processes and share information with RL parties (like consumers).

6.3.1.1.2 Requirements of general IT practices in RL

The requirements of general IT practices in RL include economic, organisational and SC requirements. The *economic requirements* of IT practices involve *investment* and *costs* for implementing and using general IT for RL, which can include capital costs, labour costs, training costs and operational costs. The investment and cost requirements for general IT demonstrates the

importance of performing a cost-benefit analysis (strategy) for the efficient and effective RLM of consumer returns.

The *organisational requirements* of general IT include management involvement, IT staff involvement, and staff training. *Management involvement* can be important for developing and implementing general IT strategies for RL, like developing and implementing appropriate IT systems and infrastructure and performing a cost-benefit analysis. Similarly, *IT staff involvement* can be important for developing and implementing appropriate IT systems and infrastructure for RL, emphasising the importance of internal cooperation between functions/departments to manage consumer returns. Associating with the economic requirements of general IT, *staff training* can be important for operating IT systems appropriately.

Finally, the *SC requirement* of general IT practices involves *SCI, SC collaboration* and *4PL/3PL providers*, emphasising the importance of the general IT strategies of considering IT compatibility with SC parties and developing and using integrative and compatible IT systems for RL. Consequently, organisations need to implement SCI practices (see section 6.4.1) to effectively use general IT to manage consumer returns. Furthermore, organisations that lack the capability of utilising appropriate IT for RL must use third-party logistics (3PL), third-party RL (3PRL), fourth-party RL (4PLs) and third-party software providers (*3PL*s) gain access to world-class technologies for RL, linking general IT practices with RL outsourcing practices (see section 6.5).

In the next section, the outcomes of general IT practices (strategies and requirements) will be analysed and discussed.

6.3.1.2 Outcomes of general IT practices in RL

The outcomes can be described as the results of incorporating the strategies and requirements of general IT practices for the effective management of consumer returns. Like the strategies and the requirements, the outcomes (benefits) of general IT were divided into categories, namely economic, operational (related to RL processes), organisational, environmental, social, market-related and SC outcomes.

Table 6.2 provides an overview of the findings related to the *outcomes of general IT* practices to manage consumer returns, including the categories, subcategories, supporting sources for the subcategories and key quotations that support both the subcategories and the discussion of the findings.

Table 6.2 Findings related to outcomes of general IT practices to manage consumer returns

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
Economic outcomes	***Address economic barriers***	None	• *"[…] managers to take stock of the high costs involved in the reverse supply chain and realise that many of these costs can be mitigated through the use of sound information systems […]."* (Jayaraman *et al.* 2008:424)
	Economic benefits and performance	Huang and Yang (2014:635)	• *"[…] improving information systems and technology for RL […] would lead to […] economic performance […]."* (Lee & Lam, 2012:596) • *"The continuing development of ICT offers […] significant economic […] benefits in the RL process."* (Bernon & Cullen, 2007:44) • *"The more companies invest in information technology, the better the economic benefits […]."* (Shi *et al.* 2012:222)
	Cost effectiveness	None	• *"Information technology use […] are shown to enhance levels of reverse logistics cost effectiveness […]." (Huscroft et al. 2013a:230)*
	Cost savings	Huscroft *et al.* (2013a:231) Sharif *et al.* (2012:2527) Aitken and Harrison (2013:753) Shi *et al.* (2012:222)	• *"[…] effective use of technology […] reduced operational costs […]."* (Kongar *et al.* 2015:62) • *"[…] costs involved in the reverse supply chain […] can be mitigated through the use of sound information systems […]."* (Jayaraman *et al.* (2008:424) • *"[…] IT […] can reduce labour cost, information cost, management cost, and other, invisible costs."* (Hong *et al.* 2008:177) • *"Investment in technology […] would help reduce costs […]."* (Subhashini, 2016:10)
	Profitability	None	• *"[…] the use of integrated logistics information management system to […] improve profitability."* (Lau &Wang, 2009:459) • *"IS investments will lead to higher profit gains."* (Toyasaki *et al.* 2013:1214)
Operational (RL process) outcomes	***Address operational barriers***	Shi *et al.* (2012:222)	• *"[…] operational barriers […] included problems with product quality, limited forecasting and visibility, inadequate information and technology systems and developmental barriers. The practices that were identified for overcoming these barriers included […] state-of-the-art technology […]."* (Badenhorst, 2016:10) • *"RL operations cannot be performed without IT […] Because the RL environment is characterized [sic] by uncertainty in return volume, frequency, and source, and thus necessitates accurate product tracking and rapid timing/ processing, […]."* (Olorunniwo & Li, 2011:8) • *"[…] invest enormously in Information and communication technologies (ICT) to deal with problem of uncertainty of incoming returns."* (Lhafiane et el. 2015b:396) • *"The information systems and technology of 3PRL providers can also assist with problems in product returns […]."* (Badenhorst & van Zyl, 2015:153)
	Improves forecasting, visibility and tracking	Agrawal *et al.* (2016d:20) Banomyong *et al.* (2008:39) Cheng and Lee (2010:1118) Kongar *et al.* (2015:62) Olorunniwo and Li (2011:8) Ravi and Shankar (2015:885, 890) Subhashini (2016:10)	• *"To address issues with limited forecasting and visibility in RL, organisations can implement a variety of first-priority practices, such […] investing in state-of-the-art technology […]."* (Badenhorst, 2016:9) • *"Efficient information and technological systems are needed to for tracing and tracking of the potential products that would return for RL operations."* (Ravi *et al.* 2008:4857) • *"[…] adapting existing systems to include mechanisms that facilitate the entry of return flow data, including the types and quantities […] This would provide a high degree of visibility of the network."* (Biehl *et al.* 2007:466)
	Address IT barriers in RL	Sharif *et al.* (2012:2517)	• *"[…] compatible the systems […] within and between organizations [sic] may help guide the acquisition and implementation of technologies in the organization [sic]."* (Huscroft *et al.* 2013a:239) • *"To overcome the barrier of inadequate information technology systems, organisations can invest in state-of-the-art technology […]."* (Badenhorst, 2016:9) • *"The ability of 3PLs to provide advanced information systems […]."* (Cheng & Lee, 2010:1118) • *"Collaboration with a third-party software provider provided real-time information systems related to returned products."* (Bernon & Cullen, 2007:51)
	Facilitate and support RL processes and activities	Bernon and Cullen (2007:43, 49) Cheng and Lee (2010:1118) Shaik and Abdul-Kader (2014:96)	• *"[…] inform managers and IT professionals in developing and implementing appropriately fitting IT infrastructure to support RL processes."* (Huscroft *et al.* 2013a:239) • *"[…] to match resources to technologies […] that can support the reverse-logistics operation (e.g. technological commitment)."* (Sharif *et al.* (2012:2519) • *"[…]an efficient information and technological system is vital for supporting returns processes […]."* (De Leeuw *et al.* 2016:719) • *"[…] integration for supportive IS within supply-chain operations, can support the reverse-logistics operation […]."* (Sharif *et al.* (2012:2519)
		Bokade and Raut (2013:44) Huscroft *et al.* (2013a:238) Jayaraman *et al.* (2008:410) Jayaraman *et al.* (2008:418)	• *"In the collection process, the information system can collect information from customers about the returned products."* (Chan *et al.* 2010:6305) • *IT competency focussed on quick and accurate returns processing […] permit better overall RL outcomes."* (Morgan *et al.* 2016:295) • *"[…] tasks which include inspection of returned products, crediting customer accounts and resale of the returned merchandise etc. require […] information technologies (ITs)."* (Jayaraman *et al.* 2008:410) • *"In terms of sortation and storage, increased use of information technology*

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
		Lambert *et al.* (2011:563) Morgan *et al.* (2016:295) Olorunniwo and Li (2011:8)	*streamlined the processes involved."* (Bernon & Cullen, 2007: 50) • *"[…] information and technological systems for facilitating […] product recovery and proper disposal of products."* (Ravi & Shankar, 2015:885)
	Increase RL process efficiency and effectiveness	Badenhorst and van Zyl (2015:158) Huscroft *et al.* (2013a:230) Kongar *et al.* (2015:62) Sharif *et al.* (2012:2527) Tiwari (2013:241)	• *"[…] the more compatible the systems are within and between organizations* [sic], *the more effective RL processing will be […]."* (Huscroft *et al.* 2013a:239) • *"[…] for optimal reverse logistics efficiency and effectiveness, information systems and data management must be redesigned or expanded to accommodate returns […]."* (Cheng & Lee, 2010:1117) • *"[…] managers and IT professionals in developing and implementing appropriately fitting IT infrastructure […] to increase RL effectiveness via the implementation of IS that compliment RL processes […]."* (Huscroft *et al.* 2013a:239)
	Increase flexibility and operational efficiency	Kongar *et al.* (2015:62) Li and Olorunniwo (2008:384)	• *"[…] use of information technology as an enabler supports RL program to be flexible."* (Bokade & Raut, 2013:44) • *"[…] RL operational efficiency gains are affected by the use of ITs."* (Olorunniwo & Li, 2011:8) • *"Availability of prompt and accurate information may help […] achieving operational efficiency."* (Agrawal *et al.* 2016d:20)
	Facilitate operational planning and inventory management	None	• *"[…] the reverse logistics 3PL IS works as an essential tool which facilitates operational planning […]."* (Sharif *et al.* 2012:2522) • *"[…] benefits that are gained from the effective use of technology include […] inventory accuracy, and operational efficiency, […]."* (Kongar *et al.* 2015:62)
	Simplify transactions	None	• *"Enabling technology was found to simplify the transactions within the RL system […]."* (Aitken & Harrison, 2013:759) • *"IT capabilities […] to make transactions more fluid and transparent for customers compared to paper-based methods."* (Hong *et al.* 2008:184)
Organisational outcomes	***Address organisational barriers***	None	• *"[…] technology is the topmost priority solution to overcome RL adoption barriers […]."* (Prakash & Barua, 2015:611)
	Facilitate RL design, implementation and innovation	None	• *"[…] for the design of the RL system […] adapting existing systems […]."* (Biehl *et al.* 2007:466) • *"[…] firms must develop and implement effective returns processes […] use of IT can be an effective enabler […]."* (Huscroft *et al.* 2013a:231) • *"IT systems appear to be an important innovator for a firm attempting to enhance […] reverse logistics activities […]."* (Cheng & Lee, 2010:1118)
	Improve RL capabilities and competencies	None	• *"[…] greater reverse logistics competency is achieved by firms that can combine high levels of collaboration with a high IT competency."* (Morgan *et al.* 2016:304) • *"Investing in technology can improve RL capabilities […]."* (Jack *et al.* (2010:232)
	Successful and flexible RL program	None	• *"State of art technologies […] of products being returned are necessary for successful reverse logistics programs."* (Ravi & Shankar, 2015:890) • *"[…] the use of information technology as an enabler supports reverse logistics program to be flexible."* (Bokade & Raut, 2013:44)
	Enhance RL performance	Lambert *et al.* (2011:566) Olorunniwo and Li (2010:454) Sharif *et al.* (2012:2527) Jayaraman *et al.* (2008:410)	• *"[…] greater compatibility should result in greater RL performance […]."* (Huscroft *et al.* 2013a:232) • *"[…] integrated information system […] and coordinating system is responsible of the overall performance […] of the RL system."* (Lhafiane *et al.* 2015b:397) • *"[…] to improve RL design and performance. […] invest in IT systems […]."* (Biehl *et al.* (2007:458)
	Facilitate and support RLM	Bernon and Cullen (2007:49) Biehl *et al.* (2007:466) Lambert *et al.* (2011:563)	• *"[…] need for better information technology systems to support returns management."* (Bernon *et al.* 2011:495) • *"The capabilities of IT can be utilized [sic] […] to manage its reverse logistics."* (Bokade & Raut, 2013:44) • *"An integrated information system […] and coordinating system which is responsible of the overall […] management of the RL system."* (Lhafiane *et al.* 2015b:397) • *"[…] prompt and accurate information may help managers […] in managing their RL."* (Agrawal *et al.* 2016d:20) • *"The ability of 3PLs to provide advanced information systems that help […] manage complex RL activities […]."* (Cheng & Lee, 2010:1118)
	Facilitate decision-making and information management	Ramírez (2012:1147)	• *"IT can help […] complex decision-making process of final disposition of the returned product."* (Jayaraman *et al.* 2008:418) • *"IT solutions […] enable making correct decisions consistently in real-time."* (Li & Olorunniwo, 2008:384) • *"[…] information technology is also implemented to keep track of all information […]."* (Banomyong et al. 2008:39)
	Facilitate cross-functional integration (CFI) and information sharing	Toyasaki *et al.* (2013:1215)	• *"Technological resource capability […] helps the enterprises to diffuse […] information effectively across all relevant functional areas […]."* (Shaik & Abdul-Kader, 2014:98) • *"The use of information technology can allow for greater vertical coordination throughout the RL process, internal […] to the firm."* (Huscroft *et al.* 2013b:317) • *"[…] implementing IT would help mediate some of the communications challenges*

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
			these firms are facing." (Hall *et al.* 2013:779)
	Facilitate facility/ location practices	None	• *"[…] information technology emerged as an important issue when considering the control of the network."* (Bernon *et al.* 2011:494) • *"It is clear that information technology (IT) and information system (IS) are important to a DC/CRC."* (Hsu *et al.* 2009:518)
Environmental and social outcomes	***Environmental benefits and protection***	None	• *"The continuing development of ICT offers opportunities for […] environmental benefits in the RL process."* (Bernon & Cullen, 2007:44) • *"[…] improving information systems and technology for reverse logistics […] would lead to a more sustainable outcome of environmental protection […]."* (Lee & Lam, 2012:596)
	Enhance social responsibility	None	• *"[…] improving information systems and technology for reverse logistics […] would lead to a more sustainable outcome of […] social responsibility […]."* (Lee & Lam, 2012:596)
Market-related outcomes	***Competitive advantage***	None	• *"[…] information technology can help retailers develop a sustainable competitive advantage."* (Jack *et al.* 2010:232) • *"IT should be combined with additional, complimentary firm resources […] for achieving competitive advantage […]."* (Huscroft *et al.* 2013a:238)
	Meet consumer needs/demands	Li and Olorunniwo (2008:384) Ravi and Shankar (2015:877)	• *"Use of technology streamlines processes and […] meet current and future demands."* (Shaik & Abdul-Kader, 2012:30)
	Improve consumer satisfaction, service and retention	Hall *et al.* (2013:779) Hong *et al.* (2008:177) Huscroft *et al.* (2013a:241)	• *"[…] the information system […] provide information […] customer satisfaction improvements."* (Lambert *et al.* 2011:572) • *"[…] benefits that are gained from the effective use of technology include […] customer service improvements* (Kongar *et al.* 2015:62) • *"The more companies invest in information technology, the […] higher level of customer service."* (Shi *et al.* 2012:222) • *"[…] use of information system and technology for […] customer retention."* (Lee & Lam, 2012:589)
	Enable consumer information sharing and CRM	Li and Olorunniwo (2008:384)	• *"A capable IS allows a firm to […] share information with its customers […]."* (Sharif *et al.* 2012:2527) • *"Technology has the potential to increase firm reach and promotes interaction directly between firms and their customers."* (Morgan *et al.* 2016:307)
SC outcomes	***Improve SCM***	None	• *"[…] made possible by the IT infrastructure and is reflected in the management of its supply chain."* (Beh *et al.* 2016:18) • *"[…] fourth party service providers work in a virtual supply chain and manages all the work through IT and communications tool […]."* (Agrawal *et al.* 2015:83)
	Facilitate SCI, coordination and collaboration	Badenhorst (2016:9) Bernon and Cullen (2007:51) Huscroft *et al.* (2013b:317) Sharif *et al.* (2012:2527)	• *"IT enables […] information sharing with all facilities in their reverse supply chains, effectively integrates with company's whole supply chain system […]."* (Li & Olorunniwo, 2008:384) • *"Appropriate use of IT can be an effective enabler of such coordination."* (Huscroft *et al.* 2013a:231) • *"IT strengthens the impact of collaboration […]."* (Morgan *et al.* 2016:304)
	Improve SC information sharing and communication	Aitken and Harrison (2013:756) Cheng and Lee (2010:1118) Hall *et al.* (2013:779) Li and Olorunniwo (2008:384) Sharif *et al.* (2012:2527) Shaik and Abdul-Kader (2012:30)	• *"Based on IT capacity, RSC participants can easily communicate with each other in real time."* (Hong *et al.* 2008:177) • *"The information system is responsible for […] communicating efficiently between the different parties involved […]."* (Lambert *et al.* 2011:563)
	Improve SC visibility and transparency	Beh *et al.* (2016:16)	• *"IT infrastructure can make each item's subsequent step instantly visible […] to each member of the supply chain."* (Kongar *et al.* 2015:53) • *"[…] invest in IT systems to provide greater visibility to the RL network."* (Biehl *et al.* 2007:458) • *"[…] the reverse logistics 3PL IS works as an essential tool […] making the supply chain transparent […]."* (Sharif *et al.* 2012:2522)

Source: Compiled by the researcher

Table 6.2 shows that general IT practices associate with economic, operational, organisational, environmental, social, market-related and SC outcomes, which will be discussed in subsequent sections.

6.3.1.2.1 Economic outcomes of general IT practices in RL

The economic outcomes of general IT include (1) addressing economic barriers, (2) economic benefits and performance, (3) cost effectiveness, (4) cost savings, and (5) profitability. RL involves economic barriers, like high costs, which can be problematic for effective RLM (see section 2.3.1). Nevertheless, several RL practices can *address* the *economic barriers* in RL, like general IT. Particularly, managers (organisational requirement) can perform a cost-benefit analysis (general IT strategy) for general IT and realise that appropriate IT for RL can mitigate the high-cost barrier in RL.

Additionally, through the strategic improvement of existing IT for RL, continuous development of IT (general IT strategies) and investment (economic requirement), *economic benefits* and *economic performance* improvements can be realised. Consequently, general IT can lead to *cost effectiveness* in RL, reemphasising the importance of IT in addressing economic barriers in RL.

Furthermore, *cost savings* (e.g. savings in labour, information management, operational and other hidden costs) can be realised through the strategic implementation and appropriate use of capable IT (strategy) and IT investment (economic requirement). Finally, strategic development and use of integrative and compatible IT (strategy) and investment (economic requirement) can improve *profitability*, demonstrating the importance of performing a cost-benefit analysis for general IT.

6.3.1.2.2 Operational outcomes of general IT practices in RL

The operational outcomes of general IT include (1) addressing operational barriers in RL, (2) improving forecasting, visibility and tracking, (3) addressing IT barriers in RL, (4) facilitating and support RL processes and activities, (5) increasing RL process efficiency and effectiveness, (6) increasing operational efficiency and flexibility, (7) facilitating operational planning and inventory management, and (8) simplifying RL transactions.

Like addressing the economic barriers in RL, general IT can *address* the *operational barriers* in RL, which include limited forecasting and visibility, uncertainties in product returns, lack of IT systems and lack of appropriate infrastructure (developmental barriers) in RL. Specifically, operational barriers can be addressed through the (1) strategic implementation and use of state-of-the-art IT, (2) implementation and use of real-time, and responsive IT (strategies), (3) investment in IT (economic requirement) and (4) 3PRL providers (SC requirement).

Subsequently, prioritising general IT, adapting current IT for RL, implementing and appropriately using efficient state-of-the-art IT (strategies) and investment in IT (economic requirement), can *improve forecasting*, *visibility* and *tracking* of consumer product returns. Additionally, *IT barriers*, like a lack of appropriate IT systems for RL (see section 2.3.2), can be *addressed* through (1) the strategic development and use of integrative and compatible IT, (2) the strategic implementation and appropriate use of state-of-the-art IT (strategies), (3) investment in IT (economic requirement), and (5) SC collaboration, 3PL and software providers (SC requirements).

In addition to overcoming operational barriers, general IT practices, including the (1) general IT strategies of developing an IT infrastructure for RL, matching IT with resources, developing and using integrative and compatible IT, implementing efficient IT, (2) organisational requirements of involving management and IT staff, and (3) SC requirement of SCI, can *facilitate and support RL processes*. Specific RL processes and activities that can be facilitated by general IT include collection, gatekeeping, returns processing, inspection, sorting, disposition and reselling activities, emphasising the important role of IT in managing consumer returns.

Additionally, *RL process efficiency* and *effectiveness* can be increased through the general IT strategies of considering compatibility of IT with SC partners, developing and using integrative and compatible IT, redesigning or expanding existing IT and developing an IT infrastructure for RL, and the organisational requirements of management and IT staff involvement. Additionally, *flexibility* and *operational efficiency* can be *increased* through the strategic implementation and appropriate use of responsive IT for RL.

Moreover, general IT practices, like the SC requirement of 3PRL provider IT systems, can *facilitate operational planning* and *inventory management* in RL, demonstrating the value of combining IT and outsourcing practices to manage consumer returns. Finally, the strategic development of IT capabilities can *simplify RL transactions* by avoiding manual and paper-based transactions.

6.3.1.2.3 Organisational outcomes of general IT practices in RL

Several organisational outcomes associate with general IT practices in RL, including (1) addressing organisational barriers, (2) facilitating RL design, implementation and innovation, (3) improving RL capabilities and competencies, (4) successful and flexible RL program, (5) enhancing RL performance, (6) facilitating and supporting RLM, (7) facilitating decision-making and information management, (8) facilitating CFI and information sharing, and (9) facilitating facility/location practices.

Organisations can *address organisational barriers,* like resistance to change and lack to management support and attention to RL (see section 2.3.3), by prioritising general IT (strategy). Furthermore, the strategic implementation and appropriate use of capable IT systems and adapting an existing IT for RL (general IT strategies) can *facilitate RL design, implementation* and *innovation.* Additionally, organisations can *improve RL capabilities* and *competencies* through the strategic development and utilisation of IT competencies (general IT strategy), IT investment (economic requirement) and SC collaboration (SC requirement). Subsequently, through the strategic implementation and appropriate use of state-of-the-art and capable IT (general IT strategy), organisations can establish a *successful* and *flexible RL program,* emphasising the operational outcome of flexibility (see section 6.3.1.2.2).

Furthermore, *RL performance* can be *enhanced* through the general IT strategies of considering system compatibility with SC partners and developing and using integrated and compatible IT solutions, and the economic requirement of IT investment. Similarly, general IT practices, including (1) continuous development and improvement of IT for RL, (2) strategic development and use of IT capabilities and competencies, (3) strategic development and use integrated and compatible IT, (4) strategic development and use of IT with information management capability, (5) strategic implementation and appropriate use of state-of-the-art IT (general IT strategies), (6) management involvement (organisational requirement), and (7) 3PL providers (SC requirement), can *facilitate* and *support RLM.*

Additionally, general IT practices, including the strategic implementation and appropriate use of IT for RL, can *facilitate decision-making* (such as disposition decisions) and *information management* in RL, emphasising the role of general IT in supporting RL processes and enhancing visibility and tracking of product returns. Likewise, *cross-functional integration* (CFI) and internal *information sharing* can be facilitated by developing IT capabilities and appropriately using IT for RL (general IT strategies), showing a link between general IT and integration practices in RL.

Finally, general IT can *facilitate facility/location practices* in RL, including network control, separate facility/location practices, integrated facility/location practices and centralisation practices (see section 6.8), which demonstrate the impact of general IT practices on the successful implementation of other RL practices to manage consumer returns.

6.3.1.2.4 Environmental and social outcomes of general IT practices in RL

Although green logistics and waste management practices falls outside the scope of this study, any benefits associated with the RL practices of consumer returns will be included in the findings.

Evidently, general IT involves *environmental outcomes* that include environmental benefits and environmental protection. Specifically, the general IT strategies of redesigning, improving and expanding existing IT and continuously developing IT for RL can bring e*nvironmental benefits* and enable *environmental protection*, demonstrating the role of IT in the environmental drivers of RLM (see section 2.3.2.2).

The *social outcome* of IT involves *social responsibility* that can be *enhanced* through the general IT strategy of redesigning, improving and expanding existing IT for RL. Evidently, like the role of IT in the environmental drivers, IT can associate with corporate social responsibility (CSR) drivers in RL (e.g. pressures from consumers to adopt sustainable business practices like RL) (see section 2.3.2.2).

6.3.1.2.5 Market-related outcomes of general IT practices in RL

The market-related outcomes of general IT include (1) a competitive advantage, (2) meeting consumer demands/needs, (3) improving consumer satisfaction, service and retention, and (4) enabling consumer information sharing and consumer relationship management (CRM). Specifically, general IT practices in RL, including matching IT with organisational resources (general IT strategy), can help organisations to obtain a *competitive advantage* in RL. Additionally, organisations can *meet consumer needs/demands* by strategically implementing and appropriately using IT for RL.

Subsequently, organisations can *improve consumer satisfaction, service* and *retention* by not only implementing and appropriately using IT (general IT strategy), but also by investing in IT for RL (economic requirement), emphasising the operational outcome of improving RL process efficiency and effectiveness (see section 6.3.1.2.2). Finally, the strategic implementation and appropriate use of capable IT for RL (general IT strategy) *enables consumer information sharing* and *CRM*, showing the importance of general IT practices for successful consumer integration (CI) in RL (discussed in section 6.4.2)

6.3.1.2.6 SC outcomes of general IT practices in RL

The SC outcomes of general IT include (1) improving SCM, (2) facilitating SCI, coordination and collaboration, (3) improving information sharing and communication, and (4) improving SC visibility and transparency. Particularly, organisations can *improve SCM* through the strategic development and implementation of new or existing IT infrastructure for RL (general IT strategy) and the IT of a 4PL provider (SC requirement).

Furthermore, general IT practices, including the strategic implementation and appropriate use of IT for RL, can *facilitate SCI, coordination* and *collaboration.* Evidently, general IT practices in RL not only require SCI (see section 6.3.1.1.2) but also facilitate with the successful implementation of SCI, demonstrating that general IT practices can address SC barriers in RL (see section 2.3.4). Additionally, like the organisational outcome of internal information sharing (section 6.3.1.2.3) and the market-related outcome of consumer information sharing (section 6.3.1.2.5), general IT practices can *improve SC information sharing* and *communication,* which can further contribute to effective SCM and SCI in RL.

Finally, through the strategic development and implementation of new/existing IT infrastructure for RL (general IT strategy), IT investment (economic requirement) and 3PRL providers (SC requirement) organisations can improve *SC visibility* and *transparency,* which emphasise the operational outcomes of improved forecasting, visibility and tracking of consumer returns (see section 6.3.1.2.2).

Essentially, general IT practices can be important for addressing several barriers in RL, including economic, operational, organisational and SC barriers (see section 2.3), and providing various economic, operational, organisational, environmental, social, market-related and SC benefits in RL, contributing to the effective RLM of consumer returns.

In the next section, a description and conceptual framework of general IT practices in RL will be presented and analysed.

6.3.1.3 Description and conceptual framework of general IT practices to manage consumer returns

Based on the findings, presented in section 6.3.1, general IT practices can be important for the management of consumer returns, and will be described as follows:

> General IT practices for the management of consumer returns involve (1) general IT strategies, including prioritising general IT practices, strategic considerations, strategic redesign, improvement and expansion of existing IT for RL, continuous development of IT, strategic development and implementation of a new/current IT infrastructure, strategic matching and combining IT with resources, strategic development and utilisation of IT competency and capabilities, strategic development and use of integrative and compatible IT, strategic development and use of IT with information management capability, performing a cost-benefit analysis, strategic implementation and appropriate use of state-of-the-art and capable IT for RL, and implementing efficient and effective, real-time and responsive IT and (2) general IT requirements, including economic requirements (investment and costs), organisational requirements (management and IT staff involvement and staff training), and SC requirements (SCI, collaboration, and 3(R)PL, 4PL and software providers).
>
> The general IT strategies and requirements can result in several outcomes, including (1) economic outcomes (address economic barriers, economic benefits and performance, cost effectiveness and savings, and profitability), (2) operational outcomes (address operational barriers, improve forecasting, visibility and

tracking, address IT barriers, facilitate and support RL processes, increase RL process efficiency and effectiveness, operational efficiency and flexibility, facilitate operational planning and inventory management, and simplify transactions), (3) organisational outcomes (address organisational barriers, facilitate RL design, implementation and innovation, improve RL capabilities and competencies, facilitate successful and flexible RL program, enhance RL performance, facilitate and support RLM, facilitate decision-making and information management, facilitate CFI and information sharing, and facilitate facility/location practices), (4) environmental and social outcomes (environmental benefits and protection, and enhance social responsibility), (5) market-related outcomes (competitive advantage, meet consumer needs/demands, increase consumer satisfaction, service and retention, and facilitate consumer information sharing and CRM), and (6) SC outcomes (improve SCM, facilitate SCI, coordination and collaboration, and improve SC information sharing, communication and visibility).

Figure 6.5 provides a conceptual framework of general IT, which includes the general IT strategies, requirements and outcomes to manage consumer returns.

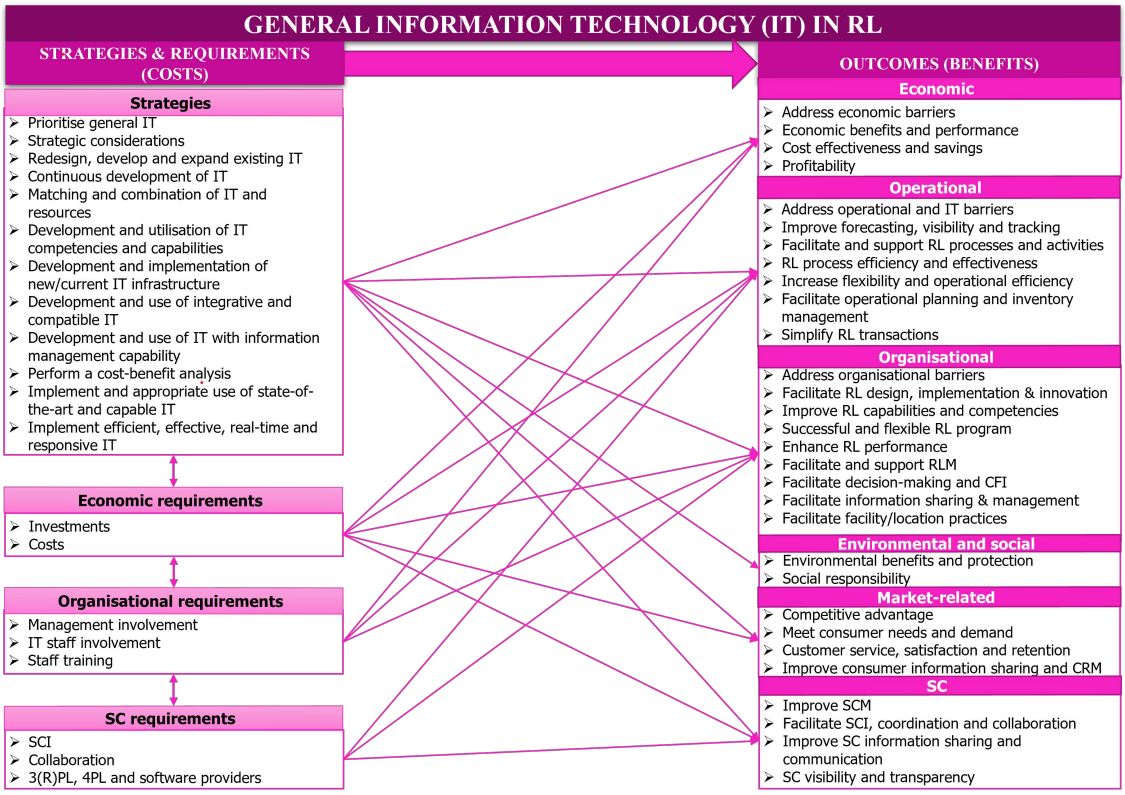


Figure 6.5 Conceptual framework of general IT practices to manage consumer returns
Source: Compiled by researcher

Figure 6.5 illustrates the links between the strategies, requirements and outcomes of general IT practices in RL, demonstrating a cost and benefit relationship. For example, the organisational requirements of management involvement can link with costs (economic requirement), performing a cost-benefit analysis, redesign and expansion of current IT systems and development and implementation of IT infrastructures (strategies), and the SC requirements of SCI and collaboration links with the strategic considerations and development of integrative and compatible IT.

Regarding the links between the strategies, requirements and outcomes of general IT, the framework demonstrates that general IT strategies can be the most significant practice category, linking with all

the general IT outcomes, including economic, operational, organisational, environmental, social, market-related and SC outcomes. Therefore, organisations must pay attention to the general IT strategies to achieve optimum results for the management of consumer returns. From the general IT requirements, the economic requirements (especially investment) contribute to all the outcomes, except for the environmental and social outcomes, emphasising the importance of performing a cost-benefit analysis for general IT practices and outcomes.

In terms of the outcomes, operational and organisational outcomes can be the most significant outcomes (associated with most of the practice categories), which means that general IT practices can be the most beneficial for organisations that experience operational and organisational challenges or problems in the RL process. The environmental and social outcomes can be the least significant outcomes, meaning that general IT practices may be less important for organisations that seek environmental and social benefits through RL practices. Nonetheless, all the outcomes of general IT practices provide important benefits to manage consumer returns, and therefore, can be considered as viable practices to manage consumer returns effectively.

In the next section, Internet and web-based technologies as IT practices in RL will be presented and explored.

6.3.2 Internet and web-based IT practices to manage consumer returns

Internet and web-based IT can be described as the most used IT used for RL (Olorunniwo & Li, 2010:457; Olorunniwo & Li, 2011:7), demonstrating the potential value of Internet and web-based IT to manage consumer returns. Despite this, limited RL literature from the QCA discussed Internet and web-based IT practices (see Figure 6.4), indicating a gap in RL literature. Nevertheless, like general IT practices, Internet and web-based IT practices include strategies, requirements and outcomes, which will be presented and discussed in the rest of this section. Table 6.3 provides an overview of the findings related to the *Internet* and *web-based IT* practices to manage consumer returns, including the categories, subcategories, supporting sources for the subcategories and key quotations that support both the subcategories and the discussion of the findings.

Table 6.3 Findings related to Internet and web-based IT practices to manage consumer returns

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
Strategies	***Strategic approach***	None	• *"The practices that were identified for overcoming these barriers included […] adopting a web-based approach […]."* (Badenhorst, 2016:10)
	Strategic development of online return capabilities	None	• *"Online return capabilities and electronic processing […] increase the speed of handling returns, increase customer satisfaction and reduce costs."* (Jayaraman *et al.* 2008:417)
	Strategic development, testing and	None	• *"To set up a web-based system for returns […]."* (Jayaraman *et al.* 2008:414) • *"[…] building, testing and implementing the web application […]."* (Jayaraman *et al.*

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
	implementation of web-based systems and applications for RL		2008:414)
	Strategic integration of web-based IT with existing IT infrastructure	None	• *"[…] the web application and integrating it with the existing IT infrastructure […]."* (Jayaraman *et al.* 2008:414)
	Strategic integration of Internet and web-based IT with other IT	Jayaraman *et al.* (2008:418) Lambert *et al.* (2011:566)	• *"[…] companies are moving away from the sole use of traditional EDI to Internet-based EDI with great advantages derived for such use."* (Olorunniwo & Li, 2011:9) • *"Implementing […] Internet-based […] ERP […]."* (Olorunniwo & Li, 2011:5) • *"Real-time information in Internet […] based on Radio Frequency Identification/Electronic Product Code can achieve real-time monitoring […]."* (Gu & Tagaras, 2014:5155) • *"[…] developed a web enabled […] RL software."* (Subhashini, 2016:9)
	Strategic development, testing and implementing of a collaborative web-based IT	Cheng and Lee (2010:1116)	• *"Web-based collaborative return authorisation (WCRA) seems to be a commercially deployable solution […]."* (Jayaraman *et al.* 2008:418) • *"[…] there will […] developing, testing and implementing the collaborative system […]."* (Jayaraman *et al.* 2008:414)
	Strategic integration of web-based IT with SC IT	None	• *"[…] set up a web-based system for returns […] and integrating it with the existing IT systems of each of the parties involved."* (Jayaraman *et al.* 2008:414)
	Strategic implementation and utilisation of the Internet and website for RL	Olorunniwo and Li (2011:5) Ravi and Shankar (2006:93)	• *"The practices that were identified for overcoming these barriers included using the Internet […]."* (Badenhorst, 2016:10) • *"Internet online tracking tools will provide more shipment details […]."* (Kannan, 2009:402) • *"The website and its associated software can also be used to capture the reason for return […]."* (Jayaraman *et al.* 2008:417) • *"[…] deploying Internet and e-business technologies in dealing with the returns process […]."* (Ravi, 2014:298)
	Strategic utilisation of Internet and web-based networks and linkages	None	• *"Web-based linkages: Information sharing by using Internet linkage […]."* (Cheng & Lee, 2010:1116) • *"The use of a computer network linkage could also be used as an important tool […] if it is web-based."* (Dowlatshahi, 2010b:4208) • *"The Internet of Things emerges as a significant new issue […]."* (Gu & Tagaras, 2014:5155)
Economic requirements	***Investment and costs***	None	• *"To set up a web-based system for returns, […] the initial capital costs will include the cost of building, testing and implementing […] and the […] operating costs would include the costs of maintaining the servers, the cost of software upgrades and the cost of recovering from breakdowns and/or failures."* (Jayaraman *et al.* 2008:414)
Market requirement	***Return information from consumers***	None	• *"[…] requiring consumers to provide a return reason on the web before returning the item […]."* (De Leeuw *et al.* 2016:723)
Economic outcomes	***Address economic barriers in RL***	None	• *"Firms tend to use a variety of complex and compound information systems due to […] high switching costs (e.g., employees' limited skills and high training costs, software and hardware investments, possibilities of new installation failure, etc.). The IT types most frequently cited are the Internet […]."* (Olorunniwo & Li, 2011:7)
	Reduce costs	None	• *"Online return capabilities and electronic processing of returns […] reduce costs."* (Jayaraman *et al.* 2008:417) • *"The website and its associated software can also be […] minimising the costs of transportation […]."* (Jayaraman *et al.* 2008:414)
	Reduce asset requirements	None	• *"Implementing the Internet (or Internet-based EDI or ERP) […] requires fewer asset […]."* (Olorunniwo & Li, 2011:5)
Operational outcomes	***Address operational barriers in RL***	None	• *"[…] operational barriers in reverse logistics […] practices that were identified for overcoming these barriers included using the Internet or adopting a web-based approach […]."* (Badenhorst, 2016:10)
	Facilitate forecasting, visibility and product return tracking	Huang and Yang (2014:619)	• *"[…] limited forecasting and visibility, […] practices that were identified for overcoming these barriers included using the Internet or adopting a web-based approach […]."* (Badenhorst, 2016:10) • *"[…] web-based applications to facilitate the tracking and tracing of returns, as well as the overall integration of all RL activities."* (Ravi *et al.* 2008:4867) • *"Real-time information in Internet […] based on Radio Frequency Identification/Electronic Product Code can achieve real-time monitoring […]."* (Gu & Tagaras, 2014:5155) • *"[…] offer visibility via a web portal."* (Lambert *et al.* 2011:566)
	Address product return quality problems	None	• *"[…] problems with product quality, […] practices that were identified for overcoming these barriers included using the Internet or adopting a web-based approach […]."* (Badenhorst, 2016:10)
	Address IT and infrastructure barriers in RL	None	• *"[…] inadequate information and technology systems and developmental barriers. The practices that were identified for overcoming these barriers included using the Internet or adopting a web-based approach […]."* (Badenhorst, 2016:10)
	Reduce operational errors and inconsistencies	None	• *"[…] to overcome human error and inconsistency with manual data recording, organisations can utilise technology solutions such as the Internet […]."* (Badenhorst (2016:5)
	Improve RL process	Gu and Tagaras	• *Online return capabilities […] increase the speed of handling returns […]."* (Jayaraman

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
	speed, flexibility and efficiency	(2014:5155) Hsu *et al.* (2009:518) Huang and Yang (2014:619)	*et al.* 2008:417) • *"Internet online tracking tools will provide more shipment details in less time […]."* (Kannan, 2009:402) • *"The website […] can also be used to […] minimising […] processing time […]."* (Jayaraman *et al.* 2008:417) • *"Web-based linkages: […] by using Internet linkage to save paper and time."* (Cheng & Lee, 2010:1116) • *"[…] web technology to improve the flexibility […]."* (Lhafiane *et al.* 2015b:399) • *"[…] requiring consumers to provide a return reason on the web before returning the item would allow the company to be more efficient […]."* (De Leeuw *et al.* 2016:723)
	Facilitate RL processes	Dowlatshahi, (2010b:4208) Kannan (2009:402) Olorunniwo and Li (2011:5)	• *"[…] deploying Internet and e-business technologies in dealing with the returns process […]."* (Ravi, 2014:298) • *"The website and its associated software can also be used to capture the reason for return […]."* (Jayaraman *et al.* 2008:417) • *"[…] relies on the Internet to […] schedule pick-ups, arrange transportation and track the status of returned goods."* (Huang & Yang, 2014:619) • *"[…] deployed these technologies […] in their returns processing […] internet was the highest used technology […]."* (Olorunniwo & Li, 2010:457) • *"[…] evaluation and sorting of used products […] through the platform of the Internet of Things […]."* (Gu & Tagaras, 2014:5155) • *"The website and its associated software can […] determine the disposition mode up-front […]."* (Jayaraman *et al.* 2008:417)
Organisational outcomes	***Improve RL performance and RLM***	None	• *"[…] a web portal […] is responsible of the overall performance and management of the RL system."* (Lambert *et al.* 2011:566)
	Facilitate information management	None	• *"[…] the Internet to capture customer information, […] that can be altered rapidly and successfully to it customer needs […]."* (Huang & Yang, 2014:619)
Market-related outcomes	***Enhance consumer satisfaction and convenience***	None	• *"Online return capabilities […] increase customer satisfaction […]."* (Jayaraman *et al.* 2008:417) • *"[…] websites […] can provide additional and more detailed information on returns policy and procedure which in turn may make return process more convenient."* (Ahsan & Rahman, 2016:610)
	Meet consumer needs	None	• *"[…] the Internet to capture customer information, […] that can be altered rapidly and successfully to it customer needs […]."* (Huang & Yang, 2014:619)
	Facilitate consumer information sharing and communication	None	• *"[…] Internet […] dealing with the returns process and […] keeping in touch with their […] customers […]."* (Ravi 2014:298) • *"The use of a computer network linkage could also be used as an important tool to communicate with RL customers […] if it is web-based." (Dowlatshahi, 2010b:4208)* • *"[…] websites […] can provide additional and more detailed information on returns policy and procedure […]."* (Ahsan & Rahman, 2016:610)
SC outcomes	***Facilitate SCM***	None	• *"The Internet of Things emerges as a significant new issue and possibility in supply chain management."* (Gu & Tagaras, 2014:5155) • *"E-Business technologies should be used for the online management of entire value chain."* (Ravi & Shankar, 2006:93)
	Facilitate SCI and collaboration	Olorunniwo and Li (2011:5)	• *"Web-enabled systems make it easier for all players to collaborate […]."* (Jayaraman *et al.* 2008:418) • *"To implement any collaborative effort between two parties using technology, again there will be two types of costs – capital cost of developing, testing and implementing the collaborative system, and integrating it with the existing IT systems of each of the parties involved."* (Jayaraman *et al.* 2008:414) • *"The use of a computer network linkage could also be used […] in regard to […] business-to-business interaction if it is web-based."* (Dowlatshahi, 2010b:4208)
	Facilitate SC information sharing and communication	Cheng and Lee (2010:1116) Dowlatshahi (2010b:4208) Ravi (2014:298)	• *"Web-enabled systems make it easier for all players to […] exchange information."* (Jayaraman *et al.* 2008:418) • *"Information sharing of RL will be fully shared through the Internet […] by making the enterprises to achieve a ''zero distance'' communication."* (Shi *et al.* 2012:228) • *"The Internet, however, has given many companies the ability to grant external suppliers or other business partners […] access to their internal processes (including data) […]."* (Olorunniwo & Li, 2011:5)
	Improve SC visibility	None	• *"Web-based systems […] provide organization-wide [sic] visibility of the reverse supply chain."* (Partida, 2011:64) • *"[…] Internet of Things based on Radio Frequency Identification/Electronic Product Code can achieve real-time monitoring of almost every link of the supply chain […]."* (Gu & Tagaras, 2014:5155) • *"Web-based collaborative return authorisation (WCRA) […] consolidates visibility to suppliers, […] third-party logistics providers […] and customers […]."* (Jayaraman *et al.* 2008:418)

Source: Compiled by the researcher

Table 6.3 shows that Internet and web-based IT practices involve several strategies, requirements and outcomes, which will be discussed and concluded with a description and conceptual framework.

6.3.2.1 Strategies and requirements of Internet and web-based IT practices in RL

Internet and web-based IT practices in RL involve several *strategies*, including (1) a strategic approach, (2) strategic development of online return capabilities, (3) strategic development, testing and implementation of web-based systems and applications, (4) strategic integration of web-based IT with existing IT infrastructure, (5) strategic integration of Internet and web-based IT with other IT, (6) strategic development, testing and implementation of a collaborative web-based IT, (7) strategic integration of web-based IT with SC IT, (8) strategic implementation and utilisation of the Internet and website for RL, and (9) strategic utilisation of Internet and web-based network and linkages.

For the effective implementation of Internet and web-based IT in RL, organisations need to adopt a *strategic web-based approach*, which can guide the development and implementation of Internet and web-based IT strategies for RL. Additionally, organisations must *strategically develop online return capabilities*, which may contribute to IT and other intangible resources as a competitive differentiator in RL.

Accordingly, organisations can *strategically develop, test* and *implement web-based systems and applications* for RL and *integrate* the *web-based IT* with the *existing IT structure.* Additionally, organisations can *strategically integrate the Internet and web-based IT* with other *IT* for RL, for example, Internet-based EDI, ERP or RFID or a web-based RLIT (also see sections 6.3.3, 6.3.4 and 6.3.3). Nevertheless, like general IT practices (see section 6.3.1), the IT used by SC parties can be important for an effective reverse supply chain (RSC).

Consequently, organisations may benefit from the *strategic development, testing and implementation of a collaborative web-based IT* for RL, which can involve the *strategic integration of the web-based IT* of the organisation with the *IT* of SC parties. Therefore, like general IT, Internet and web-based IT demonstrates the important link between IT practices and SCI practices to manage consumer returns.

Additional Internet and web-based IT strategies can include the *strategic implementation and utilisation* of the *Internet* and *website* for RL, which can be important for organisations (like online retailers) that use the web and Internet to sell products online to manage consumer returns. Furthermore, organisations can *strategically implement* and *utilise Internet* and *web-based IT*

networks and *linkages*, which can include the Internet of Things (IoT) and computer networks that share information and communicate across devices utilising the Internet.

The *requirements* of Internet and web-based IT practices in RL include economic and market-related requirements. The *economic requirements* of Internet and web-based IT involve *investment* and *costs* including, capital costs (e.g. costs of developing, testing and implementing a web-based IT) and operational costs (e.g. maintenance of servers, software upgrade costs and break-down or repair costs), implying that a cost-benefit analysis may be important for Internet and web-based IT. Finally, the *market-related requirement* of Internet and web-based IT involves *return information from consumers*, which means that consumers must cooperate and provide information on the return reason (e.g. defective and damaged product) through the web-based system.

In the next section, the outcomes of Internet and web-based IT practices will be discussed.

6.3.2.2 Outcomes of Internet and web-based IT practices in RL

The outcomes of Internet and web-based IT practices include (1) economic outcomes, (2) operational outcomes, (3) organisational outcomes, (4) market-related outcomes, and (5) SC outcomes.

The *economic outcomes* of Internet and web-based IT practices include addressing economic barriers, reducing costs and asset requirements. Since the Internet can be utilised for various business processes, organisations can *address economic barriers* in RL by avoiding high costs of developing, implementing and using special/new technologies for RL. Consequently, utilising the Internet can avoid additional training costs and software and hardware investments, reducing economic risks in RL.

Additionally, organisations *can reduce RL costs* (such as transport cost) through the Internet and web-based strategies of developing online capabilities and implementing and utilising a website for RL. Evidently, organisations, like online retailers, that sell products online can use existing software and capabilities for RL and reduce RL costs. Furthermore, organisations can *reduce asset requirements* through the strategic integration of Internet and web-based IT with other IT (such EDI and ERP) and strategic implementation and utilisation of the Internet for RL, emphasising reduction in investment requirements.

Numerous *operational outcomes* can be realised through Internet and web-based IT, including (1) addressing operational barriers, (2) facilitating forecasting, visibility and product return tracking, (3)

addressing problems with product quality, (4) addressing IT and infrastructure barriers, (5) reducing operational errors and inconsistencies, (6) improving RL process speed, flexibility and efficiency, and (6) facilitating RL processes. Like general IT (section 6.3.1.2), Internet and web-based IT strategies, including adopting a strategic web-based approach and implementing and utilising IT for RL, can address operational barriers in RL (see section 2.3.2).

Accordingly, Internet and web-based IT practices, including the strategies of (1) adopting a strategic web-based approach, (2) developing, testing and implementing web-based applications for RL, (3) integrating Internet and web-based IT with other IT (such as RFID), and (4) implementing and utilising the Internet and website for RL, can *facilitate forecasting, visibility* and *product return tracking.* Additionally, *product return quality problems* and *IT* and *infrastructure barriers* (developmental barriers) (section 2.3.2) can be *addressed* through the Internet and web-based strategies of adopting a strategic web-based approach and implementing and utilising IT for RL. Similarly, organisations can *reduce operational errors* and *inconsistencies* through the strategic implementation and utilisation of the Internet for RL, demonstrating that Internet and web-based practices can be critical for organisations that experience operational challenges in RL.

Several Internet and web-based practices can *improve RL process speed, flexibility* and *efficiency*, including (1) strategic development of online return capabilities, (2) strategic implementation and use of the Internet and website for RL, (3) strategic development and use of Internet and web-based networks and linkages, and (4) return information from consumers (market-related requirement). Ultimately, Internet and web-based strategies, like using the Internet and website for RL, and using Internet and web-based networks and linkages (e.g. IoT), can *facilitate RL processes,* including (1) a customer return request or gatekeeping for capturing the return reason and other related information, (2) collection and transportation for scheduling pick-ups and tracking shipments, (3) returns processing (such as issuing credits/refund), (4) inspection and sorting, and (5) disposition.

In contrast to the operational outcomes, limited *organisational outcomes* associate with Internet and web-based IT practices. Nevertheless, organisations can *improve RL performance*, *RLM* and *information management* through the strategic implementation and use of the Internet and website for RL, demonstrating an advantage to online retailers that can use existing websites to effectively manage consumer returns.

The *market-related outcomes* of Internet and web-based IT practices include (1) enhancing consumer satisfaction and convenience, (2) meeting consumer needs, and (3) facilitating consumer information

sharing and communication. Specifically, organisations can *enhance consumer satisfaction* and *convenience* by developing online return capabilities and implementing and using websites for RL (strategies), reemphasising the importance of Internet and web-based practices for online retailers. Additionally, the Internet can be utilised to capture consumer information, allowing organisations to incorporate changes (if necessary) to *meet consumer needs.* Similarly, utilising the Internet and website for RL and developing and using Internet and web-based network linkages can *facilitate consumer information sharing* (e.g. sharing return policies and procedures) and *communication* (e.g. keeping consumers informed on product return status).

Finally, Internet and web-based practices associate with several *SC outcomes*, including facilitating SCM, SCI and collaboration, SC information sharing and communication, and improving SC visibility. Specifically, *SCM* can be *facilitated* through the Internet and web-based strategy of developing and using Internet and web-based networks and linkages (such as using IoT and e-business IT) for RL. Additionally, several Internet and web-based practices can *facilitate SCI* and *collaboration,* including the (1) strategic development, testing and implementation of web-based IT, (2) strategic development, testing and implementation of a collaborative web-based IT, (3) strategic integration of web-based IT with SC IT, (4) strategic development and use of Internet and web-based networks and linkages, and (5) economic requirements of investment and costs.

Subsequently, Internet and web-based strategies, including the development, testing and implementation of web-based IT and implementation and utilisation of the Internet for RL, can *facilitate SC information sharing* and *communication.* Lastly, several Internet and web-based strategies can *improve SC visibility*, including (1) developing, testing and implementing web-based IT, (2) integrating Internet and web-based IT with other IT (e.g. RFID), (3) developing, testing and implementing a collaborative web-based IT system, and (4) developing and using Internet and web-based networks and linkages (such as IoT).

Essentially, Internet and web-based IT practices can be important for the management of consumer returns, providing several economic, operational, organisational, market-related and SC benefits. In the next section, a description and conceptual framework of Internet and web-based IT practices in RL will be presented and analysed.

6.3.2.3 Description and conceptual framework of Internet and web-based practices to manage consumer returns

Based on the findings presented in section 6.3.2, Internet and web-based IT practices can be important for the management of consumer returns, and will be described as follows:

> Internet and web-based practices the management of consumer returns involve (1) strategies that include a strategic approach, development of online return capabilities, development, testing and implementation of web-based systems and applications, integration of web-based IT with existing IT infrastructure, integration of Internet and web-based IT with other IT, development, testing and implementation of a collaborative web-based IT, integration of web-based IT with SC IT, implementation and utilisation of the Internet and website for RL, and utilisation of Internet and web-based network and linkages, and (2) requirements that include economic requirements (investment and costs), and a market-related requirement (return information from consumers). The Internet and web-based IT strategies and requirements can result in several outcomes, including (1) economic outcomes (address economic barriers, reduce costs and asset requirements), (2) operational outcomes (address operational barriers, improve forecasting, visibility and tracking, address product return quality problems, address IT and infrastructure barriers, reduce operational errors and inconsistencies, improve RL process speed, flexibility and efficiency, and facilitate RL processes), (3) organisational outcomes (improve RL performance, RLM and information management), (4) market-related outcomes (enhance consumer satisfaction and convenience, meet consumer needs/demands and facilitate consumer information sharing and communication), and (5) SC outcomes (facilitate SCM, SCI, collaboration, SC information sharing and communication, and improve SC visibility).

Based on the findings, Figure 6.6 provides a conceptual framework for Internet and web-based IT to manage consumer returns.

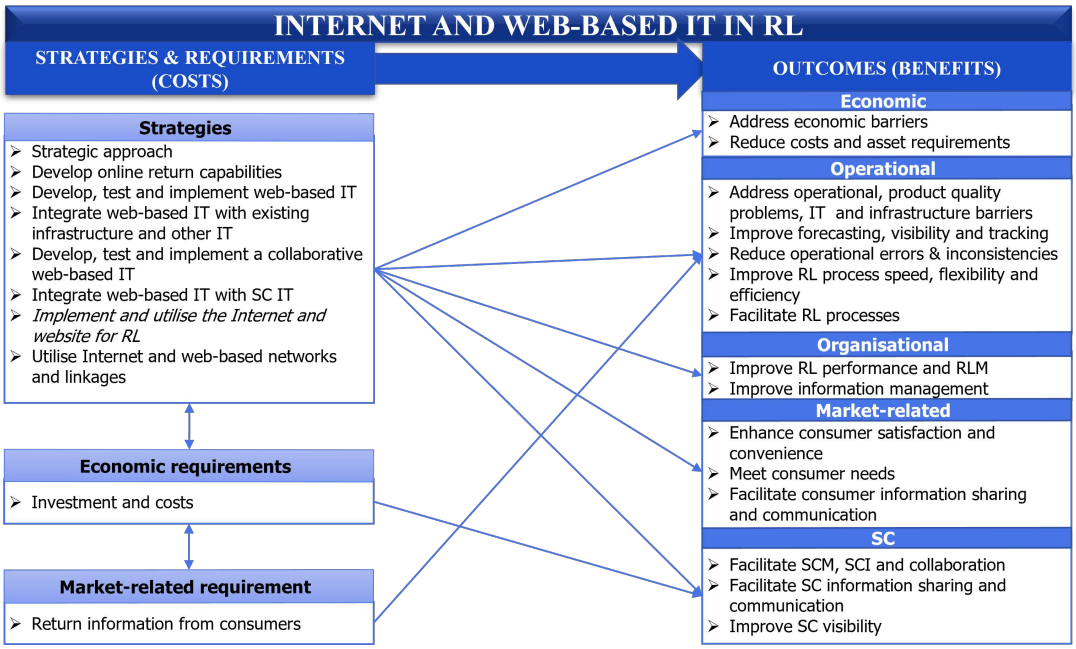


Figure 6.6 Conceptual framework for Internet and web-based IT practices to manage consumer returns
Source: Compiled by the researcher

Figure 6.6 illustrates the links between the strategies, requirements and outcomes of Internet and web-based IT practices in RL, demonstrating a strategy, cost and benefit relationship. For example, the economic requirements of investment and costs links with the development, testing and

implementation of web-based systems for RL and the market-related requirement of return information from consumers link with implementing and utilising the Internet and website for RL, linking the requirements and strategies of Internet and web-based IT.

In terms of the links between the strategies, requirements and outcomes, the framework demonstrates that Internet and web-based IT strategies, can be the most significant practice category, linking with all the outcomes, including economic, operational, organisational, market-related and SC outcomes. Specifically, implementing and using the Internet and website for RL (emphasised through italics) can be the most important Internet and web-based IT strategy, contributing to all the outcome categories. Evidently, organisations can achieve various benefits in RL by utilising the Internet and website for managing consumer returns.

In contrast, Internet and web-based requirements, including economic and market-related requirements, associate with limited outcomes, implying that investment, costs and return information from consumers may be less important. Nevertheless, as mentioned above, the requirements link with the strategies, and can, therefore, contribute indirectly to several outcomes.

In terms of the outcomes, operational and SC outcomes can be the most significant (associated with the most practice categories), which means that Internet and web-based practices can be the most beneficial for organisations that experience operational and SC challenges or problems in RL. The other outcomes, namely economic, organisational and market-related outcomes, associate only with the Internet and web-based strategies, implying that Internet and web-based practices may be less important for organisations that seek economic, organisational and market-related benefits through RL practices. Nonetheless, all the outcomes of Internet and web-based practices provide important benefits to manage consumer returns, and therefore, can be considered as viable practices to manage consumer returns effectively.

In the next section, traditional logistics IT practices in RL will be presented and explored.

6.3.3 Traditional logistics IT (TLIT) practices to manage consumer returns

Although TLIT systems focus on managing forward logistics processes, RL literature (in the QCA) suggests that traditional solutions, like EDI, ERP and WMS (most cited TLIT systems), can be used for RL, offering various benefits to manage consumer returns. Evidently, like other IT practices, the categories associated with TLIT include strategies, requirements and outcomes, which will be

discussed in subsequent sections, and concluded with a description and conceptual framework for TLIT practices to manage consumer returns.

6.3.3.1 Strategies and requirements of TLIT practices

TLIT practices include general strategies and requirements, including economic, operational, organisational, market-related and supply chain requirements. Table 6.4 provides an overview of the findings related to the *strategies and requirements of TLIT* practices to manage consumer returns, including the categories, subcategories, supporting sources for the subcategories and key quotations that support both the subcategories and the discussion of the findings.

Table 6.4 Findings related to the strategies and requirements of TLIT practices to manage consumer returns

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
General TLIT strategies	***Prioritise TLIT***	None	• *"[…] using […] EDI, […] Logistics managers should give top priority to ICT related issues in reverse logistics programs."* (Ravi & Shankar, 2015:890)
	Strategic integration and combination of TLIT systems	Mukhopadhyay and Setaputra (2011:5329)	• *"[…] integrating with ERP […] and transportation management system […]."* (Olorunniwo & Li, 2010:456) • *"[…] combination of interactive dual direction technologies like point of sale (POS), EDI and inventory management systems […]."* (Hong *et al.* 2008:177)
	Strategic integration and combination of TLIT systems and other IT	Dowlatshahi (2010b:4208) Li and Olorunniwo (2008:384) Jayaraman *et al.* (2008:418)	• *"[…] companies are moving away from the sole use of traditional EDI to Internet-based EDI with great advantages derived for such use […]."* (Olorunniwo & Li, 2011:9) • *"Implementing […] Internet-based […] ERP […]."* (Olorunniwo & Li, 2011:5) • *"[…] integrating with ERP, radio-frequency data communication system […]."* (Olorunniwo & Li, 2010:456) • *"[…] warehouse management system […] get that query and process it and gives the result back to the RFID-Wrapper."* (Han *et al.* 2010:1079)
	Strategic development, implementation and utilisation of EDI for RL	Cheng and Lee (2010:1116) Jayaraman *et al.* (2008:414) Li and Olorunniwo (2008:384) Mukhopadhyay and Setaputra (2011:5329) Shakantu *et al.* (2009:82) Sharif *et al.* (2012:2522) Shi *et al.* (2012:228)	• *"[…] use technology like […] electronic data interchange (EDI) […] to enhance […] reverse logistics management."* (Vijayan *et al.* 2014:12) • *"[…] critical for success of RL […] companies have started using […] EDI […]."* (Ravi & Shankar, 2015:885) • *"[…] launching and operating EDI […]."* (Olorunniwo & Li, 2011:5) • *"[…] use the electronic data interchange system (EDI) […] to establish an information sharing platform […] the well configured platform […] makes reverse logistics remain in the electronic stage […]."* (Shi *et al.* 2012:222)
	Strategic development, redesign and utilisation of existing ERP for RL	Li and Olorunniwo (2008:384)	• *"[…] the development of new design, planning and control of existing ERP […] to effectively manage return flows […]."* (Jayaraman *et al.* 2008:427) • *"[…] ERP must receive notification that a returned product has been received […] and […] must also track the disposition of the returned items and coordinate various activities."* (Jayaraman *et al.* 2008:418) • *"ERP is also extensively used […]."* (Ravi, 2014:298) • *"ERP is an information system integrating all facets of an organization [sic] on a common database."* (Olorunniwo & Li, 2011:5)
	Strategic development, customisation and utilisation of WMS for RL	Cheng and Lee (2010:1117)	• *"[…] updating their warehouse management systems to handle returns."* (Bernon *et al.* 2011:495) • *"To support the return process […] WMS were extended with proprietary systems […]."* (Lhafiane *et al.* 2015b:397) • *"[…] execution systems consist of warehouse management systems […]."* (Olorunniwo & Li, 2010:456)
	Strategic utilisation of TMS for RL	Cheng and Lee (2010:1117)	• *"Technology-enabled transport systems resulted in both economic and environmental gains […]."* (Bernon &Cullen, 2007:51) • *"[…] execution systems consist of […] transportation management systems […]."* (Olorunniwo & Li, 2010:456)
	Strategic utilisation of LIMS for RL	García-Rodríguez *et al.* (2013:586)	• *"[…] reverse logistics […] through the use of integrated logistics information management system […]."* (Lau & Wang, 2009:459) • *"To dictate the information for market trends of product deliveries and returns […] an*

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
			expert system or knowledge management system may streamline the decision-making process." (Hsu *et al.* 2009:525)
	Strategic utilisation of POS and ordering systems for RL	Hong *et al.* (2008:177)	• *"To optimise the flow of information and merchandise, retailers employ technology such as […] electronic point of sale (EPoS) […]."* (Beh *et al.* 2016:15) • *"[…] information for market trends of product deliveries and returns, mainly extracted from POS […]."* (Hsu *et al.* 2009:525) • *"[…] retailers could track, through their ordering systems, those customers who routinely abuse the system […]."* (Bernon *et al.* 2016:599)
	Strategic implementation of CRM for RL	None	• *"[…] installation of customer relationship management (CRM) packages […] only first movers have installed such packages for reverse logistics."* (Janse *et al.* 2010:501)
	Strategic development, redesign and utilisation of existing APS for RL	None	• *"[…] the development of new design, planning and control of existing […] APS systems, […] have tremendous potential to effectively manage return flows […]."* (Jayaraman *et al.* 2008:427) • *"[…] advanced planning and scheduling (APS) software […] provide a support for […] a reverse logistics network."* (Daaboul *et al.* 2014:7)
	Strategic utilisation of MRP for RL	Lhafiane *et al.* (2015b:397)	• *"MRP […] systems can be used […] for RL […]."* (Biehl *et al.* 2007:466)
Economic requirements	***Investment***	None	• *"Firms […] invest in electronic data interchange (EDI) and point-of-sale (POS) […]."* (Mukhopadhyay & Setaputra, 2011:5329) • *"[…] invested enormously in RL information management technology, these systems include […] enterprise resource planning ERP […]."* (Lhafiane *et al.* 2015b:396)
	Financial obligations and costs	None	• *"EDI […] requiring financial obligations."* (Ravi & Shankar, 2015:890) • *"[…] the cost of launching and operating EDI is high […]."* (Olorunniwo & Li, 2011:5) • *"[…] cost consists of […] ERP operation cost."* (Tsai & Hung, 2009:5404)
Operational requirements	***High transaction volume***	None	• *"EDI […] is viable only in […] which the volume of transaction is very high."* (Olorunniwo & Li, 2011:5)
	Computer hardware	None	• *"A warehouse management system […] requires […] the computer […]."* (De Leeuw *et al.* 2016:723)
Organisational requirements	***Management involvement***	None	• *"Managers need to keep track of shipments and receipts that flow […] Warehouse management software now keeps track of the type of goods […]."* (Jayaraman *et al.* 2008:420) • *"[…] using […] EDI, […] Logistics managers should give top priority to ICT related issues in reverse logistics programs."* (Ravi & Shankar, 2015:890)
	IT staff involvement	None	• *"Computer experts in charge […] attending the related ERP systems."* (Hernández *et al.* 2011:84)
	Staff training	None	• *"EDI […] requiring […], training of manpower on […] requires heavy degree of investment from companies."* (Ravi & Shankar, 2015:885)
	Manual/staff input	None	• *"A warehouse management system […] requires checking something with the hands, and manual data input […]."* (De Leeuw *et al.* 2016:723)
Market-related requirement	***Consumer input***	None	• *"Consumers […] enter data manually and the ERP then recognises that inventory […]."* (Jayaraman *et al.* 2008:419)
Supply chain (SC) requirements	***SC relationships***	None	• *"EDI […] can be interpreted only by the information systems of organizations [sic] which are in some form of relationships […]."* (Olorunniwo & Li, 2011:5)
	TLIT suppliers	None	• *"ERP suppliers indicated […] increasing use of installed base management […]."* (Janse *et al.* 2010:503)

Source: Compiled by the researcher

Table 6.4 indicates that TLIT practices involve several strategies and requirements, which will be discussed in subsequent sections.

6.3.3.1.1 Strategies of TLIT practices in RL

TLIT practices in RL involve several strategies, including (1) prioritising TLIT, (2) strategic integration and customisation of TLIT systems, (3) strategic integration and customisation of TLIT and other IT, (4) strategic development, implementation and utilisation of an electronic data interchange (EDI) for RL, (5) strategic development, redesign and utilisation of an existing enterprise resource planning (ERP) system for RL, (6) strategic development, customisation and utilisation of a

warehouse management system (WMS) for RL, (7) strategic utilisation of a transport management system (TMS) for RL, (8) strategic utilisation of logistics information management systems (LIMS) for RL, (9) strategic utilisation of point-of-sale (POS) and ordering systems for RL, (10) strategic implementation of a customer relationship management (CRM) system for RL, (11) strategic development, redesign and utilisation of an existing advanced planning and scheduling (APS) system for RL, and (12) strategic utilisation of materials requirement planning (MRP) system for RL.

Like general IT (section 6.3.1), TLIT can be *prioritised* for RL, which means that organisations can choose to prioritise the development and use TLIT systems for managing consumer returns. Additionally, organisations can *strategically integrate* and *combine* different *TLIT* systems, for example, integrating ERP with TMS and combining EDI with inventory management and POS for RL. Similarly, organisations can *strategically integrate* and *combine TLIT with other IT*, like an Internet-based ERP or EDI and integrating ERP or WMS and RFID, implying that TLIT alone may lack the capability to manage consumer returns.

Nevertheless, organisations can develop, redesign and use several types of TLIT for RL. For instance, organisations can *strategically develop, implement* and *utilise EDI* for RL information sharing and management. Similarly, organisations can *strategically develop, redesign* and *utilise existing ERP* to support and manage RL processes. Furthermore, organisations can *strategically develop, customise* and *use* execution systems like traditional *WMS* and *TMS* for RL processes and activities.

Additionally, *LIMS* can be *strategically utilised* for RL to manage consumer return information and facilitate decision-making. Likewise, traditional retailing IT, like *POS* and *ordering systems*, can be *strategically utilised* for managing consumer returns, emphasising the potential of TLIT practices for the effective management of consumer returns. Additionally, organisations can *strategically implement* consumer-focussed IT like *CRM* solutions for RL, which may assist with consumer integration (CI) practices in RL (see section 6.4.2).

Finally, other traditional logistics planning systems like APS and MRP can be *strategically developed, redesigned* and *utilised* for RL support and management. Consequently, the TLIT strategies mainly involve the identification, development, integration, customisation and utilisation of TLIT systems to manage consumer returns.

6.3.3.1.2 Requirements of TLIT practices in RL

The requirements of TLIT practices in RL include economic, operational, organisational, market-related and SC requirements. The *economic requirements* of TLIT practices involve investment, financial obligation and costs. Particularly, organisations must *invest* in TLIT (such as EDI, ERP and POS) and carry *financial obligations* and *costs* for implementing and operating TLIT for RL.

The *operational requirements* of TLIT include high transaction volume and computer hardware for specific TLIT systems. For instance, a *high transaction volume* can be important to effectively utilise EDI for RL, implying that organisations with lower product return (transaction) volume may need to explore other TLIT for RL. Additionally, organisations need *computer hardware* to effectively operate a WMS for RL, emphasising the investment requirements for TLIT in RL.

The *organisational requirements* of TLIT practices include management involvement, IT staff involvement, staff training and manual/staff input. *Management involvement* can be important for (1) prioritising TLIT (such as EDI) in RL and (2) operating TLIT (such as a WMS) to manage RL processes. Additionally, *IT staff,* like computer experts, can be important for the development, redesign and maintenance of TLIT (such as ERP) for RL, emphasising the costs and financial obligations for TLIT. Likewise, *staff training* requirements for TLIT (such as EDI) demonstrates the importance of investment requirements to effectively utilise TLIT for RL. Furthermore, TLIT, like WMS, requires *manual/staff input,* demonstrating the importance of management and staff involvement in operating TLIT for RL.

Similarly, the *market-related requirement* of *consumer input* can be important for the effective utilisation of TLIT in RL. For instance, consumers must manually enter product return information, like the type of product or order number, on the system (e.g. website electronic return form), which provides the ERP with inventory-related information. The consumer input requirement demonstrates the importance of integrating TLIT with other IT, like an Internet/web-based ERP (see section 6.3.3.1.1).

Finally, the *SC requirements* of TLIT involves SC relationships and TLIT suppliers. Specifically, EDI as a TLIT requires *relationships* between organisations in the *SC,* demonstrating the importance of combining IT practices and SCI practices (see section 6.4.1) in RL. Additionally, ERP as a *TLIT* requires *suppliers,* which may be service providers that develop, redesign and maintain TLIT for organisations to manage consumer returns.

Essentially, the requirements mostly associate with specific TLIT (such as EDI, ERP and WMS), involving financial, infrastructure and human resources, and consumer and SC party relationship requirements for the effective management of consumer returns. In the next section, the outcomes of TLIT practices (strategies and requirements) will be analysed and discussed.

6.3.3.2 Outcomes of TLIT practices in RL

The outcomes of TLIT practices can be described as the results of incorporating the TLIT strategies and requirements for the effective management of consumer returns. The outcomes of TLIT practices in RL include (1) economic, (2) operational (3) organisational (4) environmental, (5) market-related and (6) SC outcomes. Table 6.5 provides an overview of the findings related to the *outcomes of TLIT* to manage consumer returns, including the categories, subcategories, supporting sources for the subcategories and key quotations that support both the subcategories and the discussion of the findings.

Table 6.5 Findings related to outcomes of TLIT practices to manage consumer returns

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
Economic outcomes	***Address economic barriers***	None	• *"Firms tend to use a variety of complex and compound information systems due to […] high switching costs (e.g., employees' limited skills and high training costs, software and hardware investments, possibilities of new installation failure, etc.). The IT types most frequently cited are […] ERP […] EDI […] and warehouse management systems (WMS) […]."* (Olorunniwo & Li, 2011:7) • *"ERP is deployed securely over the web, it […] reduces costly investment in databases."* (Jayaraman *et al.* 2008:418-419)
	Economic benefits	None	• *"Technology-enabled transport systems resulted in […] economic […] gains […]."* (Bernon &Cullen, 2007:51)
	Control RL cost	None	• *"WMS systems […] Control handling costs of returns […]."* (Lhafiane *et al.* 2015b:397)
	Profitability	None	• *"Integration of forward and reverse logistics […] through the use of integrated logistics information management system […] to improve profitability."* (Lau & Wang, 2009:459)
	Reduce asset requirements	None	• *"Implementing the […] Internet-based EDI […] requires fewer asset (infrastructure) specificities than traditional EDI […]."* (Olorunniwo & Li, 2011:5) • *"[…] Internet-based […] ERP […] requires fewer asset (infrastructure) […] than […] traditional ERP."* (Olorunniwo & Li, 2011:5)
Operational outcomes	***Improves forecasting, visibility and tracking***	None	• *"[…] improving data quality for forecasting […] related to […] ERP […]."* (Janse *et al.* 2010:503) • *"[…] MRP or ERP systems can be used to coordinate the processing and flow […] for RL, basic information such as the quantity, location, and expected arrival times […] can be relayed […]."* (Biehl *et al.* 2007:466) • *"Receiving/sending shipment notices, advanced ship notices through EDI […]."* (Cheng & Lee, 2010:1116) • *"[…] critical for success of RL […] companies have started using […] EDI […] for the purpose of tracking and tracing the returned products […]."* (Ravi & Shankar, 2015:885) • *"Managers need to keep track of shipments and receipts that flow into and out of their facility. […] Warehouse management software now keeps track of the type of goods […]."* (Jayaraman *et al.* 2008:420)
	Improve control of product returns	None	• *"To support the return process, […] WMS were extended with proprietary systems to control returns."* (Lhafiane *et al.* 2015b:397)
	Reduce manual operations	None	• *"[…] use the electronic data interchange system (EDI) […] to establish an information sharing platform […] the well configured platform, […] makes reverse logistics remain in the electronic stage […]."* (Shi *et al.* 2012:222)
	Increase RL process speed and efficiency	None	• *"[…] shorten the processing time of RL through the […] use of […] EDI […]."* (Shi *et al.* 2012:228) • *"EDI […] enhances the company's RL operation […]."* (Sharif *et al.* 2012:2522) • *"To optimise the flow of […] merchandise, retailers employ technology such as […] electronic point of sale (EPoS) […]."* (Beh *et al.* 2016:15)

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
	Facilitate and support RL processes and activities	Bernon *et al.* (2011:495)	• *"[…] to support RL […] electronic data interchange, have become more readily available in recent years."* (Huscroft *et al.* 2013a:233) • *"Consumers can now enter data manually and the ERP then recognises that inventory and sends back authorisation and item-specific labels that move the product appropriately from point-to-point in the RL recovery system."* (Jayaraman *et al.* 2008:419) • *"[…] a warehouse management system that validates if products are allowed in the reverse stream."* (De Leeuw *et al.* 2016:720) • *"A warehouse management system can help retailers organize [sic] the handling of product returns […] which requires checking something with the hands, and manual data input in the computer […]."* (De Leeuw *et al.* 2016:723) • *"Warehouse management systems can provide decision making for further recovery options […]."* (Lhafiane *et al.* 2015b:397) • *"MRP/ERP systems Support different recovery options of returns […]."* (Lhafiane *et al.* 2015b:397) • *"To properly reconcile inventory and accommodate various disposition activities, […] ERP must receive notification […] and […] track the disposition of the returned items and coordinate various activities."* (Jayaraman *et al.* 2008:418) • *"The coordination between the activities requires a management information system (MIS) […]."* (García-Rodríguez *et al.* 2013:586)
	Facilitate RL and forward logistics (FL) integration	None	• *"[…] enterprise systems also enable information sharing of forward logistics and reverse logistics […]."* (Shi *et al.* 2012:228) • *"Integration of forward and reverse logistics […] through the use of integrated logistics information management system […]."* (Lau & Wang, 2009:459)
Organisational outcomes	***Successful RL program***	None	• *"[…] for successful reverse logistics programs […] companies have heavily invested in terms of […] EDI […]."* (Ravi & Shankar, 2015:890)
	Enhance and facilitate RLM	Ravi (2014:298)	• *"[…] use technology like […] electronic data interchange (EDI) […] to enhance […] reverse logistics management."* (Vijayan *et al.* 2014:12) • *"[…] development of new design, planning and control of existing ERP and APS systems […] have tremendous potential to effectively manage return flows […]."* (Jayaraman *et al.* 2008:427)
	Facilitate decision-making	None	• *"ERP suppliers indicated to see increasing use of installed base management for strategic decision support at their customers."* (Janse *et al.* 2010:503) • *"Warehouse management systems can provide decision making for further recovery options […]."* (Lhafiane *et al.* 2015b:397) • *"[…] an expert system or knowledge management system may streamline the decision-making process."* (Hsu *et al.* 2009:525) • *"[…] advanced planning and scheduling (APS) software […] provide a support for decision making […]."* (Daaboul *et al.* 2014:7)
	Facilitate information management	None	• *"ERP system can record and provide […] data, the generation of […] data will be faster*." (Tsai & Hung, 2009:5408) • *"[…] warehouse Management (WMS) for returns […] support consistent and updated product data […]."* (Lhafiane *et al.* 2015b:397)
	Facilitate internal information sharing and communication	None	• *"[…] enterprise systems also enable information sharing of forward logistics and RL […]."* (Shi *et al.* 2012:228) • *"Warehouse management software […] provides information to forklift operators […]."* (Jayaraman *et al.* 2008:420) • *"[…] ERP systems are mainly used for […] communication […]."* (Lhafiane *et al.* 2015b:399) • *"[…] ERP is deployed securely over the web, it is available to anyone […]."* (Jayaraman *et al.* 2008:419) • *"To optimise the flow of information […] retailers employ technology such as […] electronic point of sale (EPoS), which transmit information on size, style and colour of products back to the head office."* (Beh *et al.* 2016:15)
	Facilitate cross-functional integration (CFI)	None	• *"ERP is an information system integrating all facets of an organization [sic] on a common database."* (Olorunniwo & Li, 2011:5)
	Facilitate return prevention and avoidance (RPA)	None	• *"[…] use the electronic data interchange system (EDI) […] to establish an information sharing platform […] the well configured platform, […] reduces the actual occurrence of reverse logistics […]."* (Shi *et al.* 2012:222) • *"[…] retailers could track, through their ordering systems, those customers who routinely abuse the system and put in place processes that restrict these practices."* (Bernon *et al.* 2016:599)
	Facilitate facility/ location practices	None	• *"[…] advanced planning and scheduling (APS) software […] provide a support for decision making in designing a reverse logistics network."* (Daaboul *et al.* 2014:7)
Environmental outcomes	***Environmental benefits***	None	• *"Technology-enabled transport systems resulted in […] environmental gains […]."* (Bernon &Cullen, 2007:51)
	Reduce waste	None	• *"[…] through the use of integrated logistics information management system to reduce waste […]."* (Lau & Wang, 2009:459)
	Improve environmental performance	None	• *"[…] use the electronic data interchange system (EDI) […] to establish an information sharing platform […] the well configured platform, […] reduces the actual occurrence of reverse logistics and ultimately accomplishes low-carbon technology improvement of reverse logistics […]."* (Shi *et al.* 2012:222)
Market-related outcomes	***Provide market trend information***	None	• *"[…] information for market trends of product deliveries and returns, mainly extracted from POS […]."* (Hsu *et al.* 2009:525)
	Improve consumer	None	• *"[…] combination of interactive dual direction technologies like point of sale (POS) […] EDI and*

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
	experience		*inventory management systems […] Offering an effective and easy-to-use returns procedure can give consumers the confidence to […] send back any items that fall short of their expectations."* (Hong *et al.* 2008:177)
	Reduce consumer uncertainty	Shi *et al.* (2012:222)	• *"EDI is known to help reduce uncertainty between the customer and supplier"* (Mukhopadhyay & Setaputra, 2011:5329)
	Improve consumer responsiveness	None	• *"EDI forms an interface […] responding to customer pull exerted upon the retailer […]."* (Shakantu *et al.* 2009:83)
	Facilitate consumer information sharing and communication	None	• *"[…] EDI allows better communication with its customers […]."* (Sharif *et al.* 2012:2522) • *"Consumers can now enter data manually and the ERP […] Since the host ERP is deployed securely over the web, it is available to anyone […]."* (Jayaraman *et al.* 2008:419)
SC outcomes	***Facilitate SC innovation***	None	• *"The MIS helps […] the supply chain, encouraging the continuous adaptation of companies, their products and services."* (García-Rodríguez *et al.* 2013:586)
	Successful and efficient reverse SC (RSC)	None	• *"[…] effective combination of interactive dual direction technologies like point of sale (POS) […] EDI and inventory management systems, firms may improve RSC ease of use."* (Hong *et al.* 2008:177) • *"EDI […] was identified as being key to the success of the 'backward supply chain."* (Sharif *et al.* 2012:2522)
	Facilitate SCI and coordination	None	• *"EDI […] allows the proper coordination among supply-chain participants […]."* (Sharif *et al.* 2012:2522) • *"Computer experts in charge […] support the interoperability between the main customer and the […] supplier by attending the related ERP systems."* (Hernández *et al.* 2011:84)
	Improve SC information sharing and communication	Li and Olorunniwo (2008:384)	• *"[…] EDI […] establish an information sharing platform […]."* (Shi *et al.* 2012:222) • *"Since the host ERP is deployed securely over the web, it is available to anyone […]."* (Jayaraman *et al.* 2008:419) • *"[…] MRP or ERP systems […] basic information such as the quantity, location, and expected arrival times […] can be relayed through the reverse supply chain […]."* (Biehl *et al.* 2007:466) • *"Warehouse management systems […] communication […] to other actors involved in RL network […]."* (Lhafiane *et al.* 2015b:397) • *"The MIS helps the communication and information exchange throughout the supply chain."* (García-Rodríguez *et al.* 2013:586)
	Improve SC visibility	None	• *"[…] information sharing with trading partners, use of Electronic Data Interchange (EDI) for rapid data dissemination, supply chain visibility […]."* (Shakantu *et al.* 2009:82)

Source: Compiled by the researcher

Table 6.5 shows that TLIT practices associate with economic, operational, organisational, environmental, market-related and SC outcomes, which will be discussed in subsequent sections.

6.3.3.2.1 Economic outcomes of TLIT practices for RL

The economic outcomes of TLIT practices include addressing economic barriers, economic benefits, controlling costs, profitability and reducing asset requirements. Like Internet and web-based IT (see 6.3.2), TLIT for RL can *address economic barriers* in RL by avoiding high costs, investment and financial risks of developing, implementing and using special/new technologies for RL. Consequently, through the strategic integration/combination of TLIT with other IT (ERP and web-based systems) and utilisation of TLIT (such as EDI, ERP and WMS) for RL, organisations can avoid additional costs and investments for training, software and hardware.

Furthermore, TLIT strategies related to the strategic utilisation of (1) a TMS for RL can bring *economic benefits* (e.g. better route planning can save costs), (2) a WMS for RL can *control RL cost* and, (3) a LIMS can improve *profitability*, which can associate with the operational outcomes of

controlling product returns and integrating RL and FL processes (section 6.3.3.2.2). Finally, through the strategic integration and combination of TLIT with other IT for RL (such as Internet-based ERP or EDI) *asset requirements* can be *reduced,* emphasising a reduction in investment requirements for RL.

Essentially, although TLIT involves investment and cost requirements (see section 6.3.3.1), organisations can avoid higher investments and costs of new or specialised IT for RL, demonstrating the importance of performing a cost-benefit analysis for IT practices in RL.

6.3.3.2.2 Operational outcomes of TLIT practices for RL

The operational outcomes of TLIT include (1) improving forecasting, visibility and tracking, (2) improving control of product returns, (3) reducing manual operations, (4) increasing RL process speed and efficiency, (5) facilitating and support RL processes and activities, and (6) facilitating RL and FL integration. Like general and Internet/web-based IT, organisations can *improve forecasting, visibility* and *tracking* through several TLIT practices. For instance, through the strategic development and utilisation of ERP and/or MRP systems, organisations can improve product return forecasting and enhance visibility. Additionally, through the strategic utilisation of EDI, organisations can enhance product return visibility and improve returned product tracking.

Similarly, through the strategic utilisation of a WMS and management involvement (organisational requirement), organisations can track product returns in and out of the facility. Moreover, utilising a WMS for RL can *improve control* of *product returns,* emphasising the economic outcome of improving control of RL costs (section 6.3.3.2.1). Evidently, TLIT practices can address the operational barriers in RL related to a lack of forecasting and visibility, and product return uncertainties and in RL processes (see section 2.3.2).

Organisations can *reduce manual operations* in RL through the strategic utilisation of EDI for RL by keeping unnecessary manual RL processes (such as return request, gatekeeping and processing) in an electronic format. Consequently, strategically utilising TLIT, like EDI and POS, for RL can *increase RL process speed* and *efficiency.*

Several TLIT practices can *facilitate* and *support RL processes* and *activities,* including the (1) TLIT strategies associated with the strategic utilisation of EDI, ERP, WMS, LIMS and MRP for RL, (2) operational requirement of computer hardware, (3) organisational requirement of staff/manual input, and (4) market-related requirement of consumer input. Particularly, return information input by

consumers and utilising ERP for RL can facilitate return request and gatekeeping (return authorisation) processes in RL. Similarly, utilising a WMS (with a computer and staff/manual input) for RL can help with gatekeeping and product return validation (e.g. the return information from consumer input match the actual condition of the returned product) during inspection/sorting (see section 5.5).

Furthermore, utilising ERP, WMS and MRP systems for RL can facilitate disposition processes and activities through decision-making, product tracking and information support. Moreover, utilising ERP and LIMS for RL can coordinate RL activities and *facilitate RL* and *FL integration*, which demonstrates the role of TLIT in facility and location practices (e.g. combined facilities for RL and FL) (see section 6.8.3).

6.3.3.2.3 Organisational outcomes of TLIT practices for RL

The organisational outcomes of TLIT practices in RL include (1) a successful RL program, (2) enhancing and facilitating RLM, (3) facilitating decision-making, (4) facilitating information management, (5) facilitating internal information sharing and communication, and (6) facilitating CFI, RPA and facility/location practices. Particularly, organisations can establish a *successful RL program* through the strategic utilisation of EDI for RL and investment (economic) requirements. Additionally, *RLM* can be *enhanced* and *facilitated* through the strategic utilisation of EDI and development, redesign and utilisation of ERP and APS for RL, demonstrating the importance of TLIT practices to manage consumer returns.

Several TLIT practices, including the TLIT strategies of utilising ERP, WMS, LIMS and APS for RL and the SC requirement of ERP suppliers, can *facilitate decision-making* in RL. Moreover, utilising ERP and WMS for RL can *facilitate information management* in RL, for example, ERP can record and provide product return data and a WMS can update product return data. Additionally, strategically combining TLIT with other IT (e.g. ERP and web-based systems) and utilising ERP, WMS and POS for RL, can *facilitate internal information sharing* and *communication.* For example, a WMS can communicate the disposition option of the returned product (e.g. return to inventory) to operational staff (in the warehouse), and the POS can communicate information about the returned product to different departments (e.g. head office) in the organisation.

Subsequently, utilising TLIT (such as an ERP) for RL can *facilitate CFI*, establishing a link between TLIT and CFI practices to manage consumer returns. Additionally, the TLIT strategies of utilising EDI and ordering systems for RL can *facilitate* with *RPA practices.* For example, utilising the order

system for RL can help retailers to identify return abusers (e.g. consumers that return products with every order) and implement preventative measures (e.g. closing return abuser accounts) (see section 6.9.3). Finally, strategically utilising APS for RL can *facilitate facility/location practices* related to designing RL networks, confirming the link between TLIT practices and facility/location practices in RL (section 6.3.3.2.2).

6.3.3.2.4 Environmental and market-related outcomes of TLIT practices for RL

Like general IT (section 6.3.1.2), TLIT practices involve *environmental outcomes* that associate with environmental benefits, waste reduction and environmental performance. Specifically, strategically utilising TMS for RL can bring e*nvironmental benefits,* which may associate with reducing return transportation by coordinating FL and RL transportation. Similarly, strategically utilising LIMS for RL enables RL and FL integration, which can *reduce waste.* Lastly, strategically utilising EDI for RL can *improve environmental performance,* which associates with the organisational outcome of facilitating RPA practices by reducing product returns (section 6.3.3.2.3).

The *market-related outcomes* of TLIT practices include (1) providing market trend information, (2) improving consumer experience, (3) reducing consumer uncertainty, (4) improving consumer responsiveness, and (5) facilitating consumer information sharing and communication. Specifically, strategically utilising POS for RL can *provide market trend information,* which may help organisations to achieve other market-related benefits like a competitive advantage and satisfying consumer demands. Additionally, strategically combining TLIT, like POS, EDI and inventory management systems, can *improve consumer experience* through consumer-friendly RL procedures and processes (e.g. easy return request and product return status updates).

Moreover, strategically utilising EDI for RL can *reduce consumer uncertainties* in the RL process and *improve consumer responsiveness,* implying that TLIT for RL may improve consumer service and satisfaction. Finally, TLIT practices, including (1) strategically utilising EDI and ERP, (2) strategically integrating and combining TLIT with other IT (such as a web-based ERP), and (3) consumer return information input (market-related requirement), can *facilitate consumer information sharing* and *communication,* which can contribute to CI practices in RL (see section 6.4.2).

6.3.3.2.5 SC outcomes of TLIT practices for RL

Several SC outcomes associate with TLIT practices in RL, including (1) facilitating SC innovation, (2) successful and efficient RSC, (3) facilitating SCI and SC coordination, (4) improving SC

information sharing and communication, and (5) improving SC visibility. Particularly, strategically utilising TLIT, like LIMS, for RL can help organisations improve products and services in the SC (based on RL information), which in turn can *facilitate SC innovation.*

The TLIT strategies related to combining TLIT (such as ERP and POS) and utilising EDI for RL can ensure a *successful* and *efficient RSC,* demonstrating that all SC parties can benefit from utilising TLIT for RL. Furthermore, TLIT practices, like strategically utilising EDI and ERP for RL (strategies) and allocating IT staff (like computer experts) (organisational requirement), can *facilitate SCI* and *SC coordination,* which reemphasise the important link between IT and SCI practices (also see sections 6.3.1.2 and 6.3.2.2).

Accordingly, *SC information sharing* and *communication* can be *improved* through the TLIT strategies of integrating TLIT with other IT (e.g. web-based ERP) and utilising EDI, ERP, WMS, LIMS and MRP for RL, emphasising the importance of establishing SC relationships for TLIT (SC requirement) (section 6.3.3.1.2). Finally, strategically utilising TLIT, like EDI, for RL can *enhance SC visibility*, which emphasise the operational outcomes of TLIT related to product return forecasting, visibility and tracking (section 6.3.3.2.2).

Essentially, TLIT practices in RL can provide various economic, operational, organisational, environmental, market-related and SC benefits, contributing to the effective RLM of consumer returns. In the next section, a description and conceptual framework of TLIT practices in RL will be presented and analysed.

6.3.3.3 Description and conceptual framework of TLIT practices to manage consumer returns

Based on the findings, presented in section 6.3.3, TLIT practices can be important for the management of consumer returns, and will be described as follows:

> TLIT practices for the management of consumer returns involve (1) TLIT strategies, including prioritising TLIT practices, strategic integration and customisation of TLIT systems, strategic integration and customisation of TLIT and other IT, strategic development, implementation and utilisation of EDI for RL, strategic development, redesign and utilisation of an existing ERP for RL, strategic development, customisation and utilisation of a WMS for RL, strategic utilisation of a TMS, LIMS, POS and ordering systems for RL, strategic implementation of a CRM system for RL, strategic development, redesign and utilisation of an existing APS system for RL, and strategic utilisation of a MRP system for RL, and (2) TLIT requirements, including economic requirements (investment, financial obligation and costs), operational requirements (high transaction volume and computer hardware), organisational requirements (management and IT staff involvement, staff training and staff/manual input), market-related requirement (consumer information input), and SC requirements (SC relationships and TLIT suppliers).
>
> The TLIT strategies and requirements can result in several outcomes, including (1) economic outcomes (address economic barriers, economic benefits, control RL cost, profitability and reduce asset requirements), (2) operational outcomes (improve forecasting, visibility and tracking, improve product return control, reduce manual operations, increase RL process speed and efficiency, facilitate and support RL processes and activities,

and integrate RL and FL), (3) organisational outcomes (successful RL program, enhance and facilitate RLM, facilitate decision-making, information management, and internal information sharing and communication, and facilitate CFI, RPA and facilitate facility/location practices), (4) environmental outcomes (environmental benefits, reduce waste, and improve environmental performance), (5) market-related outcomes (market trend information, improve consumer experience, reduce consumer uncertainty, improve consumer responsiveness and facilitate consumer information sharing and communication), and (6) SC outcomes (facilitate SC innovation, successful and efficient RSC, facilitate SCI and coordination, and improve SC information sharing, communication and visibility).

Figure 6.7 provides a conceptual framework of TLIT practices, which includes the TLIT strategies, requirements and outcomes to manage consumer returns.

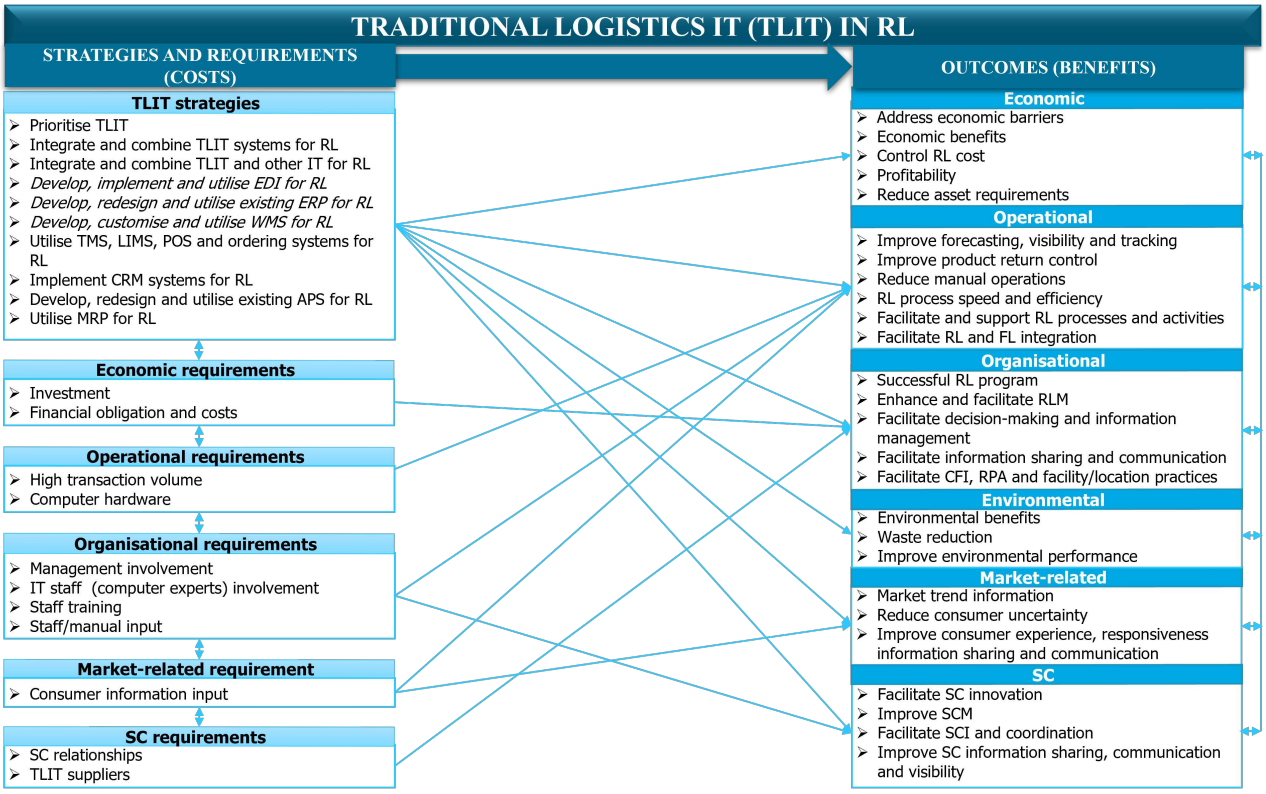


Figure 6.7 Conceptual framework of TLIT practices to manage consumer returns
Source: Compiled by researcher

Figure 6.7 illustrates the links between the strategies, requirements and outcomes of TLIT practices in RL, demonstrating a cost and benefit relationship. For example, the TLIT strategy of utilising a WMS for RL can link with investment and costs (economic requirements), computer hardware (operational requirement) and staff/manual input (organisational requirement). Similarly, the TLIT strategy of developing and utilising ERP for RL can link with consumer information input (market-related requirement) and TLIT (ERP) suppliers (SC requirement).

Regarding the links between the strategies, requirements and outcomes of TLIT, the framework demonstrates that TLIT strategies can be the most significant practice category, linking with all the TLIT outcomes, including economic, operational, organisational, environmental, market-related and

SC outcomes. In contrast, the economic, operational and SC requirements can be the least significant TLIT practice categories, contributing to limited outcomes. Nevertheless, the economic requirements of investment and costs can be important for developing and utilising TLIT for RL, contributing indirectly to all outcome categories.

In terms of the outcomes, operational outcomes can be the most significant outcome category (associated with most of the practice categories), which means that TLIT practices can be the most beneficial for organisations that experience operational challenges or problems in RL. In contrast, the environmental outcomes can be the least significant outcome category (only associated with TLIT strategies), meaning that TLIT practices may be less important for organisations that seek numerous environmental benefits through RL practices.

Finally, the framework shows that the TLIT outcome categories can be linked, for example, improving RL cost control (economic outcome) can link with improving product return control (operational outcome), and integrating RL and FL (operational outcome) can link with facilitating facility/location practices (organisational outcome). Similarly, improving forecasting, visibility and tracking (operational outcomes) can link with reducing consumer uncertainty (market-related outcome) and improving SC visibility (SC outcome).

Essentially, the links between the TLIT strategies, requirements and outcomes demonstrate the importance of a holistic approach to the management of consumer returns, meaning that organisations must carefully consider and analyse the costs (strategies and requirements) and benefits (outcomes) before implementing and using TLIT for the effective management of consumer returns.

In the next section, barcode and RFID as IT practices in RL will be presented and explored.

6.3.4 Barcode and RFID IT practices to manage consumer returns

In this section the use of barcode and radio frequency identification (RFID) information technology (hereafter barcode/RFID IT) to manage consumer returns will be explored. Like general IT practices, barcode/RFID covered 29% of the IT practices discussed in the QCA of RL literature (see Figure 6.4). Barcode/RFID IT practices can be distinguished from other IT practices (Internet/web and TLIT) using labels/tags and scanning/radio devices. However, like other IT practices, the categories associated with barcode/RFID IT practices include strategies, requirements and outcomes, which will be discussed in subsequent sections, and concluded with a description and conceptual framework to manage consumer returns.

6.3.2.1 Strategies and requirements of barcode/RFID IT practices in RL

Barcode and RFID IT practices include barcode/RFID strategies, and barcode/RFID requirements, including economic, operational, organisational, environmental market-related and supply chain requirements. Table 6.6 provides an overview of the findings related to the *strategies* and *requirements* of *barcode/RFID IT practices* to manage consumer returns, including the categories, subcategories, supporting sources for the subcategories and key quotations that support both the subcategories and the discussion of the findings.

Table 6.6 Findings related to the strategies and requirements of barcode/RFID to manage consumer returns

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
Strategies	***Develop an RFID strategy***	None	• *"The RFID strategy helps the players achieve […] coordination […]."* (Nativi & Lee, 2012:376) • *"[…] use of RFID information-sharing strategy […]."* (Nativi & Lee, 2012:373)
	Strategic considerations	Vijayan *et al.* (2014:12)	• *"Issues also have arisen with some products—such as liquids or packages with metal caps—reflecting energy and blocking the RF tag's reading […]."* (Kabir, 2013:97) • *"[…] high value, low volume goods (e.g. high-tech consumer electronics) will benefit more from RFID than those with lower value, high-volume goods (e.g. consumer products) […] the greater […] order fulfillment complexity in the warehouse (e.g. value-added services, product returns), the greater the opportunity to gain benefits from adopting RFID."* (Jayaraman *et al.* 2008:424) • *"[…] implement information technology such as RFID, careful considerations must be taken to understand the complexity […] of the system in order to attain high economic benefits."* (Nativi & Lee, 2012:373) • *"[…] retailers are also more likely to use barcodes […] and radio frequency to enhance their reverse logistics management."* (Jayaraman *et al.* 2008:414) • *"[…] the category identification of pharmaceutical products […] through RFID system […]."* (Kongar *et al.* 2015:53) • *"[…] RFID […] is beginning to deliver significant cost reductions in retailers, automotive, pharmaceutical, and personal computer supply-chain processes."* (Jayaraman *et al.* 2008:418) • *"Cost is a major consideration here, as implementing RFID is not inexpensive."* (Kumar *et al.* 2009:197) • *"[…] for RFID over Barcode. […] must be viewed in light of the acquisition, installation, training, system integration and the maintenance costs of RFID. These costs vary across industries and between specific warehousing environments."* (Jayaraman *et al.* 2008:422) • *"The benefit of using RFID is more pronounced when a distribution channel has to handle customer returns."* (Jayaraman *et al.* 2008:424)
	Perform cost-benefit analyses for barcode/RFID IT	None	• *"[…] the processing costs and labour utilisation rates […] rises for the traditional barcode technology environment. Conversely, […] labour cost, under the RFID setting, was less […] the lower labour utilisation rates suggest that there may be several hidden advantages regarding direct labour requirements for RFID over Barcode. These results, however, must be viewed in light of the acquisition, installation, training, system integration and the maintenance costs of RFID."* (Jayaraman *et al.* 2008:422) • *"The cost of implementing barcode/RFID of information system includes the cost of hardware, software, […] However, long term cost savings would be beneficial for implementation throughout the whole company."* (Lee & Lam, 2012:593)
	Benefit-driven strategy	Nativi and Lee (2012:373)	• *"The use of RFID technology solved some long-standing issues […] allowing cost minimization [sic] while leading to more economically viable solutions."* (Kongar *et al.* 2015:56) • *"[…] the benefits of RFID implementation stemmed from the ability to automatically keep track of the number […] and quantity of such new and returned goods at key areas of the warehouse is of immense value to the warehouse managers."* (Jayaraman *et al.* 2008:420)

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
	Strategic procurement or development of state-of-the-art barcode/RFID IT	Kongar *et al.* (2015:62) Nativi and Lee (2012:372)	• *"[…] successful implementation of reverse logistics operations required procurement of state-of-art technologies available in the market. They gave examples of RFID […]."* (Ravi, 2014:299) • *"State of art technologies for tracking and tracing of products […] for successful reverse logistics […] barcodes […] assume importance in this regard."* (Ravi & Shankar, 2015:890) • *"[…] developing RFID-based applications […]."* (Jayaraman *et al.* 2008:418) • *"[…] sophisticated […] bar-coding, ensured the availability of real-time information systems relating to returned products."* (Bernon & Cullen, 2007:49)
	Strategic combination or integration of barcode, RFID and other IT for RL	Kongar *et al.* (2015:63) Lee and Lam (2012:593) Olorunniwo and Li (2010:457)	• *"Real-time information in Internet […] based on Radio Frequency Identification/Electronic Product Code can achieve real-time monitoring […]."* (Gu & Tagaras, 2014:5155) • *"[…] combining technologies such as barcodes and radio frequency identification (RFID) tags that enable the company to be more responsive […]."* (Sharif *et al.* 2012:2522) • *"[…] use customized [sic] solution integrating with ERP and RFID."* (Li & Olorunniwo, 2008:384) • *"[…] any legacy system (e.g., warehouse management system) working behind the scene will get that query and process it and gives the result back to the RFID […]."* (Han *et al.* 2010:1079)
	Strategic development and utilisation of an IT infrastructure	None	• *"[…] RFID […] infrastructure requires the supply chain wide implementation […]."* (Kongar *et al.* 2015:62) • *"RFID-based IT infrastructure which would provide […] tracking and tracing […] throughout the RL operations."* (Kongar *et al.* 2015:63)
	Strategic development of a database/data matrix	Kumar *et al.* (2009:196)	• *"IT database—using automated identification through RFID […]."* (Kongar *et al.* 2015:62) • *"[…] create a database of returned products […] an RFID system to speed up the scanning […]."* (Hsu *et al.* 2009:523) • *"One of the advances […] in creating an efficient network is data matrix; a 2D matrix barcode […]."* (Kongar *et al.* 2015:53)
	Strategic creation, installation and utilisation of labels/tags	Barker and Zabinsky (2008:253) Beh *et al.* (2016:16) Han *et al.* (2010:1077) Kabir (2013:97) Kinobe *et al.* 2015:91) Selvi and Kayar (2016:18)	• *"Bar-coded labels were attached to the product […]."* (Bernon & Cullen, 2007:49) • *"A typical RFID system consists of tags […]."* (Sasikumar & Kannan, 2008b:243) • *"[…] RFID […] tagging each inventory item […]."* (Jayaraman *et al.* 2008:414) • *"[…] the use of RFID tags […] help […] return channels."* (Jayaraman *et al.* 2008:424)
	Strategic installation and utilisation of scanners/readers and computer hardware	Kongar *et al.* (2015:60) Li and Olorunniwo (2008:384) Olorunniwo and Li (2011:5)	• *"[…] in technology enabled scanning […] Bar-coded labels […]."* (Bernon & Cullen, 2007:49) • *"RFID readers can also now be mounted on the forklift vehicle […]."* (Jayaraman *et al.* 2008:420) • *"[…] barcode/RFID of information system includes […] hardware [...]."* (Lee & Lam, 2012:593) • *A typical RFID system consists of […] computing hardware and middleware."* (Sasikumar & Kannan, 2008b:243) • *"The RFID readers will proper identify the total amount of inventory […]."* (Nativi & Lee, 2012:374)
	Strategic utilisation of software for barcode/RFID IT	Jayaraman *et al.* (2008:414)	• *"[…] barcode/RFID of information system includes […] software [.]."* (Lee & Lam, 2012:593)
	Strategic implementation and utilisation of barcode/RFID IT for RL	Beh *et al.* (2016:15) Kumar *et al.* (2009:196) Kongar *et al.* (2015:56) Narayana *et al.* (2014:394) Ravi and Shankar (2015:890)	• *"[…] implementing barcode/RFID […] long term cost savings would be beneficial for implementation throughout the whole company."* (Lee & Lam, 2012:593) • *"Benefits from RFID implementation were identified […]."* (Jayaraman *et al.* 2008:420) • *"[…] retailers are also more likely to use barcodes […] and radio frequency to enhance their reverse logistics management."* (Jayaraman *et al.* 2008:414) • *"[…] RFID technology was used to count the quantities of the returned items […]."* (Dowlatshahi, 2012:1267)
Economic requirements	***Investment***	Badenhorst (2013:4)	• *"[…] investments in context of RL for barcodes […]."* (Ravi & Shankar, 2015:885) • *"[…] RFID […] requiring […] heavy degree of investment from companies."* (Ravi & Shankar, 2015:885)
	Cost and financial obligations	None	• *"RFID-based solution […] the initial costs would include the cost of setting up the infrastructure […]."* (Jayaraman *et al.* 2008:414) • *"[…] costs can include RFID readers, […] software […] cost of training the workers […] operating costs […] The operating costs would include (i) the cost of the RFID tag itself (ii) the cost of tagging each inventory item and (iii) the cost of maintaining the RFID readers, and the software upgrades."* (Jayaraman *et al.* 2008:414) • *"[…] acquisition, installation, training, system integration and the maintenance costs of RFID."* (Jayaraman *et al.* 2008:422) • *"[…] processing costs […] rises for the traditional barcode IT […]."* (Jayaraman *et al.* 2008:422) • *"The cost of implementing barcode/RFID of information system includes the cost of hardware, software, consultancy service and training."* (Lee & Lam, 2012:593) • *"[…] barcodes […] RFID […] are some of the technologies which could be used requiring*

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
			financial obligations." (Ravi & Shankar, 2015:885)
Operational and infrastructure requirements	***Facilities, equipment and network structures***	Narayana *et al.* (2014:394) Nativi and Lee (2012:367, 371)	• *"[…] RFID readers placed at inspection centers [sic]; the related data is retrieved […]."* (Kongar *et al.* 2015:60) • *"[…] remote readers can be installed at fixed points in the warehouse to keep track of inventory […] that will be affected by RFID […]."* (Jayaraman *et al.* 2008:420) • *"The RFID technology was used to count the quantities of the returned items in the collection centres. The RFID signals were then transferred to a central processing centre."* (Dowlatshahi, 2012:1267) • *"RFID requires an interface environment and network structure […]."* (Kongar *et al.* 2015:57)
Organisational requirements	***Organisation wide implementation***	None	• *"The cost of implementing barcode/RFID of information system […] would be beneficial for implementation throughout the whole company."* (Lee & Lam, 2012:593)
	Management involvement	None	• *"Managers need to keep track of shipments and receipts […] to minimise any error in this process, remote readers can be installed at fixed points in the warehouse to keep track of inventory […] that will be affected by RFID […]."* (Jayaraman *et al.* 2008:420) • *"[…] benefits of RFID implementation […] at key areas of the warehouse is of immense value to the warehouse managers."* (Jayaraman *et al.* 2008:420)
	Staff involvement and compliance	None	• *"[…] labour utilisation […] rises for the traditional barcode IT […]."* (Jayaraman *et al.* 2008:422) • *"[…] from customer returns is the need for personnel at the warehouse to check the number of cases in the shipment against what appears in the documentation. This is now typically done by scanning the barcode labels on the cases. After the implementation of RFID, tags will be affixed to cases […] Checking at the receiving dock will then be done by readers installed around the entrance that can automatically scan the RFID tags"* (Jayaraman *et al.* 2008:420) • *"RFID […] was reliant on staff compliance […]."* (Breen, 2006:544)
	Staff training	Jayaraman *et al.* (2008:414) Lee and Lam (2012:593)	• *"[…] barcodes […] RFID […] requiring […] training of manpower on these technologies […]."* (Ravi & Shankar, 2015:885)
SC requirements	***SC wide implementation***	Barker and Zabinsky (2008:253) Nativi and Lee (2012:367)	• *"[…] RFID […] infrastructure requires the supply chain wide implementation […]."* (Kongar *et al.* 2015:62) • *"If each company had their own RFID system, it would be very cumbersome and inefficient for the players downstream. If […] partner to implement RFID on a single system, this would benefit all."* (Kumar *et al.* 2009:199)
	SC collaboration	Kongar *et al.* (2015:57)	• *"[…] to be most effective in the use of RFID, all players in the supply chain must work collaboratively […]."* (Kumar *et al.* 2009:197)
	Software suppliers and consultants	None	• *A third-party software supplier […] with more sophisticated […] bar-coding […]."* (Bernon & Cullen, 2007:49) • *"[…] implementing barcode/RFID […] includes the cost of […] consultancy service […]."* (Lee & Lam, 2012:593)

Source: Compiled by the researcher

Table 6.6 shows that barcode/RFID IT practices include several strategies and requirements, which will be discussed in subsequent sections.

6.3.2.1.1 Strategies of barcode/RFID IT practices in RL

The barcode/RFID IT practices in RL involve several strategies, including (1) developing an RFID strategy, (2) strategic considerations for barcode/RFID IT, (3) performing cost-benefit analyses for barcode/RFID IT, (4) benefit-driven strategies, (5) strategic procurement or development of state-of-the-art barcode/RFID IT, (6) strategic combination of barcode, RFID and other IT for RL, (7) strategic development of an IT infrastructure, (8) strategic development of a database or data matrix, (9) strategic creation, installation and utilisation of labels and tags, (10) strategic installation and utilisation of scanner/readers and computer hardware, (11) strategic utilisation of software for barcode/RFID IT, and (12) strategic implementation and utilisation of barcode/RFID IT for RL.

Unique to barcode/RFID IT, organisations must start with the *development of an RFID strategy* that focus on SC integration (SCI) and information sharing internally and externally. Consequently, RFID must benefit the organisation and the RSC to manage consumer returns effectively. Nevertheless, several *strategic considerations* can be important for efficient and effective use barcode/RFID IT for RL. Specifically, organisations must consider the types of products, order and IT complexity, business and industry types, return volume, type of returns, and costs before implementing barcode/RFID IT for RL. In terms of the *types of products*, organisations must consider the packaging and characteristics of the products (like metals and liquids), which may interrupt/block RFID reading and signals. Additionally, higher value products (e.g. high-tech computers, TVs, and appliances) may be more suitable for RFID than lower value products (e.g. clothing and consumables), which may be more suitable for barcode IT. Furthermore, RFID may be more suitable for complex *orders*, which may result in more complex returns. Moreover, organisations must recognise and understand the *complexity* of RFID IT since appropriate implementation and utilisation of RFID may require skilled staff, suitable space, and appropriate equipment and infrastructure (see section 6.3.2.1.2).

In terms of the *business* and *industry types*, retailers generally use barcode and RFID IT, and pharmaceutical, automotive and high-tech industries generally use RFID IT, emphasising the appropriateness of using RFID for higher valued products. Additionally, RFID IT may be more beneficial for lower *return volumes*, which can relate to the product/industry type, for example, higher valued products (such as a new model car) associate with better quality that lowers the likelihood of returns. Nevertheless, organisations must consider the types of returns since barcode/RFID IT may be more beneficial for consumer returns, emphasising that retailers can benefit the most from using barcode/RFID IT. Finally, organisations must consider the *costs* of barcode/RFID IT since purchasing, implementation and utilisation costs can be high (see section 6.3.2.1.2).

Accordingly, organisations must *perform cost-benefit analyses* for barcode/RFID IT, which can include trade-offs between (or comparison of) barcode and RFID IT and cost-benefit trade-offs for utilising barcode/RFID IT in RL. For instance, barcode IT involves higher processing costs and labour requirements/costs than RFID, which means that RFID may be more beneficial for the efficiency of RL processes (speed with fewer human error) than barcode IT. Additionally, organisations must compare the overall costs/expenses and potential long-term benefits of barcode/RFID IT for RL, emphasising the importance of strategically considering barcode/RFID costs and understanding the complexity and appropriateness of barcode/RFID IT. Evidently,

organisations need to develop a *benefit-driven strategy* for barcode/RFID IT, focusing on the long-term benefits and the value of implementing barcode/RFID IT to manage consumer returns.

Based on the considerations and cost-benefit analyses of barcode/RFID IT, organisations can *strategically procure* or *develop state-of-the-art barcode/RFID IT* for RL. Additionally, organisations may choose to *strategically combine* or *integrate barcode, RFID* and *other IT,* for example, Internet and RFID, barcode IT with RFID tags, and TLIT (e.g. ERP and WMS) and RFID.

However, organisations must *strategically develop* and *utilise* an *IT infrastructure,* and a *database / data matrix* to effectively utilise barcode/RFID IT in RL. Furthermore, barcode/RFID IT uniquely requires *strategic creation, installation* and *utilisation* of *labels/tags,* and *strategic installation* and *utilisation* of *scanners/readers, computer hardware* and special *software.* For example, organisations must create and attach barcode labels to products, use barcode scanners to read the barcoded labels and use relevant computer hardware and software for information input, storing, processing, managing and output for effective utilisation of barcode IT.

Similarly, for RFID IT, organisations must attach tags to products/packages, install RFID readers at strategic locations in the facility and/or on equipment to read the RFID tags, and utilise RFID software to process information. Essentially, organisations can *strategically implement* and *utilise barcode/RFID* IT for RL after developing barcode/RFID strategies, considering factors that can impact the use of barcode/RFID in RL, performing a cost-benefit analysis, procuring or developing barcode/RFID IT, establishing an IT infrastructure and databases, and installing labels/tags, scanners/readers, and computer hardware and software.

6.3.2.1.2 Requirements of barcode/RFID IT in RL

Relating to the strategies of barcode/RFID IT, several requirements, including economic, operational infrastructure, organisational and SC requirements, associate with barcode/RFID IT practices in RL. Specifically, the *economic requirements* of barcode/RFID IT include investments, costs and financial obligations, which relate to the strategic considerations of costs, cost-benefit analysis, development of an IT infrastructure, and procurement, development, implementation and utilisation of barcode/RFID IT (section 6.3.2.1.1).

Evidently, organisations need to *invest* in an IT infrastructure, and in the procurement, development and installation of barcode/RFID labels/tags, scanners/readers, computer hardware and software, which involve several costs and expenses. For example, organisations must fulfil *financial*

obligations and incur purchasing (acquisition) costs, processing and labour costs (especially for barcodes), tagging/labelling costs, maintenance costs, computer hardware and software costs (including costs of upgrades), training costs and consultancy *costs* for barcode/RFID.

The *operational* and *infrastructure requirements* of barcode/RFID IT include *facilities, equipment* and *network structures*. For instance, the installation of RFID readers requires dedicated areas in a facility and handling equipment (e.g. forklifts), which emphasise the strategic considerations related to the cost and complexity of RFID and strategic installation of readers/scanner (section 6.3.2.1.1). Additionally, facilities and network structures can be important for utilising barcode/RFID IT in RL and sharing product return across facilities/locations, emphasising the development of an RFID strategy that focuses on internal and external information sharing. Consequently, facility/location practices in RL (see section 6.8) can be important for the effective utilisation of barcode/RFID IT to manage consumer returns.

The *organisational requirements* of barcode/RFID IT practices include organisation-wide implementation, management involvement, and staff involvement, compliance and training. *Organisation-wide implementation* of barcode/RFID IT can be important for realising optimum benefits and justifying high costs of procuring, installing, using and maintaining barcode/RFID IT, which emphasises the strategic importance of performing a cost-benefit analysis and developing benefit-driven strategies for barcode/RFID IT in RL (see section 6.3.2.1.1). Additionally, *management involvement* can be important for the effective implementation and utilisation of barcode/RFID IT, and for realising the outcomes/benefits of barcode/RFID IT practices to manage consumer returns.

On the one hand, *staff involvement* can be important for utilising barcode IT in RL processes, for example, staff scanning barcode labels of returned products in the receiving area. On the other hand, *staff compliance* can be important for implementing and utilising RFID IT for RL processes, for example, staff accepting the adoption and use of RFID readers, in the receiving area, instead of manual scanning devices used with barcode IT. Evidently, staff involvement versus staff compliance emphasises the importance of performing a cost-benefit analysis, comparing the costs of higher labour utilisation for barcode IT with the benefits of lower labour requirements for RFID IT, while paying attention to the total costs of procuring, implementing and utilising barcode and RFID (see section 6.3.2.1.1). Nevertheless, both barcode and RFID IT requires *staff training,* which not only emphasises the staff involvement of barcode IT and complexity of RFID (strategic consideration) but also the training cost requirements of barcode/RFID IT in RL.

Barcode/RFID IT involve several *SC requirements*, including SC-wide implementation, SC collaboration, and software suppliers and consultants. Particularly, RFID in RL requires *SC-wide implementation*, which means that SC parties must utilise the same IT infrastructure and collectively implement and utilise a single RFID IT, emphasising the development of an RFID strategy that focuses on SCI (section 6.3.2.1.1). Consequently, RFID requires *SC collaboration*, indicating that a lack of SCI (SC barrier) in RL (see section 2.3.4) can hamper the effectiveness of RFID to manage consumer returns. Finally, barcode/RFID requires *software providers* and *consultants*, which emphasise the strategic importance of utilising appropriate software for barcode/RFID, the complexity of RFID (strategic consideration) and cost requirements (e.g. training and consultancy fees) of barcode/RFID.

Essentially, barcode/RFID practices in RL represent a strong association between the barcode/RFID strategies and barcode/RFID requirements, which can contribute to several outcomes discussed in the next section.

6.3.2.2 Outcomes of barcode/RFID IT practices in RL

The outcomes of barcode/RFID IT practices can be described as the benefits of incorporating barcode/RFID strategies and requirements to manage consumer returns. The outcomes of barcode/RFID practices in RL include (1) economic, (2) operational (3) organisational (4) environmental, (5) market-related and (6) SC outcomes. Table 6.7 provides an overview of the findings related to the *outcomes of barcode/RFID IT* to manage consumer returns, including the categories, subcategories, supporting sources for the subcategories and key quotations that support both the subcategories and the discussion of the findings.

Table 6.7 Findings related to the outcomes of barcode/RFID IT practices to manage consumer returns

CATEGORY	SUB-CATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
Economic outcomes	***Address economic barriers***	None	• *"Firms tend to use a variety of complex and compound information systems due to […] high switching costs (e.g., employees' limited skills and high training costs, software and hardware investments, possibilities of new installation failure, etc.). The IT types most frequently cited are […] bar code […] systems […]."* (Olorunniwo & Li, 2011:7) • *"With the wide adoption of RFID technology and technological advancements, cost […] -related challenges are expected to be overcome soon."* (Kongar *et al.* 2015:63)
	Economic benefits and performance	None	• *"The RFID strategy helps the players achieve higher volumes […] volume increase and coordination will thereby increase overall economic performances."* (Nativi & Lee, 2012:376) • *"[…] implement information technology such as RFID, careful considerations must be taken to understand the complexity […] of the system in order to attain high economic benefits."* (Nativi & Lee, 2012:373) • *"The use of RFID technology solved some long-standing issues […] allowing cost minimization [sic] while leading to more economically viable solutions."* (Kongar *et al.* 2015:56) • *"RFID […] provide a high impact on the economic performance […]."* (Nativi & Lee, 2012:374)
	Cost effective	None	• *"By investing in wireless technology for the reverse logistics process, such as radio frequency identification technology (RFID), an organisation can handle its reverse flow more cost-effectively."* (Badenhorst, 2013:4)

CATEGORY	SUB-CATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
	Reduce costs	None	• *"The RFID strategy helps […] lower holding costs […]."* (Nativi & Lee, 2012:376) • *"[…] RFID […] is beginning to deliver significant cost reductions in retailers, automotive, pharmaceutical, and personal computer supply-chain processes."* (Jayaraman *et al.* 2008:418) • *"[…] implementing barcode/RFID […] includes the cost of hardware, software, consultancy service and training. However, long term cost savings would be beneficial for implementation throughout the whole company."* (Lee & Lam, 2012:593) • *"The RFID readers will proper identify the total amount of inventory; therefore, reducing […] inventory cost."* (Nativi & Lee, 2012:374) • *"RFID/barcode information system can […] reduce excess inventory and holding cost […]."* (Lee & Lam, 2012:593) • *"[…] RFID technology can also help […] accurate inventory information decreases the overall costs by facilitating the internal activities of diverse supply chain members involved in the reverse logistics process […]."* (Kongar *et al.* 2015:62)
Operational outcomes	***Address IT barriers in RL***	None	• *"A third-party software supplier […] with more sophisticated […] bar-coding, ensured the availability of real-time information systems relating to returned products*." (Bernon & Cullen, 2007:49)
	Improve forecasting and visibility of product returns	None	• *"[…] RFID real time data can be obtained, which […] also helps to […] forecast the demand."* (Kumar *et al.* 2009:196) • *"Similar to 2D data matrix barcodes, RFID tags provide a real-time data visibility […]."* (Kongar *et al.* 2015:53) • *"RFID technology installed in their warehouses […] RFID tags are placed in the inventories (e.g., pallets) and RFID readers are located in the warehouses […] the players will have enhanced ''visibility'' […] since they will monitor continuously their inventory levels in real-time."* (Nativi & Lee, 2012:371)
	Facilitate identification, tracking and tracing of product returns	Barker and Zabinsky (2008:253) Kinobe *et al.* (2015:91) Narayana *et al.* (2014:394)	• *"The cost of implementing barcode/RFID […] includes the cost of hardware, software, consultancy service and training. However, long term cost savings would be beneficial for implementation throughout the whole company […] to track the movement of goods for the whole supply chain […]."* (Lee & Lam, 2012:593) • *"[…] combining technologies such as barcodes […] tracking […] of goods in transit or within warehouse […]."* (Sharif *et al.* 2012:2522) • *"RFID-based IT infrastructure […] provide […] visibility by tracking and tracing […] products at item-level throughout the RL operations."* (Kongar *et al.* 2015:63) • *"[…] attaching a two-dimensional bar code or other device that uniquely identifies a unit of the product so it can be tracked […]."* (Kabir, 2013:97) • *"RFID tags are […] the most efficient way to uniquely identify products […]."* (Han *et al.* 2010:1077) • *"RFID readers can also now be mounted on the forklift vehicle to help workers to rapidly locate goods […] with less effort."* (Jayaraman *et al.* 2008:418) • *"[…] using barcodes […] for the purpose of tracking and tracing the returned products."* (Ravi & Shankar, 2015:890) • *"RFID-based solution for tracking inventory is implemented, the initial costs would include the cost of setting up the infrastructure for reading the RFID tags."* (Jayaraman *et al.* 2008:414) • *"Managers need to keep track of shipments and receipts […] to minimise any error in this process, remote readers can be installed […] to keep track of inventory […] by RFID […]."* (Jayaraman *et al.* 2008:420)
	Facilitate and support RL processes and activities	Barker and Zabinsk (2008:253)	• *"Commercial technologies that may be used to support RL, such as radiofrequency identification […]."* (Huscroft *et al.* 2013a:233) • *"[…] designated collection points can be handled with […] RFID […]."* (Kongar *et al.* 2015:53) • *"[…] the receiving dock when shipments arrive from […] customer returns is the need for personnel at the warehouse to check the number of cases in the shipment against what appears in the documentation. This is […] done by scanning the barcode labels on the cases. After the implementation of RFID, tags will be affixed to cases […] Checking at the receiving dock will then be done by readers […] that can automatically scan the RFID tags."* (Jayaraman *et al.* 2008:419-420) • *"[…] developing RFID-based applications that use a reader to 'lock' the tag at the checkout […] If the item is eventually returned, then the tag can be used to determine the product's validity. The use of RFID to validate the item […]."* (Jayaraman *et al.* 2008:418) • *"The benefit of using RFID […] to handle customer returns. Returned products have to be inspected, verified for customer credit, refurbished […] and then returned to the supply chain to satisfy future demands."* (Jayaraman *et al.* 2008:424) • *"To streamline the sorting process and create a database of returned products […] an RFID system to speed up the scanning […]."* (Hsu *et al.* 2009:523) • *"RFID-based IT system would eliminate over- or under-credit of these returns by creating an automated credit system."* (Kongar *et al.* 2015:62) • *"[…] a simple scan of RFID tag […] is especially significant in many reverse-logistics activities such as repair, refurbish, and recycling […]."* (Han *et al.* 2010:1080)
	Improve RL process speed and efficiency	Beh *et al.* (2016:16) Hsu *et al.* (2009:523) Shi *et al.* (2012:228)	• *"IT database—using automated identification through RFID […] shortens the completion time of the RL operations."* (Kongar *et al.* 2015:62) • *"[…] reverse logistics […] processes, labelling [sic], barcoding, […] increases the efficiency of warehouse activities."* (Selvi & Kayar, 2016:18)
	Reduce manual operations and operational	None	• *"[…] under the RFID setting, […] the lower labour utilisation rates suggest that there may be several hidden advantages regarding direct labour requirements for RFID over Barcode. These results, however, must be viewed in light of the acquisition, installation, training, system integration and the*

CATEGORY	SUB-CATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
	errors		*maintenance costs of RFID. These costs vary across industries and between specific warehousing environments."* (Jayaraman *et al.* 2008:422) • *"Managers need to keep track of shipments and receipts […] to minimise any error in this process, remote readers can be installed [..] to keep track of inventory […] by RFID […]."* (Jayaraman *et al.* 2008:420).
	Facilitate operations management	None	• *"RFID system […] to manage all operations with increased visibility."* (Kongar *et al.* 2015:56) • *"IT database […] via RFID […] providing reliable information required for […] warehouse management […]."* (Kongar *et al.* 2015:57)
	Improve inventory management and control	Dowlatshahi (2012:1267) Sharif *et al.* (2012:2522) Toyasaki *et al.* (2013:1224)	• *"Real-time information in Internet […] based on Radio Frequency Identification/Electronic Product Code can achieve real-time monitoring […]."* (Gu & Tagaras, 2014:5155) • *"IT database […] via RFID […] providing reliable information required for inventory management […]."* (Kongar *et al.* 2015:57) • *"RFID technology installed in their warehouses. This means that RFID tags are placed in the inventories (e.g., pallets) and RFID readers are located in the warehouses […] the players will […] monitor continuously their inventory levels in real-time […]."* (Nativi & Lee, 2012:371) • *"[…] the benefits of RFID implementation stemmed from […] tracking the […] quantity of […] returned goods at key areas of the warehouse is of immense value to the warehouse managers."* (Jayaraman *et al.* 2008:420) • *"[…] use bar-code or RFID […] to improve […] inventory management […]."* (Lee & Lam, 2012:593) • *"RFID is […] a method of inventory control […]."* (Kumar *et al.* 2009:192)
Organisational outcomes	***Facilitate RL development and implementation***	None	• *"The use of RFID technology solved some long-standing issues that hinder the development of reverse logistics […]."* (Kongar *et al.* 2015:56) • *"[…] successful implementation of reverse logistics operations required procurement of state-of-art technologies […] of RFID […]."* (Ravi, 2014:299)
	Successful RL programs	None	• *"State of art technologies for tracking and tracing of products being returned are necessary for successful reverse logistics programs […] barcodes […] assume importance in this regard."* (Ravi & Shankar, 2015:890)
	Enhance RL performance	None	• *"[…] RFID-based IT infrastructure […] improve […] the overall performance of the RL system."* (Kongar *et al.* 2015:63)
	Enhance RLM	Kongar *et al.* (2015:56)	• *"[…] use technology like […] radio frequency identification (RFID) technology to enhance their reverse logistics management."* (Vijayan *et al.* 2014:12) • *"[…] retailers are also more likely to use barcodes […] and radio frequency to enhance their reverse logistics management."* (Jayaraman *et al.* 2008:414)
	Improve information management	Narayana *et al.* (2014:394)	• *"[…] use bar-code or RFID and information system to improve information management […]."* (Lee & Lam, 2012:593) • *"[…] any information regardless of its characteristics […] can be delivered by a simple scan of RFID tag […] is especially significant in many reverse-logistics activities […] since it is critical to have that consistent master data available from the beginning to the end of product life cycle."* (Han *et al.* 2010:1080) • *"[…] RFID readers placed at inspection centers [sic], the related data is retrieved and recorded into the system."* (Kongar *et al.* 2015:60) • *"Networked RFID systems […] providing complete information about the product's life cycle […]."* (Jayaraman *et al.* 2008:419)
	Facilitate internal information sharing	None	• *"To optimise the flow of information […] technology such as barcodes […] which transmit information […] back to the head office."* (Beh *et al.* 2016:15) • *"RFID technology […] enhanced information sharing among decision-makers."* (Nativi & Lee, 2012:367) • *"[…] any information regardless of its characteristics […] can be delivered by a simple scan of RFID tag […]."* (Han *et al.* 2010:1080)
	Facilitate PM and RPA practices	None	• *"RFID process […] also measure returns over time to ensure continual improvements […]."* (Kumar *et al.* 2009:197) • *"The RFID technology could also be used to effectively protect against the return of counterfeit items […]."* (Jayaraman *et al.* 2008:418)
	Facilitate facility/location practices	Dowlatshahi (2012:1267)	• *"[…] reduce the complexity of the reverse logistics systems and manage the network effectively […] One of the advances that can aid in creating an efficient network is data matrix; a 2D matrix barcode […]."* (Kongar *et al.* 2015:53) • *"The use of RFID technology solved some long-standing issues […] such as: the choice of location for returned products […]."* (Kongar *et al.* 2015:56)
Environmental outcome	***Environmental benefits***	None	• *"[…] the use of RFID information-sharing strategy, the system can be more robust to attain higher environmental benefit […]."* (Nativi & Lee, 2012:373) • *"[…] economic benefits, cost is reduced in the RFID scenario, but the percentage of change was not as high as the environmental benefit […]."* (Nativi & Lee, 2012:367)
Market-related outcomes	***Competitive advantage***	None	• *"RFID technology provides […] competitive advantages […]."* (Nativi & Lee, 2012:367)
	Meet demand/ increase responsiveness	Kongar *et al.* (2015:62)	• *"[…] combining technologies such as barcodes and radio frequency identification (RFID) tags that enable the company to be more responsive and to meet customer requirements […]."* (Sharif *et al.* 2012:2522)
	Improve consumer experience	None	• *"[…] developing RFID-based applications that use a reader to 'lock' the tag at the checkout […] can be used to determine the product's validity. The use of RFID to validate the item thus removes the proof-of-purchase from the customer's hands […]."* (Jayaraman *et al.* 2008:414)

CATEGORY	SUB-CATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
	Improve customer service	None	• *"RFID/barcode information system can […] provide better service level for the customers."* (Lee & Lam, 2012:593) • *"[…] RFID technology can also help to improve inventory accuracy […] and provides better demand forecasting that boosts customer service levels."* (Kongar *et al.* 2015:62)
SC outcomes	***Improve (R)SCM***	Nativi and Lee (2012:367)	• *"RFID systems that are common throughout the supply chain, […], maintaining focus on the control of improvement strategies […] in the reverse supply chain."* (Kumar *et al.* 2009:200) • *"[…] for direct integration with RFID-based supply chain management."* (Han *et al.* 2010:1077) • *"RFID […] as an enabling technology that can improve […] supply-chain operations."* (Jayaraman *et al.* 2008:419)
	Facilitate SCI, coordination and collaboration	Kumar *et al.* (2009: 197)	• *"The RFID strategy helps the players achieve […] coordination will thereby increase overall economic performances."* (Nativi & Lee, 2012:376) • *"RFID-tagged goods […] enhance the visibility of returned products […] allowing their integration […] for web-based collaboration […] between supply chain participants."* (Jayaraman *et al.* 2008:424) • *"RFID technology and information sharing helps entities coordinate the system."* (Nativi & Lee, 2012:372) • *"Networked RFID systems help connect […] all networked partners."* (Jayaraman *et al.* 2008:419)
	Improve SC information sharing and communication	None	• *"[…] the RFID strategy is a technology that can offer […] information sharing among players […]."* (Nativi & Lee, 2012:373) • *"[…] RFID-based IT infrastructure […] improve […] the communication between supply chain members […]."* (Kongar *et al.* 2015:63) • *"The RFID reader detects the signals retrieved from multiple tags […] the reader transfers the data to a […] database […] it creates a transparent common communication environment for all parties in the supply chain […]."* (Kongar *et al.* 2015:60) • *"[…] radio frequency identification […] improve the exchange of information among various logistics practitioners […]."* (Kongar *et al.* 2015:52) • *"[…] information sharing with trading partners, […] using bar codes […]."* (Shakantu *et al.* 2009:82) • *"Each entity will have RFID technology installed in their warehouses. This means that RFID tags are placed in the inventories […] and RFID readers […] in the warehouses […] the players will be able to share different types of information through the EPC Global Network."* (Nativi & Lee, 2012:371) • *"[…] supply chain must work collaboratively and utilize [sic] the same system and processes […] the RFID […] ensures real time information flow […]."* (Kumar *et al.* 2009:197)
	Enhance SC responsiveness, visibility and forecasting	Han *et al.* (2010:1080) Jayaraman *et al.* (2008:424) Kongar *et al.* (2015:52) Kabir (2013:97)	• *"[…] the RFID strategy is a technology that can offer […] information sharing among players, and visibility […] which help the supply chain adapt rapidly from changes in the system."* (Nativi & Lee, 2012:373) • *"The cost of implementing barcode and RFID […] would be beneficial […] to track the movement of goods for the whole supply chain […]."* (Lee & Lam, 2012:593) • *"Each entity will have RFID technology installed in their warehouses. This means that RFID tags are placed in the inventories […] and RFID readers […] in the warehouses […], the players will have enhanced ''visibility'' in their warehouses […] through the EPC Global Network."* (Nativi & Lee, 2012:371) • *"[…] supply chain visibility using bar codes […]."* (Shakantu *et al.* 2009:82) • *"[…] with RFID real time data can be obtained, which […] gives the manufacturer, distributors, and others within the supply chain a true demand of what product is needed when and where."* (Kumar *et al.* 2009:196)

Source: Compiled by the researcher

Table 6.7 shows that barcode/RFID practices in RL associate with economic, operational, organisational, environmental, social, market-related and SC outcomes, which will be discussed in subsequent sections.

6.3.2.2.1 Economic outcomes of barcode/RFID IT practices in RL

The economic outcomes of barcode/RFID practices include (1) addressing economic barriers, (2) economic benefits and performance, (3) cost effectiveness and (4) reducing costs. Like other IT practices (Internet/web and TLIT), barcode/RFID can *address economic barriers* in RL (like high costs and investment requirements) (see section 2.3.1). Particularly, organisations can utilise barcode IT for both FL and RL operations, avoiding high investment and costs of developing, implementing and using special/new technologies for RL. Additionally, implementing RFID can address cost-

related challenges in RL, which may associate with improved visibility and efficiency in RL processes (see section 6.3.2.2.2).

Moreover, organisations can realise *economic benefits* and improve *economic performance* through the barcode/RFID strategies related to (1) developing an RFID strategy that focuses on SCI, (2) considering the complexity of RFID, (3) focussing on a benefit-driven strategy for RFID, and (4) implementing and using RFID for RL. Consequently, organisations can enhance the *cost-effectiveness* of RL processes by investing in RFID IT (economic requirement), emphasising the importance of performing a cost-benefit analysis for barcode/RFID IT in RL (see section 6.3.2.1.1).

Finally, organisations can *reduce costs* through several barcode/RFID IT practices, including the (1) barcode/RFID strategies of developing an RFID strategy, considering business/industry type for RFID, performing a cost-benefit analysis, focusing on benefit-driven strategies, installing and utilising RFID readers, computer hardware and software, and implementing and utilising barcode/RFID IT for RL, and (2) barcode/RFID requirements of costs (economic), organisation-wide implementation of RFID and staff training (organisational), and consultancy service (SC). Particularly, developing an RFID strategy, installing and using RFID readers and utilising barcode/RFID IT for RL can reduce inventory costs, which demonstrates important operational outcomes related to demonstrating the operational benefits related to inventory management and control (see section 6.3.2.2.2).

Essentially, despite the investment and costs requirements of barcode/RFID IT (section 6.3.2.1.2), organisations can obtain many cost-related benefits for adopting barcode/RFID IT practices, which demonstrates the importance of performing a cost-benefit analysis and focussing on a benefit-driven barcode/RFID strategy for the effective management of consumer returns.

6.3.2.2.2 Operational outcomes of barcode/RFID IT practices in RL

Several operational outcomes associate with barcode/RFID IT practices, including (1) addressing IT barriers in RL, (2) improving forecasting and visibility of product returns, (3) facilitating identification, tracking and tracing of product returns, (4) facilitating and support RL processes and activities, (5) improving RL process speed and efficiency, (6) reducing manual operations and operational errors, (7) facilitating operations management, and (8) improving inventory management and control.

Like general IT and Internet/web-based IT practices (sections 6.3.1 and 6.3.2), barcode/RFID IT practices can *address IT barriers in RL* (such as a lack of information systems for RL) (section 2.3.2). Particularly, organisations can procure state-of-the-art barcode IT (strategy) through software service suppliers (SC requirement) to provide appropriate IT for consumer returns, demonstrating a link between IT and outsourcing practices in RL (see section 6.5).

Additionally, organisations can *improve forecasting* and *visibility* of *product returns* through barcode/RFID strategies, like developing a data matrix for barcode IT, installing and utilising RFID tags and readers, and implementing and utilising RFID IT, and operational/infrastructure requirements, like utilising facilities for RFID installation. Accordingly, several barcode/RFID IT practices *facilitate product return identification, tracking* and *tracing,* including the (1) barcode/RFID strategies of a cost-benefit analysis, benefit-driven strategies, combining barcode and other IT, developing and using an IT infrastructure, installing and using labels, tags, readers, computer hardware and software, and implementing and using barcode/RFID IT for RL, and (2) barcode/RFID requirements of costs (e.g. installation, consultancy and training costs) (economic), equipment and facilities (operational/infrastructure), organisation-wide implementation, management involvement and staff training (organisational), and consultancy service (SC).

Similarly, various barcode/RFID practices can *facilitate* and *support RL processes* and *activities*, including the (1) barcode/RFID strategies of strategic considerations (type of returns), benefit-driven strategies, developing and using an IT infrastructure and database, installing and using labels/tags and scanners/readers, and developing, implementing and using barcode/RFID IT for RL, and (2) barcode/RFID requirements of facilities (operational and infrastructure) and staff involvement and compliance (organisational). For example, developing, implementing and utilising RFID (including installing tags/readers) in a warehouse can facilitate and support product returns receiving (e.g. automatic check-in of products), inspection/sorting and validation (e.g. confirming the accuracy of consumer return information), processing (e.g. consumer receives appropriate credit), disposition (e.g. support efficient repair) and resale/redistribution.

Evidently, barcode/RFID practices, including the strategic development of an IT database, installation of labels and tags, and utilisation of barcode/RFID IT for RL, can *improve RL process speed* and *efficiency.* Additionally, organisations can *reduce manual operations* and *operational errors* through barcode/RFID practices that mostly involve RFID-specific strategies and requirements, including (1) strategic considerations (costs and industry of RFID), (2) installing RFID readers, (3) procuring, implementing and using RFID IT for RL (strategies), (4) costs (economic requirement), (5) facilities

(operational/infrastructure requirement), and (5) management involvement and staff training (organisational requirements). Consequently, reducing manual operations through RFID emphasises labour utilisation (staff involvement versus staff compliance) as the main difference between barcode and RFID IT, demonstrating the importance of performing a cost-benefit analysis for barcode/RFID practices in RL (see section 6.3.2.1).

Furthermore, developing an IT database for RFID and implementing and utilising RFID (strategies) can *facilitate operations management* through enhanced visibility and information sharing in a facility. Finally, organisations can *improve inventory management* and *control* through (1) barcode/RFID strategies related to benefit-driven strategies, combining/integrating barcode/RFID with other IT (e.g. Internet and RFID), using an IT database, installing and using RFID tags and readers, implementing and using barcode/RFID IT, and (2) barcode/RFID requirements related to facilities (operational/infrastructure) and management involvement (organisational).

Essentially, improvements in forecasting, visibility, tracking/tracing, RL process efficiency and inventory management, emphasise the importance of barcode/RFID IT for reducing inventory costs (section 6.3.2.2.1) and addressing economic and operational barriers in RL.

6.3.2.2.3 Organisational outcomes of barcode/RFID IT practices in RL

The organisational outcomes of barcode/RFID IT practices in RL, include (1) facilitating RL development and implementation, (2) a successful RL program, (3) enhancing RL performance, (4) enhancing RLM, (5) improving information management, (6) facilitating internal information sharing, (7) facilitating performance measurement (PM) practices and return prevention and avoidance (RPA) practices, and (8) facilitating facility/location practices.

Through the strategic procurement, implementation and utilisation of state-of-the-art RFID IT (strategy), organisations can *facilitate RL development* and *implementation,* implying that RFID IT can address organisational barriers in RL (such as a lack of awareness and management inattention) that hamper successful implementation of RL (see section 2.3.3). Similarly, organisations can establish a *successful RL program* through the strategic procurement, implementation and utilisation of state-of-the-art barcode IT for RL. Additionally, organisations can *enhance RL performance* through the strategic development and use of an IT infrastructure for RFID, emphasising economic performance improvements through RFID (see section 6.3.2.2.1).

More importantly, through the strategic consideration of the business type (retailers) and utilisation of barcode/RFID IT for RL (barcode/RFID IT strategies), organisations can *enhance RLM*, demonstrating the importance of barcode/RFID IT practices for managing consumer returns. Furthermore, organisations can *improve information management* through (1) barcode/RFID IT strategies related to installing and utilising tags and scanners/readers, and implementing and utilising barcode/RFID IT, and (2) barcode/RFID IT requirements related to facilities and network structures (operational/infrastructure). For example, utilising RFID readers in a facility can retrieve and record product return data on the system and utilising a RFID tags and network structures can provide information about the returned product, regardless of its condition and life-cycle stage.

Subsequently, barcode/RFID IT practices, like strategic installation and utilisation of tags and scanners/readers, and utilisation of barcode/RFID IT for RL, can *facilitate internal information sharing*, implying that barcode/RFID IT may facilitate CFI practices in RL (section 6.4.3). Nevertheless, barcode/RFID IT can directly facilitate other practices in RL, including PM (section 6.7), RPA (section 6.9.3) and facility/location practices (section 6.8).

Particularly, through the strategic implementation and utilisation of RFID IT for RL, organisations can *facilitate PM practices* by measuring product returns over an extended period (e.g. three years) and implementing improvement initiatives. Likewise, utilising RFID IT for RL can *facilitate RPA practices* by identifying and preventing fraudulent returns (like counterfeit returns). Finally, barcode/RFID IT practices can *facilitate facility/location practices* in RL. For example, the barcode/RFID strategies of (1) creating a data matrix and utilising barcode IT for RL can facilitate network design and control, and (2) utilising RFID IT for RL (strategy) can facilitate strategic decisions of optimal location for product returns (e.g. centralised versus decentralised location).

6.3.2.2.4 Environmental and market-related outcomes of barcode/RFID IT practices in RL

Like general IT and TLIT practices (sections 6.3.1 and 6.3.3), barcode/RFID IT practices can lead to the *environmental outcome* in RL. Particularly, organisations can achieve *environmental benefits* by developing an RFID strategy that focusses on information sharing (with SC parties) and implementing and using RFID for RL. Moreover, barcode/RFID IT practices involve several *market-related outcomes*, including (1) a competitive advantage, (2) meeting consumer demands/needs and increasing responsiveness, (3) improving consumer experience, and (4) improving customer service.

Specifically, organisations can obtain a *competitive advantage* by implementing and utilising RFID IT for RL, which may associate with enhanced economic performance (economic outcome), efficient

RL processes (operational outcome), and enhanced RL performance and management (organisational outcomes) (sections 6.3.2.2.1, 6.3.2.2.2 and 6.3.2.2.3). Additionally, organisations can *meet consumer needs/demands* and *improve consumer responsiveness* by strategically combining barcode and RFID IT for RL, demonstrating the importance of implementing barcode/RFID IT to manage consumer returns.

Relating to the support of RL processes/activities and the reduction of manual RL operations (operational outcomes), organisations can *improve consumer experience* through the strategic implementation of RFID tags and readers, and development, implementation and utilisation of RFID IT for RL. For example, utilising RFID tags and readers for RL can reduce the hassle of providing documentation (like proof of purchase) to return a product. Subsequently, organisations can *improve* overall *customer service* levels through the strategic utilisation of barcode/RFID for RL, which relates to the operational outcomes of barcode/RFID practices (such as improved forecasting and inventory management) (section 6.3.2.2.2).

6.3.2.2.5 SC outcomes of barcode/RFID IT practices in RL

Numerous SC outcomes associate with barcode/RFID practices, including (1) improving (R)SCM, (2) facilitating SCI, coordination and collaboration, (3) improving SC information sharing and communication, and (4) enhancing SC responsiveness, visibility and forecasting. Particularly, the strategic implementation and utilisation of RFID IT for RL and SC-wide implementation of RFID (SC requirement) can *improve* (R)SCM. Additionally, developing an RFID strategy, installing RFID tags, utilising RFID for RL (strategies), and utilising network structures (operational/infrastructure requirement) can *facilitate SCI, coordination* and *collaboration.*

Moreover, several barcode/RFID practices, including the (1) barcode/RFID strategies of developing an RFID strategy, developing and using an IT infrastructure and database, installing and using RFID tags and readers, and implementing and using barcode/RFID IT, and (2) barcode/RFID requirements of facilities and networks(operational/infrastructure), SC-wide implementation and SC collaboration, can *improve SC information sharing* and *communication.*

Similarly, various barcode/RFID IT practices can *enhance SC responsiveness, visibility* and *forecasting,* including the (1) barcode/RFID strategies of an RFID strategy, a cost-benefit analysis, benefit-driven strategies, installing labels, tags and readers, and implementing and using barcode/RFID IT for RL, and (2) barcode/RFID requirements of costs (economic), facilities and networks (operational/infrastructure), and (8) SC-wide implementation (SC). Evidently, the SC

outcomes of barcode/RFID IT practices demonstrates the importance of IT in RL for addressing SC barriers (section 2.3.4) and supporting effective SCI practices (section 6.4.1) in RL.

Essentially, barcode/RFID practices can be important for addressing economic, operational, organisational and SC barriers in RL (see section 2.3), and providing various economic, operational, organisational, environmental, market-related and SC benefits for the effective management of consumer returns.

In the next section, a description and conceptual framework of barcode/RFID IT in RL will be presented and analysed.

6.3.2.3 Description and conceptual framework of barcode/RFID IT practices to manage consumer returns

Based on the findings, presented in section 6.3.4, barcode/RFID IT practices can be important for the management of consumer returns, and will be described as follows:

> Barcode/RFID IT for the management of consumer returns involve (1) barcode/RFID IT strategies, including an RFID strategy, strategic considerations, a cost-benefit analyses, benefit-driven strategies, strategic procurement or development of state-of-the-art barcode/RFID IT, combination of barcode, RFID and other IT for RL, development of an IT infrastructure, database or data matrix, creation, installation and utilisation of labels and tags, installation and utilisation of scanner/readers, computer hardware and software, implementation and utilisation of barcode/RFID IT for RL, and (2) barcode/RFID IT requirements, including economic requirements (investment, financial obligation and costs), operational/infrastructure requirements (facilities, equipment and network structures), organisational requirements (organisation-wide implementation, management and staff involvement, staff compliance and training), and SC requirements (SC-wide implementation, SC collaboration, and software suppliers and consultants).
>
> The barcode/RFID IT strategies and requirements can result in several outcomes, including (1) economic outcomes (address economic barriers, economic benefits and performance, cost effectiveness and reduce costs), (2) operational outcomes (address IT barriers, improve forecasting and visibility, identify, track and trace product returns, facilitate and support RL processes, improve RL process speed and efficiency, reduce manual operations and errors, facilitate operations management, and improve inventory management and control), (3) organisational outcomes (facilitate RL development and implementation, successful RL program, enhance RL performance and RLM, improve information management, facilitate internal information sharing, and facilitate PM, RPA and facility/location practices), (4) environmental outcome (environmental benefits), (5) market-related outcomes (competitive advantage, meet consumer needs/demands, and improve consumer responsiveness, consumer experience and service), and (6) SC outcomes (improve (R)SCM, facilitate SCI, coordination and collaboration, improve SC information sharing and communication, and enhance SC responsiveness, visibility and forecasting).

Figure 6.8 provides a conceptual framework of barcode/RFID IT practices, which includes the barcode/RFID IT strategies, requirements and outcomes to manage consumer returns. Particularly, the framework illustrates the links between the strategies, requirements and outcomes of barcode/RFID in RL, demonstrating a cost and benefit relationship. For example, the links between barcode/RFID IT strategies and requirements can be demonstrated by the economic requirement of costs, which links with the barcode/RFID strategies of strategic considerations, cost-benefit analysis,

IT infrastructure, installation and use of labels, tags, scanners/readers, computer hardware and software, and procurement/development, implementation and use of barcode/RFID for RL, and other requirements, including facilities/equipment (operational/infrastructure), organisations-wide implementation and staff training (organisational) and consultants (SC) requirements.

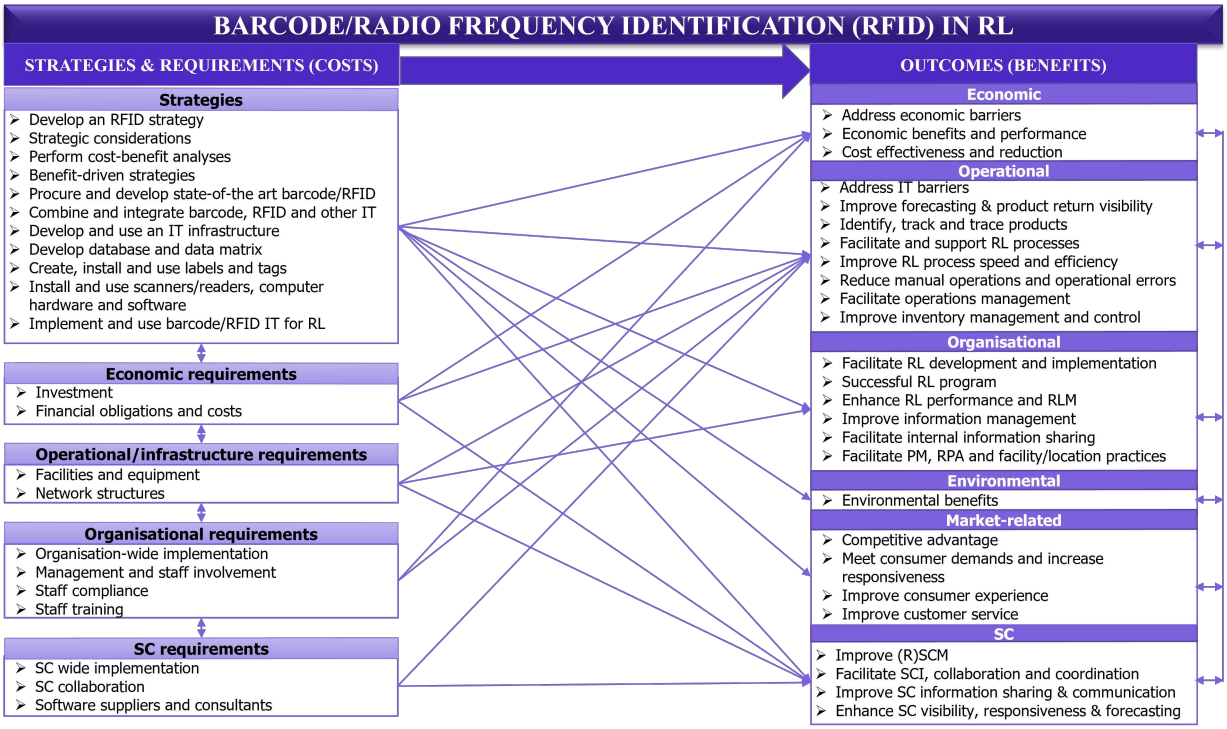


Figure 6.8 Conceptual framework of barcode/RFID IT practices to manage consumer returns
Source: Compiled by researcher

Regarding the links between barcode/RFID IT strategies, requirements and outcomes, the framework demonstrates that barcode/RFID IT strategies can be the most significant practice category, linking with all the barcode/RFID IT outcomes, including economic, operational, organisational, environmental, market-related and SC outcomes. Therefore, organisations must pay attention to the barcode/RFID strategies to achieve optimum results to manage consumer returns.

From the barcode/RFID requirements, economic requirements (especially costs) and operational/infrastructure requirements (especially facilities) contribute to the most outcomes (three categories each) and organisational and SC requirements to the least outcomes (two categories each). Nevertheless, collectively the barcode/RFID requirements contribute to most of the outcome categories, including economic, operational, organisational and SC outcomes.

Regarding the outcomes of barcode/RFID IT practices, operational (first) and SC (second) can be the most significant outcomes (associated with most of the practice categories), which means that barcode/RFID IT practices can be the most beneficial for organisations that experience operational and SC barriers and problems in RL. In contrast, the environmental and market-related outcomes can

be the least significant outcomes, meaning that barcode/RFID IT practices may be less important for organisations that seek environmental and market-related benefits through RL practices.

Finally, the framework shows that the barcode/RFID IT outcome categories can be linked, for example, a competitive advantage (market-related outcome) can link with economic performance (economic outcome), efficient RL processes (operational outcome), enhanced RL performance and RLM (organisational outcomes). Additionally, the operational outcome of improvements in forecasting, visibility and tracking can link with cost reductions (economic outcome), internal information sharing (organisational outcomes), meeting consumer demands and increasing responsiveness (market-related outcomes), and SC information sharing, visibility, forecasting and responsiveness (SC outcomes).

Essentially, the links between the barcode/RFID IT strategies, requirements and outcomes demonstrate the importance of a holistic approach to the management of consumer returns, meaning that organisations must carefully consider and analyse the costs (strategies and requirements) and benefits (outcomes) before implementing barcode/RFID IT for the effective management of consumer returns. In the next section, RL specific technology as the final IT practice category, will be discussed and explored.

6.3.3 RL information technology (RLIT) practices to manage consumer returns

RL information technology (RLIT) can be described as rarely used (Ravi & Shankar, 2015:890), underdeveloped and complex (Kongar *et al.* 2015:53, 56), which explains the lack of findings in the QCA of RL literature (see Figure 6.4). In this study, RLIT represents a (1) specific solution for managing RL processes and practices, (2) customised/tailored IT created for RL, (3) software/IT used for specific RL processes (such as return authorisation software), and (4) software/system to manage consumer returns. Despite the limited findings, RLIT practices included the same main categories of strategies, requirements and outcomes, which will be presented and discussed in the rest of this section.

Table 6.8 provides an overview of the findings related to the *RLIT practices to manage consumer returns*, including the categories, subcategories, supporting sources for the subcategories and key quotations that support both the subcategories and the discussion of the findings.

Table 6.8 Findings related to RLIT practices to manage consumer returns

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
Strategies	***Prioritise RLIT***	None	• *"[…] develop and invest in RL technology is the highest ranked solutions in this case for*

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
			RL […].” (Prakash & Barua, 2015:612)
	Strategic considerations	None	• *“[…] decisions regarding the RL information system. The economic aspects of this system comprise hardware, software, support, space (computer room and desk), and external services (e.g., Internet provider). These costs depend on the volume of returns, the basic requirements of each activity, the number of users, and the technology choices […].”* (Lambert *et al.* 2011:573)
	Perform cost-benefit analysis	None	• *“[…] organisations do want to implement special return software, they will have to carefully consider the cost–benefit trade-off.”* (Badenhorst, 2016:9)
	Strategic identification, creation, development and procurement of RLIT	Huang and Yang (2014:620) Kongar *et al.* (2015:56) Prakash and Barua (2015:612) Prakash and Barua (2016b:64)	• *“[…] acquire […] and […] create emerging IT to support RL is an […] important, facet of IT/RL fit.”* (Huscroft *et al.* 2013a:233) • *“[…] tailoring technologies to support RL operations […].”* (Huscroft *et al.* 2013a:237) • *“[…] companies that can innovate to find or create RL/IT solutions […].”* (Huscroft *et al.* 2013a:237) • *“Create, develop and invest in RL technology […].”* (Agarwal *et al.* 2016:3) • *“[…] purchase reverse logistics software […].”* (Ravi, 2014:299)
	Strategic development of RLIT innovative capabilities	Lee and Lam (2012:595)	• *“[…] reverse logistics technology innovativeness […] enhance […] reverse logistics […].” (Huscroft et al. 2013a:230)* • *“[…] innovativeness in the area of RL technologies […].”* (Huscroft *et al.* 2013a:237)
	Strategic development of RLIT infrastructure	Lau and Wang (2009:458)	• *“[…] IT could be incorporated […] by building a RL IT infrastructure […].”* (Biehl *et al.* 2007:466)
	Strategic development and implementation of an integrative, transparent and coordinated RLIT	None	• *“The system needs to be integrated to cover all elements […] of the RL system.”* (Lambert *et al.* 2011:566) • *“[…] information transparency in an RL information system improves information sharing […].”* (Lambert *et al.* 2011:572) • *“The most important element is the coordinating system which is responsible of the overall performance […] of the RL system.”* (Lambert *et al.* 2011:566)
	Strategic combination and integration of RLIT with other IT	Subhashini (2016:9)	• *“[…] returns-management system, relies on the Internet to […] track the status of returned goods.”* (Huang & Yang, 2014:619) • *“[…] be integrated to cover all elements […] via a web portal […] and […] the RL system.”* (Lambert *et al.* 2011:566) • *“RL-specific information system […] needs to be connected to the enterprise system for inventory management, items, or the production data […].”* (Lambert *et al.* 2011:573)
	Strategic implementation and utilisation of product return and RL process related IT	Jayaraman *et al.* (2008:418)	• *“Technology-enabled reverse logistics processes […] enabled better use of storage facilities and less potential damage to returned goods.”* (Bernon & Cullen, 2007:50) • *“[…] computerized [sic] return tracking […] which could be used […].”* (Ravi & Shankar, 2015:885) • *“[…] technological solutions […] for establishing returns classifications procedures […].”* (Zikopoulos & Tagaras, 2015:436) • *“[…] organisations do want to implement special return software […].”* (Badenhorst, 2016:9) • *“[…] companies have heavily invested in […] product recovery technologies […].”* (Ravi & Shankar, 2015:890) • *“[…] by return logistics software known as Direct Automated Returns Tracking (DART) […] enabled scanning to take place […].”* (Bernon & Cullen, 2007:49) • *“[…] make use of a return merchandise authorisation (RMA) system […].”* (Badenhorst, 2013:4)
	Strategic implementation and utilisation of RLM IT systems	Lau and Wang (2009:458) Mollenkopf *et al.* (2007:215)	• *“[…] returns-management system […] to capture customer information […].”* (Huang & Yang, 2014:619) • *[…] in reverse logistics […] using […] reverse logistics information management systems […].”* (Badenhorst, 2016:10)
	Strategic utilisation of hardware and software for RLIT	None	• *“RL information system […] comprise hardware, software […] and external services (e.g., Internet provider) […].”* (Lambert *et al.* 2011:573)
	Strategic implementation and utilisation of a modern and flexible RLIT	Kongar *et al.* (2015:52) Shaik and Abdul-Kader (2014:97)	• *“[…] the use of latest reverse logistics technology to increase efficiency […].”* (Lau & Wang, 2009:459) • *“[…] use […] emerging IT to support RL is an […] important, facet of IT/RL fit […].”* (Huscroft *et al.* 2013a:233) • *“[…] problems […] in the execution of an RL operation […] to overcome this threat, a flexible RL information system is required.”* (Sasikumar & Kannan, 2008b:243)
Economic requirements	***Investment and financial obligations***	Agarwal *et al.* (2016:3) Prakash and Barua (2015:611, 612) Abdulrahman *et al.* (2014:469) Zikopoulos and Tagaras (2015:444)	• *“[…] companies have heavily invested in […] product recovery technologies […].”* (Ravi & Shankar, 2015:890) • *“[…] enterprises have invested enormously in reverse logistics information management technology […].”* (Lhafiane et el. 2015b:396) • *“[…] invest in RL technology is the highest ranked solutions in this case for RL […].”* (Prakash & Barua, 2015:612) • *“[…] computerized [sic] return tracking […] which could be used requiring financial obligations. Also, training of manpower on these technologies requires heavy degree of investment from companies.”* (Ravi & Shankar, 2015:885) • *“[…] investment in the returns management system […].”* (Mollenkopf *et al.* 2007:215)

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
	Costs	None	• *"RL information system […] comprise hardware, software, support, space […] and external services [...] costs […]."* (Lambert *et al.* 2011:573)
Operational requirement	***Facility/office space and furniture***	None	• *"RL information system […] comprise […] space (computer room and desk) […]."* (Lambert *et al.* 2011:573) • *"Technology-enabled reverse logistics processes […] use of storage facilities […]."* (Bernon & Cullen, 2007:50)
Organisational requirements	***Organisational commitment to RL***	Abdulrahman *et al.* (2014:469)	• *"With the increased focus on RL processes […] an organization's [sic] propensity to embrace emerging technologies to support RL […]."* (Huscroft *et al.* 2013a:233)
	Management involvement	Huang and Yang (2014:619)	• *"[…] managers' choices regarding investment in the returns management system […]."* (Mollenkopf *et al.* 2007:215) • *"[…] the logistics managers indicated that ABC was planning to purchase reverse logistics software […]."* (Ravi, 2014:299)
	IT support	None	• *"RL information system […] comprise […] support […]."* (Lambert *et al.* 2011:573) • *"[…] emphasise more on […] software support to handle returns […]."* (Ahsan & Rahman, 2016:625)
	Staff training	Abdulrahman *et al.* (2014:469)	• *"[…] computerized [sic] return tracking […] requiring […] training of manpower on these technologies […]."* (Ravi & Shankar, 2015:885)
SC requirements	***SCI***	Lambert *et al.* (2011:566)	• *"[…] integration with supply chain partners on reverse logistics technology […]."* (Morgan *et al.* 2016:307)
	3P service providers	None	• *"RL information system […] comprise […] external services (e.g., Internet provider) […]."* (Lambert *et al.* 2011:573) • *"[…] third party service provider […] developed a web enabled […] reverse logistics software […]."* (Subhashini, 2016:9)
	Partnerships with 3PRL providers	Kannan *et al.* (2009:28) Subhashini (2016:9)	• *"3PRL partner […] deal with flexible capacity of return products […] These activities require […] customized [sic] information systems […]."* (Prakash & Barua, 2016b:64)
Economic outcomes	***Economic performance and cost effectiveness***	None	• *"RL information systems and technology would lead to more economic performance outcomes."* (Huang & Yang, 2014:635) • *"Reverse Logistics IT Capabilities were found to have a direct and positive impact on Economic Performance […]."* (Lee & Lam, 2012:595) • *"[…] technology innovativeness can enhance RL cost […] effectiveness […]."* (Huscroft *et al.* 2013a:237)
	Reduce costs	None	• *"[…] companies that can innovate to find or create RL/IT solutions will have a higher […] ability to reduce costs […]."* (Huscroft *et al.* (2013a:237) • *"[…] third party service provider […] developed a web enabled […] reverse logistics software […] This reduces the human error […] and can also reduce the labor [sic] costs."* (Subhashini, 2016:9)
	Profitability	None	• *"[…] managers' choices regarding investment in the returns management system as […] a potential means of improved profitability."* (Mollenkopf *et al.* 2007:215)
Operational outcomes	***Address operational barriers in RL***	Kongar *et al.* (2015:52) Sasikumar and Kannan (2008b:243)	• *"[…] operational barriers in reverse logistics included problems with product quality, limited forecasting and visibility inadequate information and technology systems and developmental barriers. The practices […] for overcoming these barriers included […] using return software […] and reverse logistics information management systems […]."* (Badenhorst, 2016:10)
	Facilitate forecasting, visibility and product return tracking	Badenhorst (2016:10)	• *"[…] building a RL IT infrastructure […] facilitate the entry of return flow data, including the types and quantities […] This would provide a high degree of visibility of the network."* (Biehl *et al.* 2007:466) • *"The system needs to be integrated to cover all elements and possibly offer visibility via a web portal […] of the RL system."* (Lambert *et al.* 2011:566) • *"[…] returns-management system, relies on the Internet to […] track the status of returned goods."* (Huang & Yang, 2014:619) • *"[…] special information systems for tracking […] of returns […] industries are turning to third-party reverse logistics providers (3PRLPs)."* (Kannan *et al.* 2009:28) • *"3PRL partner […] customized [sic] information systems to monitor shipments […]."* (Prakash & Barua, 2016b:64)
	Address IT barriers in RL	None	• *"One of the most serious problems that companies face in the execution of an RL operation is the dearth of good information systems […] to overcome this threat, a flexible RL information system is required."* (Sasikumar & Kannan, 2008b:243)
	Reduce human errors and manual operations	None	• *"[…] third party service provider […] developed a web enabled […] reverse logistics software […] This software […] reduces the human error […] less paperwork and manual processes."* (Subhashini, 2016:9)
	Improve RL process speed, flexibility and efficiency	Agarwal *et al.* (2016:3)	• *"[…] third party service provider […] developed a web enabled […] reverse logistics software […] This software […] speeds up the process […]."* (Subhashini, 2016:9) • *"3PRL partner […] deal with flexible capacity of return products […] These activities require […] customized [sic] information systems [..]."* (Prakash & Barua, 2016b:64) • *"[…] invest in the use of latest reverse logistics information system and technology so as to increase efficiency."* (Lau & Wang, 2009:458)
	Facilitate and support RL processes	None	• *"[…] acquire, use, and possibly even create emerging IT to support RL […]."* (Huscroft *et al.* 2013a:233) • *"The physical flow of the returns process was integrated and supported by return logistics*

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
			software […].” (Bernon & Cullen, 2007:49) • *“[…] software support to handle returns […].”* (Ahsan & Rahman, 2016:625) • *“With the increased focus on RL processes […] an organization’s [sic] propensity to embrace emerging technologies to support RL […].”* (Huscroft *et al.* 2013a:233) • *“[…] also make use of a return merchandise authorisation (RMA) system, which is a system used to make the RMA process more efficient and effective.”* (Badenhorst, 2013:4) • *“[…] returns-management system, relies on the Internet to capture customer information, schedule pick-ups, arrange transportation […] of returned goods.”* (Huang & Yang, 2014:619) • *“[…] innovate to find or create RL/IT solutions will have a […] ability to […] effectively process returns.”* (Huscroft *et al.* 2013a:237) • *“[…] technological solutions […] for establishing returns classifications procedures […] for used products quality evaluation.”* (Zikopoulos & Tagaras, 2015:436) • *“[…] uses software which includes […] decision rules for deciding whether to repair, disassemble, reuse or scrap returned products.”* (Jayaraman *et al.* 2008:418) • *“[…] third party service provider […] developed a web enabled […] reverse logistics software […] This software […] suggests an appropriate disposition method for the product.”* (Subhashini, 2016:9) • *“3PRL partner has to deal with […] activities like product acquisition/gate keeping, collection, inspection & sorting, storage, and processing. These activities require […] customized [sic] information systems to monitor shipments, and data mining & support.”* (Prakash & Barua, 2016b:64)
	Facilitate inventory management and control	None	• *“[…] RL system […] connected to the enterprise system for inventory management […].”* (Lambert *et al.* 2011:573) • *“Technology-enabled reverse logistics processes […] enabled better use of storage facilities and less potential damage to returned goods.”* (Bernon & Cullen, 2007:50)
Organisational outcomes	***Address organisational barriers in RL***	None	• *“[…] develop and invest in RL technology is the top most priority solution to overcome RL adoption barriers.”* (Prakash & Barua, 2015:611)
	Enhance RL design, innovation and capabilities	None	• *“[…] for the design of the RL system […] building a RL IT infrastructure […].”* (Biehl *et al.* 2007:466) • *“One way to develop an innovative capability is customizing [sic] RL technology […].”* (Huang & Yang, 2014:620) • *“[…] returns-management system […] a logistics manager develops processes that can be altered rapidly […] the firm may develop an innovative capability.”* (Huang & Yang, 2014:619)
	Improve RL performance	Shaik and Abdul-Kader (2014:96)	• *“[…] innovativeness in the area of RL technologies may indeed enhance RL performance.”* (Huscroft *et al.* 2013a:237) • *“The most important element is the coordinating system which is responsible of the overall performance […] of the RL system.”* (Lambert *et al.* 2011:566)
	Improve RLM and information management	Bernon and Cullen, (2007:49)	• *“The most important element is the coordinating system which is responsible of the overall […] management of the RL system.”* (Lambert *et al.* 2011:566) • *“[…] the management of return flows […] requires a […] special information systems for tracking […] of returns […] industries are turning to third-party reverse logistics providers (3PRLPs).”* (Kannan *et al.* 2009:28) • *“3PRL partner […] customized [sic] information systems to monitor […] data mining & support.”* (Prakash & Barua, 2016b:64)
Environmental outcome	***Environmental protection***	None	• *“RL information systems and technology would lead to more sustainable environmental protection […].”* (Huang & Yang, 2014:635)
Market-related outcomes	***Competitive advantage***	Shaik and Abdul-Kader (2014:96)	• *“[…] firm’s ability to acquire, use, and possibly even create emerging IT to support RL […] Resisting use of new techniques and relying on outdated technologies will put a company behind their competitors […].”* (Huscroft *et al.* 2013a:233) • *“With the increased focus on RL processes […] an organization’s [sic] propensity to embrace emerging technologies to support RL should enhance its ability to perform in the marketplace.”* (Huscroft *et al.* 2013a:233)
	Meet consumer needs	None	• *“[…] returns-management system […] a logistics manager develops processes that can be altered rapidly and successfully to it customer needs […].”* (Huang & Yang, 2014:619)
	Improve customer service	None	• *“Reverse Logistics IT Capabilities were found to have a direct and positive impact on […] Service quality.”* (Lee & Lam, 2012:595) • *“[…] managers’ choices regarding investment in the returns management system as an element of service quality improvement […].”* (Mollenkopf *et al.* 2007:215)
SC outcomes	***Facilitate SC information sharing and communication***	Shaik and Abdul-Kader (2014:97)	• *“[…] IT could be incorporated into the reverse supply chain by building a RL IT infrastructure […] that facilitate the entry of return flow data […].”* (Biehl *et al.* 2007:466) • *“[…] information transparency in an RL information system improves information sharing through the entire supply chain […].”* (Lambert *et al.* 2011:572)

Source: Compiled by the researcher

In the subsequent sections these categories of RLIT practices, presented in Table 6.8, will be discussed and concluded with a description and conceptual framework of RLIT to manage consumer returns.

6.3.3.1 Strategies of RLIT practices in RL

RLIT practices in RL involve several strategies, including (1) prioritising RLIT, (2) strategic considerations, (3) performing a cost-benefit analysis, (4) strategic identification, creation, development and procurement of RLIT, (5) strategic development of RLIT innovative capabilities, (6) strategic development of a RLIT infrastructure, (7) strategic development and implementation of an integrative, transparent and coordinated RLIT, (8) strategic combination and integration of RLIT with other IT, (9) strategic implementation and utilisation of product return and RL process related IT, (10) strategic implementation and utilisation of RLM IT systems, (11) strategic utilisation of hardware and software for RL, and (12) strategic implementation and utilisation of a modern and flexible RLIT.

Like general IT and TLIT (sections 6.3.1 and 6.3.3), organisations can benefit from *prioritising RLIT* to manage consumer returns. However, before adopting/implementing RLIT organisations need to *strategically consider* the costs and several requirements of RLIT (see section 6.3.3.2), product return volume, type of RL activities and number of users (internal staff). Consequently, organisations must *perform a cost-benefit analysis,* which involves identifying the requirements (costs) and outcomes (benefits) of RLIT implementation to manage consumer returns.

Based on the considerations and cost-benefit analysis, organisations can *strategically identify, create, develop* and/or *procure RLIT* to effectively support the RLM of consumer returns. Moreover, organisations must *strategically develop RLIT innovative capabilities* and *a RLIT infrastructure,* indicating that effective RLIT development and implementation requires tangible and intangible resources. Additionally, like general IT (see section 6.3.1), organisations must *strategically develop* and *implement an integrative, transparent and coordinated RLIT,* indicating that the RLIT must be capable of integrating and communicating with other SC parties.

Like other IT practices, organisations can *strategically combine* and *integrate RLIT* with *other IT,* for example, combining RLIT with the Internet or integrating a RLIT with an ERP system. Furthermore, depending on the RL processes and practices, organisations can *strategically implement* and *utilise* specific RLIT systems, including *product return* and *RL process related IT* (such as return software,

return tracking system or product recovery IT) and *RLM IT systems* (such as a returns management system).

Regardless of the type of RLIT, organisations must *strategically utilise hardware* and *software* for RLIT, which emphasise the importance of considering the costs and requirements of RLIT. Finally, organisations must *strategically implement* and *utilise a modern* and *flexible RLIT* for the effective management of consumer returns.

6.3.3.2 Requirements of RLIT practices in RL

The requirements of RLIT practices in RL include economic, operational, organisational and SC requirements. Like other IT practices, RLIT involves the *economic requirements* of investments, financial obligations and costs. However, the *investment requirements* and *financial obligations* may be more significant for RLIT since organisations must not only invest in a new IT that can only be used for RL but also in other requirements, like training of staff. Moreover, RLIT entails various *costs* for hardware, software, office equipment and space, IT support and 3P service provider, which emphasise the importance of the RLIT strategies of considering costs, performing a cost-benefit analysis and utilising software and hardware for RLIT (see section 6.3.3.1) and other requirements of RLIT.

The *operational requirements* of RLIT involves *facilities, office space* and *furniture*, which forms part of the strategic considerations and high cost of RLIT. The *organisational requirements* of RLIT involves organisational commitment, management involvement, IT support and staff training. Relating to the prioritisation of RLIT and high investment requirements, *organisational commitment* can be important for RLIT implementation, which means that organisational barriers in RL (e.g. lack of top management support and commitment) can hamper the adoption of RLIT to manage consumer returns.

Additionally, *management involvement* can be important for the investment, procurement and effective utilisation of RLIT to manage consumer returns. Like general IT and TLIT (sections 6.3.1 and 6.3.3), *IT support* can be important for development, software and maintenance of RLIT, emphasising the cost and operational (office space and furniture) requirements of RLIT. Additionally, RLIT requires *staff training*, which demonstrates the importance of considering the number of RLIT users (see section 6.3.3.1) and the investment requirements of RLIT.

Finally, the *SC requirements* of RLIT includes SCI, 3P service providers and partnerships with 3PRL providers. Particularly, organisations must focus on *SCI* practices for the effective utilisation of RLIT, which emphasise the importance of implementing an integrative, transparent and coordinated RLIT (section 6.3.3.1). Furthermore, *3P service providers* (such as Internet service providers) can be important for combining RLIT with other IT, like the Internet or a web-based system, adding to the RLIT cost requirements. Alternatively, organisations can develop *partnerships* with *3PRL providers* to gain access to RLIT, demonstrating the importance of developing innovative capabilities for RLIT (RLIT strategy) and other requirements (like investment and organisational commitment) that may hamper RLIT adoption and implementation.

In the next section, the outcomes of RLIT will be discussed, which may mitigate the strategies and requirements (costs) of RLIT.

6.3.3.3 Outcomes of RLIT practices in RL

The outcomes of RLIT practices, including economic, operational, organisational, environmental, market-related and SC outcomes (see Table 6.8), can be described as the benefits of incorporating RLIT strategies and requirements to manage consumer returns. These outcomes will be briefly described in subsequent sections.

6.3.3.3.1 Economic outcomes of RLIT practices in RL

The economic outcomes of RLIT practices include economic performance and cost effectiveness, reducing costs and profitability. Particularly, organisations can improve *economic performance* and *cost effectiveness* through the strategic development of innovative capabilities for RLIT and implementation and use of RLIT (strategies) to manage consumer returns. Additionally, organisations can *reduce costs* (e.g. return handling and labour costs) through the RLIT strategies of developing innovative capabilities, identifying and creating RLIT and combining RLIT with other IT (e.g. a web based RLIT) and the SC requirement of using 3P service providers, which points to the operational benefits of RLIT (section 6.3.3.3.2).

Finally, organisations can improve *profitability* through the investment (economic requirement) and use of RLM IT (RLIT strategy) and management involvement (organisational requirement), showing the strategic significance of adopting RLIT to manage consumer returns. Essentially, the economic outcomes of RLIT practices may mitigate the economic requirements (investments and costs) of

RLIT, which demonstrates the importance of performing a cost-benefit analysis for RLIT (see section 6.3.3.1).

6.3.3.3.2 Operational outcomes of RLIT practices in RL

Several operational outcomes associate with RLIT practices, including (1) addressing operational barriers in RL, (2) improving forecasting, visibility and tracking of product returns, (3) addressing IT barriers in RL, (4) reducing human errors and manual operations, (5) improving RL process speed, flexibility and efficiency, (6) facilitating and support RL processes, and (7) facilitating inventory management and control.

Specifically, RLIT practices, like utilising product return and RLM IT for RL (strategies), can *address operational barriers* in RL, which involves limited forecasting and visibility, product return problems, IT and infrastructure (developmental) barriers. Accordingly, organisations can *improve forecasting, visibility* and *tracking* of *product returns,* through the RLIT strategies of developing a RLIT infrastructure, implementing an integrative RLIT, combining RLIT with other IT (e.g. web-based IT) and utilising product return IT, and the SC requirement of partnering with 3PRL providers.

Furthermore, organisations can *address IT barriers in RL* (such as a lack of appropriate IT for RL) (section 2.3.2), through the implementation of a flexible RLIT (strategy). Consequently, organisations can *reduce human errors* and *manual operations* through RLIT practices, including combining RLIT with other IT, utilising product return IT (strategies) and using 3P service providers (SC requirement), which emphasise the economic outcome of labour cost reductions (section 6.3.3.3.1). Additionally, several RLIT practices can *improve RL process speed*, *flexibility* and *efficiency,* for instance, combining RLIT with web-based IT (strategy) and using 3P service providers (SC requirement) can increase RL process speed, partnering with 3PRL providers (SC requirement) can increase RL process flexibility, and investing (economic requirement) and implementing modern RLIT (strategy) can improve RL process efficiency.

Similarly, various RLIT practices can *facilitate* and *support RL processes,* including the (1) RLIT strategies of developing innovative RLIT capabilities, identifying, creating, procuring and implementing modern RLIT, combining RLIT with other IT, utilising software for RLIT, and using product return and RLM IT (RLIT types) for RL, and (2) RLIT requirements of organisational commitment, IT support (organisational requirements), using 3P service providers and partnering with 3PRL providers (SC requirements). Evidently, RLIT practices can facilitate and support pre-receipt RL processes, including a consumer return request, gatekeeping, collection and transportation

(see chapter 4), and post-receipt RL processes, including processing, inspection, sorting and disposition (see chapter 5), demonstrating the importance of RLIT for the effective management of consumer returns.

Finally, organisations can *improve inventory management* and *control* by combining RLIT with other IT (like an ERP), implementing and utilising RL process specific IT (strategies) and utilising a facility for RLIT (operational requirement), implying that RLIT can facilitate with the operational management of consumer product returns.

6.3.3.3.3 Organisational and environmental outcomes of RLIT practices in RL

The *organisational outcomes* of RLIT practices in RL, include (1) addressing organisational barriers, (2) enhancing RL design, innovation and capabilities, (3) improving RL performance, and (4) improving RLM and information management. Particularly, organisations can *address organisational barriers in RL* (such as lack of attention and commitment to RL) (see section 2.3.3) by prioritising, developing and investing in RLIT practices, which emphasise the significance of organisational commitment (organisational requirement) for the effective utilisation of RLIT (see section 6.3.3.2).

Although RLIT involves the development of innovative capabilities, organisations can *enhance RL design*, *innovation* and *capabilities* through the RLIT practices of developing a RLIT infrastructure, developing and implementing RLIT, using RLM IT (strategies) and management involvement (organisational requirement), which demonstrates the importance of a cost-benefit analysis for RLIT (section 6.3.3.1).

Furthermore, organisations can *improve RL performance* through the RLIT strategies of developing innovative capabilities and implementing a coordinated RLIT, emphasising economic performance improvement (economic outcome) and RL process speed, efficiency and support (operational outcomes) (see sections 6.3.3.3.1 and 6.3.3.3.2). Similarly, organisations can *improve RLM* and *information management* by developing and implementing a coordinated RLIT, using product return IT (e.g. return tracking IT) (RLIT strategies) and partnering with 3PRL providers (SC requirement), demonstrating the value of RLIT practices for the effective management of consumer returns.

Finally, like other IT practices (e.g. general IT, TLIT and barcode/RFID IT), RLIT can be beneficial for the environment, involving an *environmental outcome*. Particularly, implementing and using RLIT for RL can lead to *environmental protection,* which serves as one of the drivers to manage consumer returns (see section 2.3). Consequently, RLIT not only addresses barriers to RL

implementation (such as operational and organisational barriers) but also contributes to the drivers of effective RLM.

6.3.3.3.4 Market-related and SC outcomes of RLIT practices in RL

The *market-related outcomes* of RLIT practices include a competitive advantage, meeting consumer needs and improving customer service. Specifically, organisations can obtain a *competitive advantage* by identifying, creating, procuring, implementing and utilising a modern RLIT for RL (strategy) and being committed to RL (organisational requirement). Evidently, using outdated or inappropriate IT for RL can hamper an organisation's competitiveness in the market, reiterating the importance of a cost-benefit analysis for RLIT (see section 6.3.3.1).

Organisations can *meet consumer needs* by strategically utilising RLM IT (e.g. returns management system) for RL and involving management (organisational requirement), emphasising the RLIT operational outcome of increased RL process flexibility (section 6.3.3.3.2). Similarly, organisations can *improve customer service* levels by developing innovative RLIT capabilities, utilising RLM IT for RL (RLIT strategies), investing in RLIT (economic requirement) and involving management (organisational requirement), which demonstrates the importance of RLIT to manage consumer returns.

Finally, the *SC outcomes* of RLIT practices involve information sharing and communication. Specifically, organisations can *improve SC information sharing* and *communication* by developing a RLIT infrastructure and developing and implementing an integrative and transparent RLIT, emphasising the importance of SCI as a SC requirement for RLIT (see section 6.3.3.2).

In the next section, a description and conceptual framework of RLIT in RL will be presented and analysed.

6.3.3.4 Description and conceptual framework of RLIT practices to manage consumer returns

Based on the findings, presented in section 6.3.3, RLIT practices can be important for the management of consumer returns, and will be described as follows:

> RLIT practices for the management of consumer returns involve (1) RLIT strategies, including prioritising RLIT, strategic considerations, a cost-benefit analyses, identification, creation, development and procurement of RLIT, development of innovative capabilities, development of a RLIT infrastructure, development and implementation of an integrative, transparent and coordinated RLIT, combination and integration of RLIT with other IT, implementation and utilisation of product return and RL process related IT and RLM IT systems, utilisation of hardware and software for RL, and implementation and utilisation of a modern and flexible RLIT, and (2) RLIT requirements, including economic requirements (investment, financial obligation and costs), operational requirements (facilities, office space and furniture), organisational requirements (organisational

commitment, management involvement, IT staff support, and staff training), and SC requirements (SCI, 3P software suppliers and 3PRL providers).

The RLIT strategies and requirements can result in several outcomes, including (1) economic outcomes (economic performance, cost effectiveness, reduce costs and profitability), (2) operational outcomes (address operational barriers, improve forecasting, visibility and tracking of product returns, address IT barriers, reduce human error and manual operations, improve RL process speed, flexibility and efficiency, facilitate and support RL processes, and improve inventory management and control), (3) organisational outcomes (address organisational barriers, improve RL design, innovation and capabilities, and improve RL performance, RLM and information management), (4) environmental outcome (environmental protection), (5) market-related outcomes (competitive advantage, meet consumer needs and improve customer service), and (6) SC outcomes (improve SC information sharing and communication).

Figure 6.9 provides a conceptual framework of RLIT, which includes the RLIT strategies, requirements and outcomes to manage consumer returns.

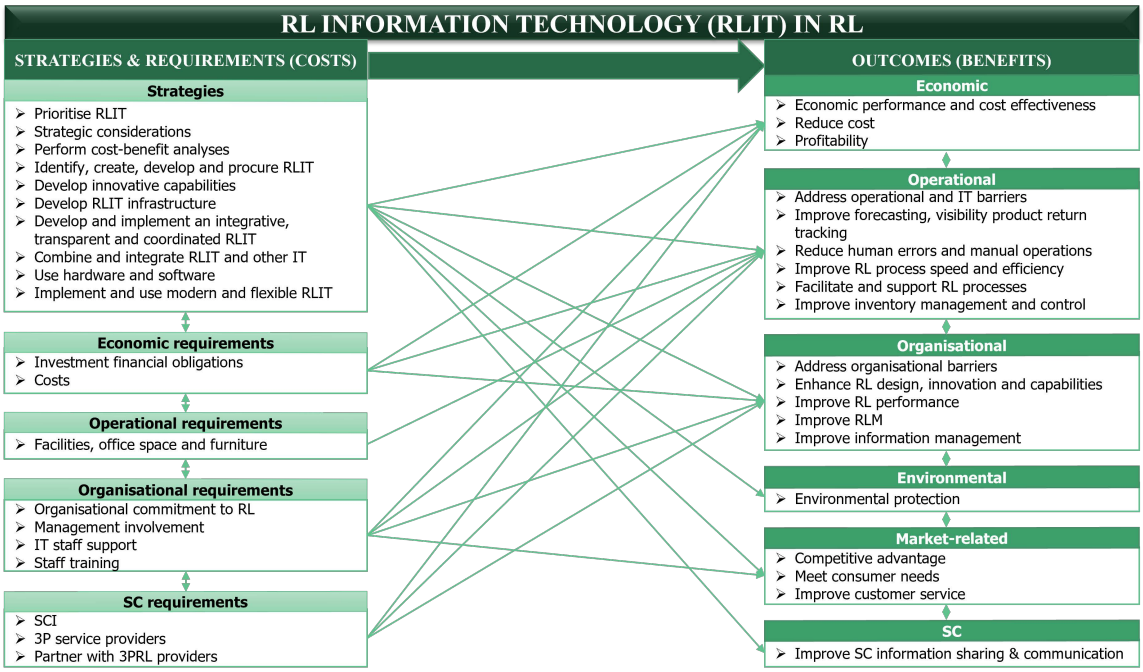


Figure 6.9 Conceptual framework of RLIT practices to manage consumer returns
Source: Compiled by researcher

Figure 6.9 illustrates the links between the strategies, requirements and outcomes of RLIT in RL, demonstrating a cost and benefit relationship. For instance, the links between RLIT strategies and requirements can be demonstrated by the economic requirement of costs, which links with the RLIT strategies of strategic considerations, cost-benefit analysis, RLIT infrastructure, procuring RLIT and using hardware and software for RLIT, and other requirements, including office space and furniture (operational), IT staff support and staff training (organisational), and 3P service provider (SC) requirements.

Regarding the links between RLIT strategies, requirements and outcomes, the framework demonstrates that RLIT strategies can be the most significant practice category, linking with all the RLIT outcomes, including economic, operational, organisational, environmental, market-related and

SC outcomes. Therefore, organisations must pay attention to the RLIT strategies to achieve optimum results to manage consumer returns. From the RLIT requirements, organisational requirements contribute to the most outcome categories (four) and operational requirements to the least outcome categories (one), which means that organisations must focus on the organisational requirements for effective RLM.

Regarding the outcomes of RLIT practices, operational outcomes can be the most significant outcome category (associated with most of the practice categories), which means that RLIT practices can be the most beneficial for organisations that experience operational barriers and problems in RL. In contrast, the environmental and SC outcomes can be the least significant outcomes (only linked with the RLIT strategies), meaning that RLIT practices may be less important for organisations that seek environmental and SC benefits through RL practices.

Finally, the framework shows that the RLIT outcomes can be linked, for example, improvement in visibility, reduction in manual operations and RL process flexibility, efficiency and support (operational outcomes) can link with economic performance and cost reduction (economic outcomes), improvements in RL performance, RLM and information management (organisational outcomes), environmental protection (environmental outcome), meeting consumer needs and improvement of customer service (market-related outcomes), and improvement in SC sharing and communication (SC outcomes).

Essentially, the links between the RLIT strategies, requirements and outcomes demonstrate the importance of a holistic approach to the management of consumer returns, meaning that organisations must carefully consider and analyse the costs (strategies and requirements) and benefits (outcomes) before implementing RLIT for the effective management of consumer returns.

In the next section, a conceptual framework and summary of findings for IT practices (discussed in section 6.3) to manage consumer returns will be presented and described.

6.3.4 Conceptual framework and summary of findings for IT practices to manage consumer returns

This section provides a conceptual framework and summary of findings for IT practices to manage consumer returns. The findings presented in section 6.3 showed that all IT practices can be important for the management of consumer returns. Figure 6.10 provides a conceptual framework for IT practices to manage consumer returns.

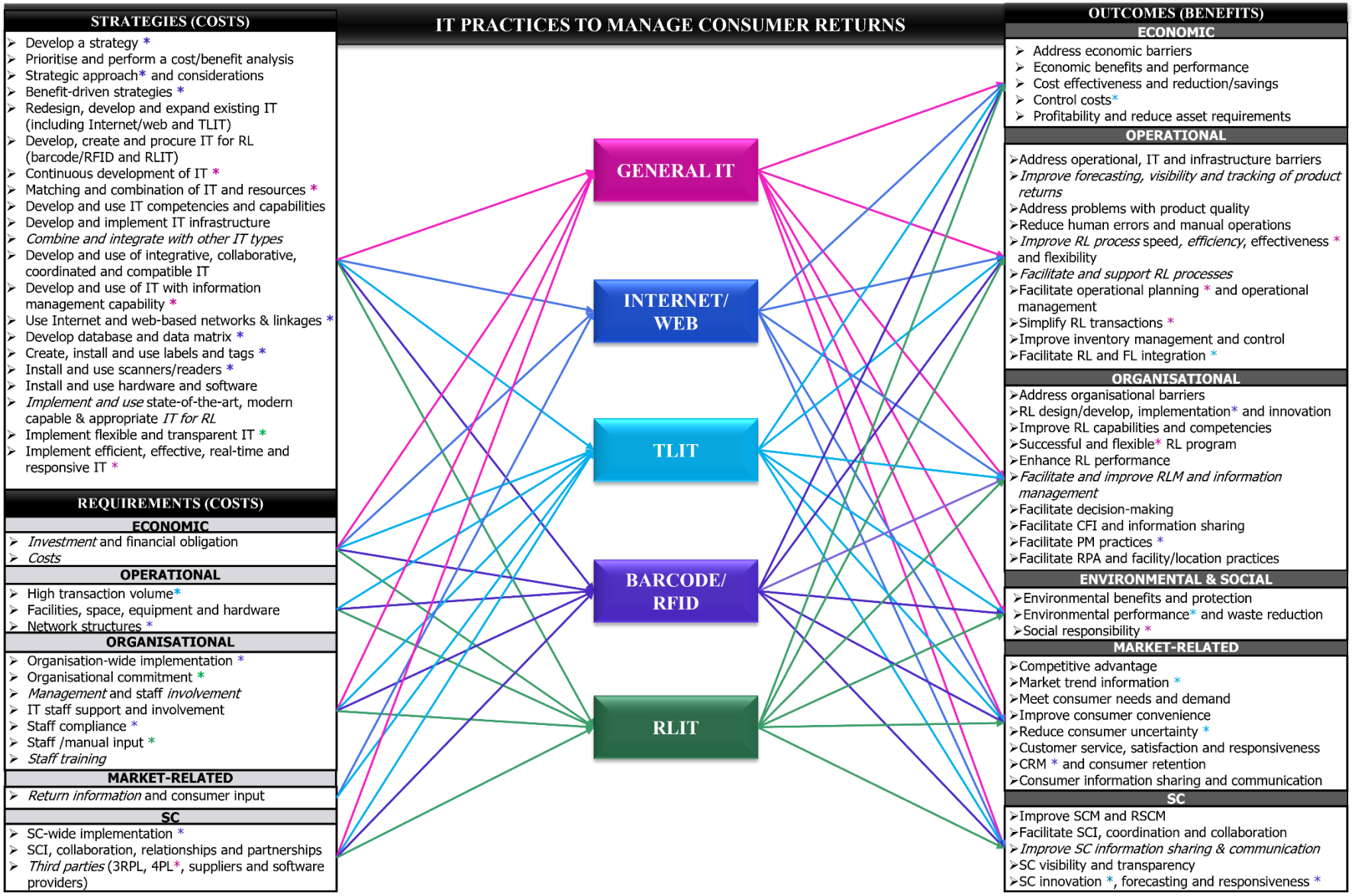


Figure 6.10 Conceptual framework of IT practices to manage consumer returns
Source: Compiled by the researcher

Specifically, Figure 6.10 illustrates a summary of the findings related to the IT practices, including general IT, Internet/web-based IT, TLIT, barcode/RFID IT and RLIT practices, focusing on the combined strategies and requirements (costs) and outcomes (benefits) as well as the relationship between the costs, IT types and benefits. Furthermore, *the most significant* (all IT types linked to the) strategies, requirements and outcomes of IT practices are emphasised through *italics*, while *unique requirements and outcomes* (only applicable to a single practice) are emphasised with a *coloured asterisk* (*) (linked to the practice colour). The strategies, requirements and outcomes without italics and asterisks can be associated with at least two IT practices.

Based on Figure 6.10 and the discussions given in section 6.3, Table 6.9 provides a summary of the findings and managerial implications for IT practices to manage consumer returns.

Table 6.9 Summary of findings and managerial implications for IT practices to manage consumer returns

CATEGORY	KEY FINDINGS	MANAGERIAL IMPLICATIONS
Strategies	• All IT types, including general IT, Internet/web, TLIT, barcode/RFID and RLIT involve strategies • All IT types can be combined and integrated with other IT types to be implemented and used for RL • All IT types (except Internet/web) must be prioritised in RL • General IT, barcode/RFID and RLIT involve strategic considerations, a cost-benefit analysis, IT infrastructure and implementation and use of state-of-the-art/modern IT • General IT, Internet/web and RLIT involve development of capabilities or competencies and development and use of integrative, coordinated/collaborative and compatible IT • TLIT, barcode/RFID and RLIT involve hardware and software • Internet/web and TLIT involve redesign, development and expansion of existing IT for RL • Barcode/RFID and RLIT involve creation, development and procurement of IT for RL • Only general IT involves strategies related continuous development of IT, combining and matching IT with resources, development and use of IT with information management capability and implementation of efficient, effective, real-time and responsive IT • Only Internet/web-based IT involves strategies related to a strategic approach to the use of Internet and web-based networks and linkages • Only barcode/RFID IT involves strategies related to benefit-driven strategies, development of database and data matrix, and the creation, installation and use of labels/tags and readers/scanners • Only RLIT involves the strategy related to implementation and use of flexible and transparent IT	• For effective IT practices in RL, organisations must focus on IT strategies • For any type of IT in RL, organisations must focus on the strategies related to combining and integrating with other IT types and implementing and using IT for RL • Organisation must prioritise IT practices (except Internet/web) in RL • For general IT, barcode/RFID and RLIT strategies, organisations must focus on strategic considerations, cost-benefit analysis and implementing and using state-of-the-art/modern IT for RL • For general IT, Internet/web and RLIT strategies, organisations must focus on developing capabilities/competencies, and developing and using integrative, coordinated/collaborative and compatible IT • For TLIT, barcode/RFID and RLIT strategies, organisations must focus on installing and using hardware and software • For Internet/web and TLIT strategies, organisations must focus on the redesign, development and expansion of existing IT for RL • For barcode/RFID and RLIT strategies, organisations must focus on the creation, development and procurement of IT for RL • For general IT strategies, organisations must focus on continuous development of IT, combining and matching IT with resources, develop, implement and use efficient, effective, real-time and responsive IT with information management capability • For Internet/web-based IT strategies, organisations must develop a strategic approach and focus on using Internet and web-based networks and linkages • For barcode/RFID IT strategies, organisations must focus on benefit-driven strategies, developing a database or data matrix, and the creation, installation and use of labels/tags and readers/scanners • For RLIT strategies, organisations must focus on implementing flexible and transparent RLIT
Requirements	• All IT types involve *economic requirements*, including investment and costs with some form of financial obligation • TLIT, barcode/RFID and RLIT involve *operational requirements*, especially facilities, space and equipment • All IT types (except Internet/web) involve *organisational requirements*, including management involvement, staff training and a form of staff involvement (IT staff and general staff) • Internet/web and TLIT involve the *market-related requirement* of consumer return information and input • All IT types (except Internet/web) involve *SC requirements*, including third parties (3PRL, suppliers or software providers), and some forms of relationship and SCI (collaboration and partnerships) • Only TLIT involve the operational requirement of high volume and the organisational requirement of staff/manual input • Only barcode/RFID involve the operational requirement of network structures, the organisational requirement of organisation-wide implementation and the SC requirement of	• For effective IT practices in RL, organisations must be willing to invest and incur costs • Organisations must focus on operational requirements related to facilities/space and equipment for TLIT, barcode/RFID and RLIT practices • Organisations must involve management, train staff and involve IT and/or general staff for effective IT practices (except Internet/web) • For Internet/web and TLIT, organisations must focus on obtaining consumer return information • Organisations must focus on external relationships with third party providers and suppliers and some form of SCI, including collaboration and partnerships for effective IT practices (except Internet/web) • For TLIT, organisations must focus on transaction volume and staff/manual input • For barcode/RFID, organisations must focus on network structures and organisation- and SC-wide implementation • Organisations must commit to RL for effective RLIT practices • Organisations can consider 4PLs for general IT practices in RL

	SC-wide implementation • Only RLIT involves the organisational requirement of organisational commitment • Only general IT involves the SC requirement of 4PL providers	
Outcomes	• All IT practices involve benefits for RLM • All IT practices involve *economic outcomes*, but uniquely, TLIT can control costs • All IT practices (except RLIT) involve the economic outcome of addressing economic barriers in RL • All IT practices (except TLIT) involve the economic outcomes cost effectiveness, savings and reduction • General IT, TLIT and barcode/RFID practices involve the economic outcome of economic benefits • General IT, barcode/RFID and RLIT involve the economic outcome of enhancing economic performance • General IT, TLIT, and RLIT practices involve the economic outcome of profitability • Internet/web and TLIT practices involve the economic outcome of reducing asset requirements • All IT practices involve *operational outcomes*, including improvements in product return forecasting, visibility, and tracking, RL process efficiency, and facilitate/support RL processes, but uniquely, general IT improve RL process effectiveness, facilitate operational planning and simplifies RL transactions and TLIT facilitates RL/FL integration • General IT, Internet/web and RLIT practices involve the operational outcomes of addressing operational barriers in RL, including problems with product quality, and increase RL flexibility • All IT practices (except TLIT) involve the operational outcome of addressing IT barriers in RL • All IT practices (except general IT) involve the operational outcome of increasing RL process speed • All IT practices (except Internet/web) involve the operational outcomes of improving product return or inventory control • Internet/web, barcode/RFID and RLIT practices involve the operational outcomes of reducing operational errors and inconsistencies • TLIT, barcode/RFID and RLIT practices involve the operational outcome of reducing manual operations • General IT, barcode/RFID and RLIT practices can facilitate inventory management • All IT practices involve *organisational outcomes*, including facilitating and improving RLM and information management, but uniquely, general IT can increase RL program flexibility and barcode/RFID can facilitate RL implementation and performance management (PM) • All IT practices (except TLIT) involve the organisational outcome of enhancing RL performance • General IT, barcode/RFID and RLIT practices involve the organisational outcome of addressing organisational barriers in RL • General IT, TLIT and barcode/RFID practices involve the organisational outcomes of a successful RL program, and facilitating internal information sharing and facility/location practices • Barcode/RFID and RLIT practices involve the organisational outcome of facilitating RL design and development • General IT and RLIT practices involve the organisational outcomes of facilitating RL innovation and increasing RL capabilities and competencies • General IT and TLIT practices involve the organisational outcomes of facilitating decision-making and CFI practices • TLIT and barcode/RFID practices involve the organisational outcome of facilitating RPA practices • All IT practices (except Internet/web) involve *environmental outcomes*, but uniquely, TLIT can improve environmental performance • General IT, TLIT and barcode/RFID practices involve the environmental outcome of environmental benefits • General IT and TLIT involve the environmental outcome of reducing waste • General IT and RLIT practices involve the environmental outcome of environmental protection • Only general IT involves the *social outcome* of social responsibility (CSR) • All IT practices involve *market-related outcomes*, but uniquely, TLIT can provide market trend information and reduce	• Organisations that experience economic barriers in RL can consider all IT practices (except for RLIT) • Organisations that experience high RL costs and cost ineffectiveness can consider all IT practices (except TILT) • To control RL costs, organisations can consider TLIT practices • Organisations that seek economic benefits in RL can consider general IT, TLIT and barcode/RFID practices • To enhance economic performance in RL, organisations can consider general IT, barcode/RFID and RLIT practices • Organisations that seek higher profitability in RL can consider general IT, TLIT and RLIT practices • To reduce asset requirements in RL, organisations can consider Internet/web and TLIT practices • Organisations can implement all IT practices to improve product return forecasting, visibility and tracking, improve RL process efficiency and facilitate/support RL processes • Organisation can implement general IT practices to improve RL process effectiveness, facilitate operational planning and simplify RL transactions • To facilitate RL/FL integration, organisations can consider TLIT • Organisations that experience operational barriers in RL, including problems with product return quality, can consider general IT, Internet/web and RLIT practices • Organisations can consider general IT, Internet/web and RLIT practices for a flexible RL process • Organisations that experience IT barriers in RL can consider all IT practices (except TLIT) • For speedy RL processes, organisations can consider all IT practices (except general IT) • Organisations can implement all IT practices (except Internet/web) to improve product return or inventory control • To reduce operational errors and inconsistencies, organisations can consider Internet/web, barcode/RFID and RLIT practices • Organisations can implement TLIT, barcode/RFID and RLIT practices to reduce manual operations • Organisations can implement all IT practices to facilitate and improve RLM and information management • For a flexible RL program, organisations can implement general IT practices • Organisations can consider barcode/RFID practices to implement RL and facilitate PM • For greater RL performance, organisations can consider all IT practices (except TLIT) • Organisations that experience organisational barriers in RL can implement general IT, barcode/RFID and RLIT practices • For a successful RL program, organisations can consider general IT, TLIT and barcode/RFID practices • For internal information sharing and communication problems, organisations can consider general IT, TLIT and barcode/RFID • Organisations can consider general IT, TLIT and barcode/RFID practices to facilitate facility/location practices in RL • To design or develop effective RL, organisations can consider barcode/RFID and RLIT practices • For RL innovation, capabilities and competencies, organisations can consider general IT and RLIT practices • Organisations can consider general IT and TLIT to facilitate decision-making in RL • Organisations that experience problems with internal integration (CFI) can consider general IT and TLIT practices • Organisations that seek to reduce or avoid product returns can consider TLIT and barcode/RFID practices • Organisations can implement all IT practices (except Internet/web) for various environmental benefits • Organisations that seek to improve environmental performance can consider TLIT • For greater environmental benefits, organisations can consider general IT, TLIT and barcode/RFID practices • To reduce waste, organisations can consider general IT and TLIT • For environmental protection, organisations can consider general IT and RLIT practices • Organisations that seek social benefits, like CSR, in RL can consider general IT practices • Organisations can implement TLIT to access market trend information and reduce consumer uncertainty

	consumer uncertainty and general IT can facilitate CRM (managing consumer relationships) • All IT practices (except TLIT) involve the market-related outcomes of meeting consumer needs/demands and improving customer service • General IT, barcode/RFID and RLIT practices involve the market-related outcome of providing a competitive advantage • General IT, Internet/web and TLIT practices involve the market-related outcomes of facilitating consumer information sharing and communication • TLIT and barcode/RFID practices involve the market-related outcomes of improving consumer experience and responsiveness • General IT and Internet/web practices involve the market-related outcomes of improving consumer/customer satisfaction • All IT practices involve *SC outcomes*, including SC information sharing and communication, but uniquely, TLIT can facilitate SC innovation and barcode/RFID can improve SC forecasting and responsiveness • All IT practices (except RLIT) involve the SC outcomes of facilitating SCI and SC cooperation, and enhancing SC visibility • General IT, Internet/web and barcode/RFID practices involve the SC outcomes of facilitating SCM and SC collaboration • TLIT and barcode/RFID involve the SC outcomes of facilitating and improving reverse supply chain management (RSCM)	• For effective CRM, organisations can consider general IT practices • To meet consumer needs/demands and improve consumer/customer service, organisations can consider all IT practices (except TLIT) • To achieve a competitive advantage, organisations can consider general IT, barcode/RFID and RLIT practices • For consumer information sharing and communication problems, organisations can implement general IT, Internet/web and TLIT practices • To improve consumer experience and responsiveness, organisations can consider TLIT and barcode/RFID practices • Organisations can consider general IT and Internet/web practices to improve consumer satisfaction • Organisations that experience SC information sharing and communication challenges in RL, can consider all IT practices • To improve SC innovation, organisations can consider TLIT practices • To improve SC forecasting and responsiveness, organisations can consider barcode/RFID practices • Organisations that experience SCI and coordination barriers in RL can consider all IT practices (except RLIT) • For better SC visibility in RL, organisations can implement all IT practices (except RLIT) • For greater SCM and SC collaboration in RL, organisations can consider general IT, Internet/web and barcode/RFID practices • For better RSCM, organisations can consider TLIT and barcode/RFID • Organisations that experience various economic, operational, organisational, market-related and SC challenges in RL can consider all IT practices • Organisations that experience various economic, operational, organisational, environmental, social, market-related and SC challenges in RL can implement general IT practices • Organisations with specific RL problems and inefficiencies in consumer returns can implement the relevant IT practices that can address the specific RL problems

Source: Compiled by the researcher

Table 6.9 provides an in-depth understanding into the value of IT practices to manage consumer returns. Essentially, the findings show that general IT, Internet/web, TLIT, barcode/RFID, RLIT practices can be important for the management of consumer returns, but before implementing a specific IT system in RL a strategy/cost-benefit analysis must be performed. The importance of IT systems as a RL practice, will further be explored in the interviews with industry experts (chapter 8).

In the next section, integration practices to manage consumer returns will be presented, discussed and analysed.

6.4 INTEGRATION PRACTICES TO MANAGE CONSUMER RETURNS

The integrations RL practices mainly involve the internal and external relationships needed for effective management of consumer returns. The external relationships involve supply chain integration (SCI) and consumer integration (CI), while the internal relationships involve cross-functional integration (CFI). According to According to Bernon *et al.* (2011:495), Soltany *et al.* (2018:780) and Dapiran and Kam (2017:831) poor internal and external integration can be detrimental to the RL performance of retailers. Evidently, to effectively manage consumer returns, organisations must implement integration practices in RL.

Figure 6.**11** provides a distribution of these mentioned integration categories based on the results of the QCA of RL literature (see Appendix C.4).

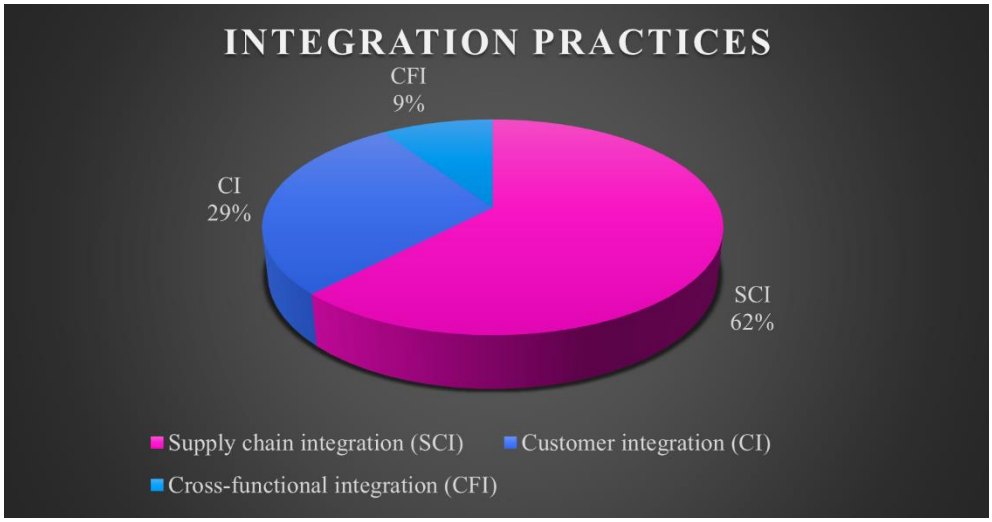


Figure 6.11 Distribution of integration practices in RL
Source: Compiled by the researcher

Figure 6.**11** shows that from the integration practices, SCI (62%) received the most attention in RL literature (from the QCA), while CI (29%) received moderate attention in RL literature. In contrast, CFI (9%) received the least attention, demonstrating a gap in RL literature. Consequently, RL literature focuses significantly on external relationships, meaning that these practices may be regarded as more important to manage consumer returns. Nevertheless, internal integration can be just as important, as Janse *et al.* (2010:508) explained that collaboration on all levels, including different departments within the organisation, is important to manage consumer returns. In fact, Asham and Rahman (2021:21) explains that internal integration is the starting point for effective external integration with SC parties.

In the subsequent sections the main integration categories will be discussed and analysed. The section concludes with a conceptual framework and summary of findings for integration practices to manage consumer returns.

6.4.1 Supply chain integration (SCI) to manage consumer returns

In this study SCI was identified as an umbrella term for the RL practices related to SC relationships, including collaboration, coordination, information sharing between SC partners and other strategic sharing initiatives, which can be viewed as critical for effective RLM. Consequently, SCI can be described as an important RL practice that involves the establishment of SC relationships between RL parties needed for a successful undertaking of RL (Agarwal *et al.* 2016:8).

Based on the findings (identified from the QCA of RL literature) SCI practices in RL involve (1) strategies of SCI, (2) requirements of SCI and (3) outcomes of SCI, which will be presented and discussed in subsequent sections. This section will conclude with a conceptual framework of SCI practices to manage consumer returns.

6.4.1.1 Strategies and requirements of SCI practices

SCI practices involve (1) several strategies, including general SCI strategies, strategic relationships, and strategic integration and sharing initiatives, and (2) few requirements, including economic, IT, operational, infrastructure and organisational requirements, which can contribute to the effective management of consumer returns. Table 6.10 provides an overview of the findings related to the *strategies and requirements of SCI* practices to manage consumer returns, including the categories, subcategories, supporting sources for the subcategories and key quotations that support both the subcategories and the discussion of the findings.

Table 6.10 Findings related to the strategies and requirements of SCI practices to manage consumer returns

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
General strategies in SCI	***Strategic approach***	None	• *"[…] integrated supply chain approach is taken to the management of returns […]."* (Bernon & Cullen, 2007:46) • *"[…] joint management (or collaborative) approach will likely be used […]."* (Lau & Wang, 2009:460) • *"[…] a life-cycle approach for products and materials is important […] for […] all members of the supply chain."* (Sarkis *et al.* 2010:347)
	Prioritise SCI practices	None	• *"[…] organisations can implement a variety of first-priority practices, such as […] sharing information with supply chain partners."* (Badenhorst, 2016:9)
	Strategic considerations	Kannan, (2009:399) Kannan *et al.* (2009:28)	• *"When companies consider implementing reverse logistics, they should also study the ability of their business partners and their reputations. High flexibility and capability of the partners are required because high variability exists in reverse flow."* (Ho *et al.* 2012:42) • *"[…] one critical issue that the supply chain nodes must consider is to be able to share information to support any decision level (strategic, tactical and operational) […]."* (Hernández *et al.* 2011:83) • *"3PLs are playing an increasing role in supporting such integrated supply chain management using sophisticated information systems and dedicated equipments."* (Ko & Evans, 2007:364) • *"[…] 4PLs have become logical alternatives for business process outsourcing by providing […] integration across multiple enterprises."* (Mukhopadhyay & Setaputra, 2006:718)
	Perform cost-benefit analyses	None	• *"It is critical for managers to take stock of the high costs involved in the reverse supply chain and realise that many of these costs can be mitigated through […] collaboration with supply chain partners."* (Jayaraman *et al.* 2008:424)
	Benefit driven strategies	None	• *"[…] collaborative […] approach will likely be used when reverse logistics is regarded as a source of long-term profit."* (Lau & Wang, 2009:460)
	Strategic definition of SCI	None	• *"[…] companies stated the need to define, a priori, collaborative objectives, scope, responsibilities, sharing of risk, and reward."* (Li & Olorunniwo, 2008:384)
	Strategic attainment of RL commitment and support from SC parties	Guarnieri *et al.* (2015:216) Khor *et al.* (2016:104)	• *"All supply channel members must be committed to the RL process."* (Sarkis *et al.* 2010:347) • *"The performance of supply chains rests […] with the disparity in the degree of resource commitment among supply-chain parties […] for the development of an RL programme.* (Sharif *et al.* 2012:2519) • *"[…] support from business partners is crucial for any company when considering the implementation of reverse logistics."* (Ho *et al.* 2012:42)
	Strategic negotiations	None	• *"[…] vendor agreements need to be strategically negotiated—not just accepted blindly Supplier agreements […] for each element of the RL process, and how the credit reconciliation process will function."* (Rogers *et al.* 2013:44) • *"[…] bargaining power is a factor key to the profit of participants in a reverse supply chain negotiation […]."* (Sheu & Gao, 2014:324) • *"The manufacturer and the retailer should negotiate a mechanism to let both of them reveal the information truthfully."* (Chen, 2011:485)
	Strategic development and utilisation of contracts	Hsu *et al.* (2009:525)	• *"Contract terms and conditions with suppliers are one of the most important factors for RL implementation."* (Agrawal *et al.* 2016d:20) • *"Contracts once enacted enforce the legal obligation of parties within the relationship."* (Breen, 2006:545) • *"Contracts are used in both relationships; between businesses, which dictates expected performance […]."* (Breen, 2006:545)
	Strategic communication in the SC	de Oliveira *et al.* (2012:1604) Huscroft *et al.* (2013b:316) Lhafiane *et al.* (2015b:397)	• *"Communication can be seen as a critical partnership attribute in supply chain alliances […] and a source of risk if communication is lacking."* (Breen, 2006:546) • *"Communication is essential to coordinating transactions and interactions […]."* (Huscroft *et al.* 2013a:238)

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
	Strategic collaboration in the SC	Hernández *et al.* (2011:83) Janse *et al.* (2010:508) Jayaraman *et al.* (2008:424) Morgan *et al.* (2016:304) Olorunniwo and Li (2010:454, 460) Prakash and Barua (2015:602) Ruiz-Benitez and Muriel (2014:574)	• *"Trading partners need to look at how they can work in a more collaborative way to achieve mutual benefit."* (Bernon *et al.* 2011:495) • *"Collaboration with a third-party software provider […] related to returned products."* (Bernon & Cullen, 2007:54) • *There is a need for collaborative initiatives in the supply chain and amongst retailers […]."* (Abraham, 2011:225) • *"[…] collaboration could extend to working with competitors."* (Bernon & Cullen, 2007:51)
	Strategic cooperation and coordination in the SC	Ho *et al.* (2012:39) Huscroft *et al.* (2013b:319) Ruiz-Benitez and Muriel (2014:574) Sarkis *et al.* (2010:348) Xiao *et al.* (2010:171) Xie and Breen (2014:457)	• *"Successful reverse logistics requires the whole-hearted participation of all the parties in the supply chain […]."* (Lau & Wang, 2009:459) • *"The successful RL implementation needs […] coordination & cooperation from supply chain partners."* (Prakash & Barua, 2015:600) • *"Reverse logistics requires supply chain members to coordinate […]."* (Vahabzadeh *et al.* 2015:335)
	Strategic collaboration, cooperation and coordination in the RSC	Prakash and Barua (2015:603) Jayaraman *et al.* (2008:424) Olorunniwo and Li (2010:455)	• *"Strategic collaboration with reverse chain partners […] Company should engage with reverse chain partners […]."* (Agarwal *et al.* 2016:3) • *"The ability to collaborate with various players in the reverse chain is as important as in the forward supply chain."* (Li & Olorunniwo, 2008:384) • *"[…] cooperation between reverse supply chain members […] provides complementary synergism."* (Sheu & Gao, 2014:324) • *"[…] managers should place efforts on the integration and coordination of the reverse supply chain […]."* (Bouzon *et al.* 2016:192)
	Strategic utilisation of incentives	None	• *"Some incentives to coordinate […] the supply chain […]."* (Ruiz-Benitez & Muriel, 2014:574) • *"[…] using appropriate incentives and […] to establish long-term partnering for mutual benefits."* (Das, 2012:1439)
	Strategic development of SC transparency, trust and loyalty	Shaik and Abdul-Kader (2014:97)	• *"[…] requires transparency and openness from both manufacturer and retailer […]."* (Mafakheri & Nasiri, 2013:193) • *"[…] collaborative process management requires building trust […]."* (Olorunniwo & Li, 2010:460) • *"[…] trust and efficient information sharing with business partners are essential for business success."* (Ho *et al.* 2012:42) • *"Loyalty and trust within a customer–supplier relationship are needed […] to promote a nurturing partnership."* (Breen, 2006:535)
	Strategic SCRM	None	• *"[…] supplier relationship management form the critical links in the supply chain and returns management […]."* (Janse *et al.* 2010:511)
	Strategic development of PM for SCI	None	• *"Performance measure […] Relationships […] Maintain long term relations and alliances among RL partners."* (Shaik & Abdul-Kader, 2012:30)
	Strategic review, assessment and maintenance of SCI practices	None	• *"Strategies involved […] reviewing and revising the status of their collaboration periodically."* (Li & Olorunniwo, 2008:384) • *"[…] reviewing relationship progress between businesses […]."* (Breen, 2006:546) • *"[…] companies have to maintain collaborative relations with both upstream and downstream members involved in reverse logistics programs."* (Ravi & Shankar, 2015:883)
Forms of strategic SC relationships	***SC consortiums***	Kilic *et al.* (2015:130)	• *"[…] joint consortium may be one of the options for handling returns […], for example common collection centre […]."* (Agrawal *et al.* 2016d:21)
	SC agreements and arrangements	Hazen *et al.* (2015:167) Jack *et al.* (2010:233)	• *"Establishing formal agreements […] providing a complete logistics solution related to the returns flows of goods […]."* (Genchev, 2009:143) • *"[…] vendor agreements need to be strategically negotiated—not just accepted blindly Supplier agreements […] for each element of the RL process […]."* (Rogers *et al.* 2013:44) • *"Retailers have contractual agreements with manufacturers regarding the collection of returned products."* (Das, 2012:1441) • *"[…] information sharing arrangements with partners were rated good or very good, indicating the level of importance placed on this aspect as a strategic competitive tool."* (Li & Olorunniwo, 2008:384)
	Contractual relationships	Breen (2006:545) Flygansvær *et al.* (2008:8) Xu *et al.* (2015:89)	• *"[…] retailer develops contractual relationships in order to promote partnerships that are oriented towards effective reverse logistics […] Formal contracts outline the goals, responsibilities and benefits of the supply chain partner relationship."* (Jack *et al.* 2010:233)
	Strategic long-term relationships	Ho *et al.* (2012:42) Olorunniwo and Li (2010:457)	• *"[…] building a strategic and long-term relationship, sharing information and risks, understanding the processes of other players and collaborating with each other, firms reap benefits."* (Yoo, 2014:151)
	Strategic partnerships	Ho *et al.* (2012:42) Olorunniwo and Li (2010:460) Sheu and Gao (2014:314) Vlachos (2016:4)	• *"[…] strategic partnerships between suppliers and buyers in supply chains, which are important in mutual relationship."* (Guarnieri *et al.* 2015:216) • *"Strategic partnerships with supply chain partners […]."* (Janse *et al.* 2010:507) • *"The key partners include payment service providers, technology providers and logistics providers. They are critical to the success of both retailers, and hence significant effort is devoted to creating a close partnership including frequent contacts, links through automated services and personal relationship assistants."* (Beh *et al.* 2016:11)

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
	Strategic alliances	Breen (2006:546) Zhou and Zhou (2015:59)	• *"A strategic alliance allows a company to take advantage of what it does well and enables it to seek partners who have strengths in other areas."* (Agrawal & Choudhary, 2014:20) • *"Alliances: collaboration with suppliers and customer related to equipment, vehicles, warehouses, information technology, exchange of information, co-development of new services or products, exchange of knowledge."* (Guarnieri *et al.* 2015:217)
	Strategic collaborative relationships	Beh *et al.* (2016:23) Agarwal *et al.* (2016:3) Janse *et al.* (2010:500) Ravi and Shankar (2015:883)	• *"Strategic collaboration with reverse chain partners […]."* (Prakash & Barua, 2015:603) • *"[…] strong collaborative process relationships increase the likelihood that companies will exchange more critical information required to further enhance more collaborative supply chain strategies."* (Olorunniwo & Li, 2010:457) • *"[…] reverse logistics should benefit from the key relationships formed within the context of reverse logistics collaboration, given the joint information sharing that occurs."* (Morgan *et al.* 2016:297)
Strategic integration and sharing initiatives	***Implement integrated strategic plan for RL***	None	• *"[…] SCs would greatly benefit by implementing an RL integrated strategic planning model […] using appropriate incentives and […] can be effectively implemented by creating contractual arrangements […] to establish long-term partnering for mutual benefits."* (Das, 2012:1439)
	Strategic alignment of interest	None	• *"[…] characteristics of collaboration […] alignment of interest of individuals and organisations […]."* (Jayaraman *et al.* 2008:416) • *"The contracts are the means to which the participating actors align their self-interests with the common interests […]."* (Flygansvær *et al.* 2008:8)
	Strategic integration and standardisation of RL processes	None	• *"[…] collaborative process management. This later stage involves […] more fully integrated RL processes […] collaborative process management requires building trust, setting joint business goals, and designing inter-enterprise processes."* (Olorunniwo & Li, 2010:460) • *"[…] characteristics of collaboration: […] standardisation of processes."* (Jayaraman *et al.* 2008:416)
	Strategic sharing goals and objectives	Jack *et al.* (2010:233) Janse *et al.* (2010:507) Jayaraman *et al.* (2008:416) Li and Olorunniwo (2008:384)	• *"[…] collaboration can be defined as a way by which all the companies in a supply chain are actively working together toward common objectives […]."* (Hernández *et al.* 2011:82) • *"[…] collaborative process management requires […] setting joint business goals […]."* (Olorunniwo & Li, 2010:460)
	Joint strategic meetings	None	• *"Joint meetings of all members of supply chain […] can lead to better design of RL systems."* (Ravi & Shankar, 2015:881)
	Joint strategic planning	Cannella *et al.* (2016:46) Jayaraman *et al.* (2008:416) Morgan *et al.* (2016:295) Olorunniwo and Li (2010:460) Prakash and Barua (2015:603)	• *"Strategies involved include […] joint planning arrangements […]."* (Li & Olorunniwo, 2008:384) • *"[…] collaborative planning […] for a joint take-back system is often advisable."* (Schultmann *et al.* 2006:1035)
	Joint strategic problem solving	None	• *"[…] this later stage involves joint problem solving, […] and more fully integrated RL processes […]."* (Olorunniwo & Li, 2010:460)
	Joint strategic PM	None	• *"Strategies involved include […] jointly established performance measures, […] of their collaboration periodically."* (Li & Olorunniwo, 2008:384)
	Strategic sharing of knowledge	Guarnieri *et al.* (2015:217) Hernández *et al.* (2011:82)	• *"[…] supply chain partners […] between producers and retailers, approaching […] to share knowledge on RL […]."* (Janse *et al.* 2010:500) • *"[…] learning and knowledge-sharing programs for […] all members of the supply chain."* (Sarkis *et al.* 2010:347)
	Strategic integration and sharing of information	Chatfield and Pritchard (2013:166) Guarnieri *et al.* (2015:217) Hernández *et al.* (2011:81, 82) Ho *et al.* (2012:42) Huscroft *et al.* (2013b:316, 319) Jayaraman *et al.* (2008:424) Lhafiane *et al.* (2015b:397) Li and Olorunniwo (2008:384) Olorunniwo and Li (2010:457, 460) Shaik and Abdul-Kader (2014:97) Yoo (2014:151)	• *"[…] supply chain partners […] between producers and retailers, […]and enhance mutual trust between producer and vendor by sharing of information, both on performance as well as on cost."* (Janse *et al.* 2010:500) • *"[…] sharing […] information about customers or suppliers to collaboration partners are key strategic actions […]."* (Morgan *et al.* 2016:305) • *"All parties involved in the supply chain must be able to effectively relay accurate and timely information to each other […]."* (Huscroft *et al.* 2013a:232) • *"[…] the benefit of collaborative practices usually refers to the sharing of information on customer demand, inventory levels, in-transit items and other operational factors."* (Cannella *et al.* 2016:46) • *"The information integration between enterprises and supply chain is an important basis for implementing reverse logistics."* (Shi *et al.* 2012:225)
	Strategic integration and sharing of IT	Guarnieri *et al.* (2015:217)	• *"[…] integrating reverse logistics systems and processes with those of supply chain partners […]."* (Partida, 2011:64) • *"[…] all players in the supply chain must work collaboratively and utilize [sic] the same system […]."* (Kumar *et al.* 2009:197)
	Strategic sharing of resources	None	• *"[…] key players in the reverse supply chain ought to coalesce resources […]."* (Khor *et al.* 2016:104) • *"Financial resources that are made available across the supply chain (e.g. cash resources, access to financial markets) […]."* (Sharif *et al.* 2012:2519)
	Strategic sharing infrastructure and facilities	None	• *"Joint consortium […] exploring such kind of business model, for example common collection centre for all used cellular phones […]."* (Agrawal *et al.* 2016d:21)

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
			• *"Joint consortium […] for joint reprocessing/recycling facilities."* (Agrawal *et al.* 2016d:25) • *"[…] collaboration with suppliers and customer related to equipment, vehicles, warehouses […]."* (Guarnieri *et al.* 2015:217)
	Strategic sharing of responsibilities	Agrawal *et al.* (2016d:21) Li and Olorunniwo (2008:384) Jack *et al.* (2010:233)	• *"To achieve better coordination in the closed-loop supply chain, it is necessary to design a collection responsibility sharing mechanism among the supply chain members."* (Shi *et al.* 2015:389) • *"Collaboration may also extend to companies operating shared services. An example could be the shared collection of returns […]."* (Bernon & Cullen, 2007:54)
	Strategic sharing of costs	None	• *"Incorporation of cost-sharing, among the supply chain members, with respect to managing product returns."* (Narayana *et al.* 2014:395)
	Strategic sharing of risks	Yoo (2014:151)	• *"[…] collaboration can be defined as a way by which all the companies in a supply chain are […] sharing […] risks […]."* (Hernández *et al.* 2011:82) • *"Strategies involved […] collaborative […] sharing of risk […]."* (Li & Olorunniwo, 2008:384)
	Strategic sharing of profits and rewards	Jack *et al.* (2010:233)	• *"[…] collaboration can be defined as a way by which all the companies in a supply chain are […] sharing information […] profits."* (Hernández *et al.* 2011:82) • *"Strategies involve […] collaborative […] sharing of [...] reward."* (Li & Olorunniwo, 2008:384)
	Strategic implementation of integrated SCM	Li and Olorunniwo (2008:385)	• *"A growing number of companies have begun to realize [sic] the importance of the implementation of integrated supply chain management […]."* (Kannan, 2009:399) • *"[…] integrated supply chain, in which all participating members' decisions are fully coordinated […]."* (Lee & Rhee, 2007:216)
Economic requirement	***Costs***	None	• *"The total cost of ownership (TCO) […] based on collaboration with suppliers."* (García-Rodríguez *et al.* 2013:586) • *"It is critical for managers to take stock of the high costs involved in the reverse supply chain […]."* (Jayaraman *et al.* 2008:424)
IT requirements	***IT competency***	None	• *"[…] combination of collaboration and an IT competency produce a complex resource […]."* (Morgan *et al.* 2016:298)
	Utilise IT	Ho *et al.* (2012:43) Ko and Evans (2007:364) Li and Olorunniwo (2008:384) Morgan *et al.* (2016:295) Prakash and Barua (2015:603)	• *"[…] also collaborate with suppliers, distributors, and 3PL providers using information technology […]."* (Lau & Wang, 2009:459) • *"Information sharing of reverse logistics will be fully shared through the Internet information flow […]."* (Shi *et al.* 2012:228) • *"[…] companies should use the electronic data interchange system (EDI) and other information technologies to establish an information sharing platform between the upstream and downstream of the process."* (Shi *et al.* 2012:222) • *"[…] contract information available to the decision makers as real-time as possible, such as on the secure information portal of the corporate web site."* (Hsu *et al.* 2009:523) • *"[…] the use of RFID, all players in the supply chain must work collaboratively […]."* (Kumar *et al.* 2009:197)
	IT Infrastructure	None	• *"[…] if almost all members in the supply chain adapt the barcode system for information management, the remaining members will be pressured to develop the technology and infrastructure for integration."* (Ho *et al.* 2012:43) • *"[…] the lack of […] infrastructure and technology may be an obstacle to collaboration."* (Lau & Wang, 2009:459) • *"Information exchange […] to which data is accessible to partner firms through mutually agreed exchange infrastructure."* (Olorunniwo & Li, 2010:455)
	Compatible IT	Olorunniwo and Li (2010:454)	• *"[…] systems compatibility between specific supply chain partners can be difficult to arrange, but is nonetheless necessary for effective and efficient operation."* (Huscroft *et al.* 2013a:232)
Organisational requirements	***Management involvement***	None	• *"It is critical for managers to take stock of the high costs involved in the reverse supply chain and realise that many of these costs can be mitigated through […] collaboration with supply chain partners."* (Jayaraman *et al.* 2008:424) • *"[…] managers should place efforts on the integration and coordination of the reverse supply chain to attain shared responsibility for the returned product […]."* (Bouzon *et al.* 2016:192) • *"The ultimate goal of any RL manager is to eventually reach a relationship stage with strategic business partners that involve […] collaborative process management."* (Olorunniwo & Li, 2010:460) • *"Efficient leadership is needed to provide clear vision and value to reverse logistics programs and should demonstrate commitment to the reverse logistics activities by integrating all the members of the supply chain."* (Ravi & Shankar, 2015:887)
	Organisational commitment to RL	None	• *"[…] for staff to recognise and appreciate the internal commitment to providing a reverse logistics function as part of the wider supply chain, hence, engendering trust among supply-chain participants […]."* (Sharif *et al.* 2012:2523)
	CFI	Bernon *et al.* (2016:600)	• *"Inter-firm coordination and collaboration is almost impossible if not preceded by intra-firm coordination through information sharing."* (Olorunniwo & Li, 2010:456)

Source: Compiled by the researcher

Table 6.10 shows that SCI includes several strategies and requirements, which will be discussed in subsequent sections.

6.4.1.1.1 General strategies of SCI practices in RL

The general strategies of SCI in RL include (1) strategic approaches, (2) prioritising SCI practices, (3) strategic considerations, (4) performing cost-benefit analyses, (5) benefit-driven strategies, (6) strategic definition of SCI, (7) strategic attainment of RL commitment and support from SC parties, (8) strategic negotiations, (9) strategic development and utilisation of contracts, (10) strategic communication, collaboration, cooperation and coordination in the SC, (11) strategic collaboration, cooperation and coordination in the RSC, (12) strategic utilisation of incentives, (13) strategic development of SC transparency, trust and loyalty, (14) strategic SC relationship management, (15) strategic development of performance measurement (PM) for SCI, and (16) strategic review, assessment and maintenance of SCI.

SCI strategies must be initiated by developing and adopting a *strategic approach* for SCI, which can include an integrated SC approach, a collaborative approach and a life-cycle approach. Evidently, organisations must develop an approach that focus on long-term SC relationships to not only manage consumer returns effectively but also extend the life cycle of returned products. Like IT practices, *SCI practices* must be *prioritised* to manage consumer returns, which means that organisations must engage in information sharing and focus on developing SC relationships.

Certain *strategic considerations* can also be important for SCI, for instance, organisations must consider partnership selection before initiating SCI initiatives. Specifically, organisations need to consider SC partner capabilities, reputation, flexibility and willingness to share information, which can be important for managing consumer returns effectively. The SC partner capabilities may relate to IT capability, RL capability, RL expertise, RL infrastructure or even established relationships with other organising with strong RL capabilities (e.g. 3PRL providers). Evidently, organisations can consider outsourcing RL to third parties (e.g. 3PLs or 4PLs) for effective SCI. Additionally, third parties can facilitate with the IT requirements in SCI (see section 6.4.1.1.4), which can equally be important for effective SCI practices (such as information sharing).

Furthermore, like IT practices, organisations must *perform cost-benefit analyses* to recognise and identify RL costs as well as the benefits of SCI to mitigate high RL costs. However, organisations may also consider SCI practices (strategies and requirements) as the costs and the SCI outcomes as the benefits, which may demonstrate the significance of SCI to manage consumer returns. Consequently, SCI must involve *benefit-driven strategies,* which focus on long-term profitability and other benefits needed for adopting SCI practices.

Developing SCI strategies means that organisations must *strategically define SCI,* which may involve defining a strategic SC relationship (section 6.4.1.1.2) and sharing initiatives (section 6.4.1.1.3), like SC goals and objectives, party responsibilities, shared risks and shared profits/rewards. Additionally, organisations need to strategically *attain RL commitment* and *support* from *SC parties,* demonstrating that a lack of commitment and support in RL extend organisational (internal) barriers (see section 2.3.3) to include SC (external) barriers to effective RLM.

Strategic negotiations can be important in developing effective SC agreements and relationships. For instance, suppliers and retailers can negotiate every stage of the RL process, specifying the supplier responsibilities (such as dealing with defective and warranty returns, and providing credits/refunds or repairs) and retailer responsibilities (such as collecting defective products, inspecting and testing products, identifying disposition options and engaging with consumers). Nevertheless, strategic negotiations must involve bargaining power and transparency (sharing truthful information), ensuring that both parties' benefit from the agreement (e.g. enhanced profitability for both parties). Subsequently, *strategic development* and *utilisation* of *contracts* can be important for managing SC relationships. Evidently, organisations can develop contracts with partners that include the terms and conditions for dealing with consumers returns, enforcing RL responsibilities and specifying shared benefits, demonstrating the importance of defining SCI and negotiating effectively.

Additional strategies needed for effective SCI include strategic communication, collaboration, cooperation and coordination in the SC. Specifically, *strategic communication* can be important for other SCI strategies, like negotiations, SC coordination and SC relationships. In fact, a lack of communication can be source of risk for all SC parties and hamper effective information sharing, which can be detrimental to effective and efficient RLM. Likewise, *strategic collaboration* can be critical for SCI and form the basis of developing strategic collaborative relationships (see section 6.4.1.1.2). Consequently, organisations must start with collaborative initiatives, like collaborating with SC parties (such as suppliers and 3PL providers) and competitors (e.g. other retailers), for effective SCI. *Strategic cooperation* and *coordination* as elements of SCI mean that all SC parties must fully participate and engage in RL processes and practices for effective RL, demonstrating the importance of attaining RL commitment and support in the SC.

Strategic collaboration, *cooperation* and *coordination* in the *RSC* can be equally important for effective SCI in RL. Consequently, organisations must apply the same strategies of the forward SC to the RSC, collaborating, cooperating and coordinating with RSC partners (e.g. third-party buyers and recovery specialist, and 3PRL providers) (also see section 5.6). Accordingly, organisations can benefit from the *strategic utilisation* of *incentives* to encourage (R)SC partners to engage in collaborative and coordinative efforts and promote long-term relationships to manage consumer returns.

Part of the SCI strategies must be the continued development and maintenance of relationship initiatives. Particularly, *strategic development* of *transparency*, *trust* and *loyalty* between SC parties, involving openness, honesty and truthfulness, can be essential for maintaining and nurturing strategic relationships. Likewise, *strategic SC relationship management* can be important for managing SC relationships for effective RLM.

Furthermore, organisations must *strategically develop PM* in SCI to measure the effectiveness of the strategic relationships to manage consumer returns. Therefore, PM practices in RL can form an important part of SCI strategies in RL. Similarly, organisations must *strategically review*, *assess* and *maintain* SCI practices, which can include periodically reviewing and assessing collaborative efforts and SC relationships, and maintaining preestablished SCI strategies related to collaboration, coordination and cooperation.

6.4.1.1.2 Forms of strategic SC relationships in RL

Table 6.10 shows that the forms of strategic relationships in SCI can range from basic agreements to more complex strategic alliances and collaborative relationships. Evidently, the forms of strategic SC relationships in RL can include (1) SC consortiums, (2) SC agreements and arrangements, (3) contractual relationships, (4) strategic long-term relationships, (5) strategic partnerships, (6) strategic alliances, and (7) strategic collaborative relationships.

The more basic relationship formations in SCI, include consortiums, agreements and contractual relationships. *SC consortiums* (or joint consortiums) can be a basic from of a SC relationship, which involves sharing of RL processes and resources. Examples of joint consortiums can be several retailers sharing collection centres for consumer returns, emphasising the importance of collaborative initiatives with competitors (see section 6.4.1.2). While consortiums involve sharing of resources for RL between competitors, *agreements* and *arrangements* involve relationships between suppliers and retailers, which can be used as a competitive tool. Agreements relate to strategic negotiations (standard SCI strategy) to establish the responsibility of the supplier and the retailer in dealing with consumer returns, which can be bound through contracts. Arrangements can include information sharing between SC partners, which can be critical for effective RL processes and practices (see section 6.4.1.2).

Although agreements can be captured in contracts, SCI can also involve *contractual relationships*, which relates to the strategic utilisation of contracts to manage consumer returns. Therefore, organisations, like retailers, can focus on developing contractual relationships with other SC partners (like suppliers and 3PL providers), which involve terms and conditions, legal obligations, RL responsibilities and mutual benefits. For example, a retailer can develop a contractual relationship with

a 3PL provider for the collection and transportation of consumer product returns and with a supplier for the repairs of defective product returns.

More complex strategic relationships in RL can include strategic long-term relationships, partnerships, alliances and collaborative relationships. A *strategic long-term relationship* may be more appropriate for established parties in a mature SC since it involves sharing of information and risks, understanding each party's RL processes and collaboration. *Strategic partnerships* can be formed between suppliers and retailers and between retailers and other parties (such as IT providers and 3PL providers), extending basic SC agreements and contractual relationships. Strategic partnerships in RL involves more effort and commitment through frequent communication, integrated systems for information sharing and appointing staff to manage the relationship.

Strategic alliances can be more complex than strategic partnerships that involve active seeking of partners with strong capabilities to manage consumer returns effectively, emphasising the importance of strategic considerations in SCI (section 6.4.1.1.1). Like strategic partnerships, alliances include collaboration between SC parties but extend integrated systems and frequent communication to include strategic sharing of infrastructure (e.g. equipment and facilities), IT, information and knowledge, and collaborative development products and services for effective RLM.

Finally, *strategic collaborative relationships* can be described as the most complex form of SC relationships, involving multiple SC parties that work collaboratively together to improve the overall RLM of the SC. Strategic collaborative relationships can involve strategic integration and sharing initiatives, like integration of RL processes, common goals, joint information sharing, joint planning, joint meetings, joint PM, and sharing risks and rewards (see section 6.4.1.1.3). Regardless of the types of strategic integration and sharing initiatives, strategic collaborative relationships require several strategic management initiatives for the effective management of consumer returns.

6.4.1.1.3 Strategic integration and sharing initiatives for SCI practices in RL

As mentioned in the preceding discussion of relationship strategies, SCI in RL can involve strategic integration and sharing initiatives (see Table 6.10), which form part of strategic relationships to manage consumer returns. Particularly, strategic integration and sharing for SCI in RL include (1) implementing an integrated RL strategic plan, (2) strategic alignment of interest, (3) strategic development, integration and standardisation of RL processes, (4) strategic sharing of goals and objectives, (5) joint meetings, planning, problem solving and PM, (6) strategic sharing of knowledge, (7) strategic integration and sharing of information and IT, (8) strategic sharing of resources, (9)

strategic sharing of infrastructure and facilities, (10) strategic sharing of responsibilities, (11) strategic sharing of costs, risks, profits and rewards, and (12) strategic implementation of integrated SCM.

For effective strategic sharing and integrative initiatives, organisations can *implement an integrated RL strategic plan* for SCI, which means that organisations need to align RL goals, strategies, practices and processes. An integrated RL strategic plan can be implemented for less complex SC relationships (such as contractual relationships) but can be utilised for the development of more complex relationships, like strategic long-term relationships or partnerships.

Strategic alignment of *interest* associates with strategic collaboration and contracts, which means that SC parties move away from self-interests towards common interests to improve the RLM of consumer returns. Furthermore, *strategic integration* and *standardisation* of *RL processes* associate with collaborative relationships, in which, collaborating SC partners use the same RL processes and practices across the SC. Integrating and standardising RL processes requires other SCI strategies, like strategic development of trust and loyalty (general SCI strategy), integrated strategic RL plans and strategic sharing of goals.

Evidently, *strategic sharing* of *goals* and *objectives* can be important in collaborative relationships, not only involving setting joint goals (e.g. effective RLM) but also actively working towards achieving shared goals (e.g. implementing practices to achieve effective RLM). *Joint meetings* can be appropriate for any strategic initiative in SCI, including general SCI strategies, like negotiations, communication and cooperation, and strategic relationships like, SC agreements, contractual relationships, strategic partnerships, alliance and collaborative relationships, and other strategic sharing initiatives, like knowledge and information sharing.

Other management activities that can be strategically shared between SC partners involve joint planning, problem solving and PM, emphasising the implementation of an integrated strategic plan in RL and the general strategy of developing PM for SCI (section 6.4.1.1.1). Consequently, *joint planning, joint problem solving* and *joint PM* indicates that SC partners can operate as one entity to develop, implement, measure and manage RL processes effectively.

Strategic knowledge sharing can include the development of knowledge sharing programmes aimed at sharing RL knowledge between SC parties, indicating more complex strategic relationships, like strategic partnerships, alliances and collaborative relationships. In contrast, *strategic integration* and *sharing of information* can be important for any form of SCI, including general SCI strategies of negotiation, communication, development of transparency, trust and loyalty and implementation of integrated SCM (section 6.4.1.1.1) and various forms of strategic SC relationships (section 6.4.1.1.2).

Strategic information sharing can involve timely and accurate information sharing between SC parties on consumer demand, RL processes and activities, RL performance and RL costs, which can be important for the management of consumer returns.

Relating to integration and sharing of information, *strategic integration* and *sharing of IT* means that SC partners can choose to integrate IT systems or share and utilise the same IT, which can be critical for effective RLM. This confirms the importance of the IT practices relating to developing and implementing integrative IT for RL to benefit all SC parties (see section 6.3.1). Equally important for effective RLM can be *strategic sharing* of *resources*, which involve SC partners combining resources (such as finance, human and knowledge resources) for RL processes and practices. *Strategic sharing* of *infrastructure* and *facilities* for RL can be important for certain strategic relationships, including joint consortiums (e.g. several retailers using the same facility to process consumer returns) and collaborative relationships (e.g. sharing equipment, vehicles and facilities).

Strategic sharing of *responsibilities* can associate with the general SCI strategies of negotiation and utilisation of contracts (section 6.4.1.1.1), strategic relationships, like SC agreements, contractual relationships and collaborative relationships (section 6.4.1.1.2). Responsibilities may relate to the knowledge and competency of the SC parties in the relationship, for example, the 3PL provider being responsible for collection and transportation, the retailer being responsible for receiving, inspection, sorting, processing and basic disposition (e.g. direct reuse) and the supplier being responsible for product recovery (e.g. repair and refurbishment of used/damaged products). Alternatively, sharing responsibilities can involve sharing RL processes in which all SC parties in the relationship work collaboratively to perform specific RL processes. For example, a multichannel retailer can be responsible for in-store return collection, the 3PL provider for the pick-up collection from the consumer, and the manufacturer for the collection of warranty and defective consumer returns.

Relating to strategic sharing of IT, resources, and infrastructure can be *strategic sharing of costs* in RL. For instance, retailers using the same facility for RL can share rent and utility costs and SC parties using the same IT for RL can share the costs of procuring, implementing and maintaining the IT system, which may help addressing economic barriers (e.g. high costs) in RL (see section 2.3.1).

Strategic sharing of *risk*, *profits* and *rewards* associate with complex strategic SC relationships, like strategic long-term relationships, partnerships, alliances and collaborative relationships. Strategic sharing of risk can associate with sharing knowledge, information and costs, while strategic sharing of rewards and profits can associate with the outcomes of SCI, demonstrating the importance of performing a cost-benefit analysis in SCI (see section 6.4.1.1.1). The potential rewards and profits that

can be expected from strategic relationships and initiatives will be explored in the outcomes of SCI practices in RL (section 6.4.1.2).

Finally, organisations can *strategically implement integrated SCM*, ensuring that all SC parties participate in SCI and that all shared plans, goals, practices, processes and resources can contribute to the effective RLM of consumer returns.

6.4.1.1.4 Requirements of SCI practices in RL

Table 6.10 shows that the requirements of SCI practices in RL include economic, IT, and organisational requirements. The *economic requirement* of SCI involves costs of strategic relationships (such as TCO) and RL costs, emphasising the importance of performing a cost-benefit analysis (general SCI strategy) and strategic sharing of costs in SCI (sections 6.4.1.1.1 and 6.4.1.1.3).

The *IT requirements* of SCI include IT competency, utilising IT, IT infrastructure and compatible IT, demonstrating the important link between SCI and IT practices to manage consumer returns. Specifically, organisations can combine IT practices, like developing an *IT competency*, with SCI practices, like collaboration, to produce complex resources for the effective management of consumer returns. Additionally, *utilisation of IT*, like Internet/web-based IT, EDI and barcode/RFID IT, can be critical for SCI strategies like strategic communication, development of transparency and trust, strategic integration and sharing of information and IT (sections 6.4.1.1.1 and 6.4.1.1.3). Moreover, IT can facilitate capturing and storage of SC relationship data (such as contract details) and promote collaborative efforts needed to manage consumer returns (e.g. RFID implementation requires collaboration).

Likewise, the importance of an *IT infrastructure* in RL can encourage the adoption of SCI practices by all members of the SC and facilitate key elements of SCI including, communication, collaboration, coordination, transparency, integrated SCM, and strategic integration and sharing initiatives. Lastly, *compatible IT* can be important for more basic SC relationships, involving integration and sharing of information between SC parties through separate IT in RL. Consequently, a lack of IT in RL can hamper effective implementation of SCI practices, demonstrating the importance of a holistic approach to manage consumer returns.

Finally, the *organisational requirements* of SCI in RL include management involvement, organisational commitment to RL and CFI (internal integration). *Management involvement* can be important for the development and realisation of several SCI strategies, including performing a cost-benefit analysis for SCI, focussing efforts on strategic collaboration, coordination and cooperation in the (R)SC, seeking the development of strategic relationships (e.g. strategic partnerships and alliances)

and sharing of RL responsibilities (strategic sharing initiative), as well as for understanding high RSC costs.

Additionally, managers can be responsible for demonstrating commitment to RL, which can be important for attaining the SCI requirement of *organisational commitment to RL*. Consequently, without organisational commitment to RL, attaining RL support and commitment from SC parties (general SCI strategy) (section 6.4.1.1.1) would be futile. Similarly, *CFI* practices can be important for SCI since the inability to share information, knowledge and resources internally (between departments) can hamper effective external integration and sharing efforts between SC parties.

Essentially, SCI practices can involve several other RL practices, including IT (section 6.3), CFI (section 6.4.3), RL outsourcing (section 6.5), PM in RL (section 6.7) and management and staff practices (section 6.9.5), demonstrating the importance of a holistic approach to the effective management of RL. In the next section, the outcomes of the SCI strategies and requirements will be explored.

6.4.1.2 Outcomes of SCI practices in RL

The outcomes of SCI practices can be described as the results of incorporating the strategies and requirements of SCI needed for effective RLM of consumer returns. Like the strategies and the requirements, the outcomes (benefits) of SCI were divided into categories, namely economic outcomes, operational outcomes (related to RL processes), organisational outcomes, environmental outcomes, market-related outcomes and SC outcomes. Table 6.11 provides an overview of the findings related to the *outcomes of SCI* practices to manage consumer returns, including the categories, subcategories, supporting sources for the subcategories and key quotations that support both the subcategories and the discussion of the findings.

Table 6.11 Findings related to outcomes of SCI practices to manage consumer returns

CATEGORY	SUB-CATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
Economic outcomes	***Address economic barriers in RL***	None	• *"[…] collaboration allows for investment in assets specific to reverse logistics […]."* (Vlachos, 2016:4) • *"It is critical for managers to take stock of the high costs involved in the reverse supply chain and realise that many of these costs can be mitigated through […] collaboration with supply chain partners."* (Jayaraman *et al.* 2008:424) • *"[…] one of the key cost drivers of retail reverse logistics is poor integration between the various interfaces that exist between internal and external organisational actors."* (Bernon *et al.* 2011:495)
	Economic benefits and asset recovery	None	• *"Collaborations between supply chain partners may help to realise financially beneficial […] options."* (Beh *et al.* 2016:23) • *"Collaboration with supply chain partners helps […] maximize [sic] asset recovery."* (Partida, 2011:63)
	Reduce investment and asset requirements	None	• *"Joint consortium […] is being used by many companies reducing their investments […]."* (Agrawal *et al.* 2016d:21) • *"Joint consortium may help […] in reduced investment for joint reprocessing/recycling facilities."* (Agrawal *et al.* 2016d:25) • *"Owing to high asset value […] of RL processes, firms must develop RL related capabilities: […] sharing information, and collaborating with partners."* (Olorunniwo & Li, 2010:454)

CATEGORY	SUB-CATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
	Economies of scale	Kilic *et al.* (2015:130)	• *"[…] managers should place efforts on the integration and coordination of the reverse supply chain to attain shared responsibility for the returned product, augmenting scale gains […]."* (Bouzon *et al.* 2016:192) • *"Joint consortium […] such kind of business model, for example common collection centre […] economies of scale can be achieved."* (Agrawal *et al.* 2016d:21)
	Cost reduction and savings	Jayaraman *et al.* (2008:416, 424)	• *"If an integrated supply chain approach is taken to the management of returns, the opportunity for companies to reduce these associated logistics costs could be in the order of 20–40% […]."* (Bernon & Cullen, 2007:46) • *"[…] cost savings should be achieved by considering a collaborative process in this reverse logistics model for supply chains."* (Hernández *et al.* 2011:109) • *"[…] managers should place efforts on the integration and coordination of the reverse supply chain to […] lowering RL costs."* (Bouzon *et al.* 2016:192) • *"Joint consortium […] is being used by many companies reducing their […] operational costs. […] exploring such kind of business model, for example common collection centre for all used cellular phones may reduce collection cost […]."* (Agrawal *et al.* 2016d:21) • *"RL alliance is very likely to facilitate a reduction in RL operational costs […]."* (Sheu & Gao, 2014:314) • *"Due to the significant costs of establishing and maintaining such a recovery network, collaborative planning […] for a joint take-back system is often advisable."* (Schultmann *et al.* 2006:1035) • *"Such information exchange enhances operational efficiency in RL […], which can in turn lead to cost reductions […]."* (Olorunniwo & Li, 2010:456) • *"Collaboration may also extend to companies operating shared services. An example could be the shared collection of returns for all retailers […] to reduce transport cost."* (Bernon & Cullen, 2007:54)
	Profitability	Kim and Goyal (2011:2535) Lee and Rhee (2007:216) Li and Olorunniwo (2008:385) Partida (2011:63)	• *"[…] integrated supply chain approach […] enhance the profitability of retailers […]."* (Bernon & Cullen, 2007:55) • *"[…] in a reverse supply chain negotiation framework […] increased bargaining power in negotiations ensures increased profits."* (Sheu & Gao, 2014:324) • *"[…] a cooperative reverse supply chain can […] create new profit sources […]."* (Sheu & Gao, 2014:324) • *"[…] RL […] profitability is influenced by the efficiency achieved through coordination and integration."* (Sarkis *et al.* 2010:348) • *"Collaborations between supply chain partners […] may offer insights into the potential of second-life retailing in reverse logistics in creating new markets and profitable operations.* (Beh *et al.* 2016:23)
Operational outcomes	***Address operational barriers***	Huscroft *et al.* (2013a:232)	• *"[…] the operational barriers in reverse logistics included problems with product quality, limited forecasting and visibility, inadequate information and technology systems and developmental barriers. The practices that were identified for overcoming these barriers included […] collaborating and sharing information with supply chain partners."* (Badenhorst, 2016:10) • *"[…] collaborative, technology-enabled engagements should assist in addressing the growing problem of product returns."* (Morgan *et al.* 2016:295)
	Address forecast and visibility problems	None	• *"To address issues with limited forecasting and visibility in reverse logistics, organisations can implement a variety of first-priority practices, such as […] sharing information with supply chain partners."* (Badenhorst, 2016:9)
	Address IT barriers in RL	None	• *"Collaboration with a third-party software provider provided real-time information systems related to returned products."* (Bernon & Cullen, 2007:51) • *"To overcome the barrier of inadequate information technology systems, organisations can […] collaborate and share information with supply partners."* (Badenhorst, 2016:9)
	Facilitate product return tracking	Ho *et al.* (2012:42)	• *"For tracking to be most effective in the use of RFID, all players in the supply chain must work collaboratively and utilize [sic] the same system and processes […]."* (Kumar *et al.* 2009:197) • *"Such information exchange enhances operational efficiency in RL […] and product tracking […]."* (Olorunniwo & Li, 2010:456)
	Reduce uncertainties of product returns	None	• *"[…] collaboration […] specific to reverse logistics which reduces uncertainty."* (Vlachos, 2016:4) • *"All parties involved in the supply chain must be able to effectively relay accurate and timely information to each other; this information exchange mitigates some of the issues stemming from infrequent and unstable demands in the reverse process.* (Huscroft *et al.* 2013a:232)
	Facilitate and support RL processes	Olorunniwo and Li (2010:456)	• *"Successful cooperation with its supplier can smooth a product return process […]."* (Sharif *et al.* 2012:2527) • *"Collaboration through electronic media would enable fast, effective, efficient and timely communication that would facilitate […] RL activities."* (Prakash & Barua, 2015:603) • *"[…] having contractual arrangements in place with key suppliers and vendors […] are required to handle these returns."* (Jack *et al.* 2010:242) • *"The key partners […] are critical to the success of both retailer […] These partners perform a key role in facilitating reverse logistics […]."* (Beh *et al.* 2016:11) • *"[…] when collaboration is done in the presence of an IT competency, increased information sharing can improve the firm's ability to handle returns."* (Morgan *et al.* 2016:305)
	Improve RL process speed, efficiency and effectiveness	Olorunniwo and Li (2010:456)	• *"[…] RL […] collection, sorting, and processing […] efficiency achieved through coordination and integration."* (Sarkis *et al.* 2010:348) • *"[…] intra-organizational [sic] collaboration facilitates enhanced levels of RL processing effectiveness."* (Huscroft *et al.* 2013a:238) • *"Retailers and manufacturers can collaborate to streamline the collection and sorting process as well."* (Jayaraman *et al.* 2008:416) • *"[…] to reduce the delay in processing an RMA, the suppliers could collaborate with the retailers."* (Jayaraman *et al.* 2008:417) • *"[…] collaborative arrangements to manage final product dispositioning effectively."* (Bernon &

CATEGORY	SUB-CATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
			Cullen, 2007:54) • *"[…] the retailer develops contractual relationships in order to promote partnerships that are oriented towards effective reverse logistics."* (Jack *et al.* 2010:233) • *"[…] quick and accurate returns processing via effective information sharing […]."* (Morgan *et al.* 2016:295) • *"[…] reverse supply chain ought to coalesce resources to focus on quick redistribution to ensure that recovered products undergo extension of product lifecycle."* (Khor *et al.* 2016:104) • *"[…] the importance of the implementation of integrated supply chain management, […] for efficiently take returned products back from customers […]."* (Kannan, 2009:399) • *"IS that are designed to be compatible with trading partners appear to be instrumental in facilitating enhanced RL processing effectiveness."* (Huscroft *et al.* 2013a:238)
	Operational efficiency and inventory control	None	• *"Accurate and timely communication is important for attaining operational efficiency […] because of the complexities of the RL process […]."* (Huscroft *et al.* 2013b:316) • *"Successful cooperation with its supplier […] result in efficient logistics operations […]."* (Sharif *et al.* 2012:2527) • *"Such information exchange enhances operational efficiency in RL (e.g. speedy RMA and product tracking) […], which can in turn lead to […] improved in-stock performance […]."* (Olorunniwo & Li, 2010:456)
Organisational outcomes	***Facilitate RL planning, design and development***	None	• *"Strategic collaboration with reverse chain partners […] Company should engage with reverse chain partners for planning and improvement."* (Agarwal *et al.* 2016:3) • *"Joint meetings of all members of supply chain and particularly with the suppliers on occasional basis can lead to better design of reverse logistics systems."* (Ravi & Shankar, 2015:890) • *"Financial resources that are made available across the supply chain (e.g. cash resources, access to financial markets) […] for the development of an RL programme […]."* (Sharif *et al.* 2012:2519)
	Successful RL implementation	de Oliveira *et al.* (2012:1604) Lhafiane et el. (2015b:397)	• *"When companies consider implementing reverse logistics, they should also study the ability of their business partners and their reputations."* (Ho *et al.* 2012:42) • *"Contract terms and conditions with suppliers are one of the most important factors for RL implementation."* (Agrawal *et al.* 2016d:20) • *"[…] support from the upstream of the supply chain (suppliers and manufactures) has a significant positive effect on the implementation of reverse logistics […] Cooperation and […] A well-established relationship, trust, and efficient information sharing with business partners […] have a positive effect on the implementation of reverse logistics."* (Ho *et al.* 2012:42) • *"[…] successful RL implementation needs […] coordination & cooperation from supply chain partners."* (Prakash & Barua, 2015:600) • *"[…] an essential tool towards implementation of a sustainable RL is collaboration among the stakeholders."* (Agarwal *et al.* 2016:3) • *"The information integration between enterprises and supply chain is an important basis for implementing reverse logistics."* (Shi *et al.* 2012:225)
	Successful RL function	Xie and Breen (2014:457)	• *"Collaboration between the various stakeholders is an imperative tool for the successful RL undertaking."* (Agarwal *et al.* 2016:8) • *"Successful reverse logistics requires the whole-hearted participation of all the parties in the supply chain […]."* (Lau & Wang, 2009:459) • *"A well-established relationship, trust, and efficient information sharing with business partners are essential for business success."* (Ho *et al.* 2012:42)
	Focus on core competencies	None	• *"The strategic alliance formation benefits every member of the supply chain to focus on their core competencies."* (Agrawal & Choudhary, 2014:20)
	Enhance RL competencies	None	• *"[…] collaboration is needed for a reverse logistics competency to be achieved."* (Morgan *et al.* 2016:304) • *"[…] greater reverse logistics competency is achieved by firms that can combine high levels of collaboration with a high IT competency."* (Morgan *et al.* 2016:304)
	Facilitate RL innovation	Abraham (2011:224) Beh *et al.* (2016:23)	• *"[…] collaboration in supply chains is important in terms of innovation as partners realize [sic] the various benefits of innovation […]."* (Hernández *et al.* 2011:81)
	Enhance RL performance	Morgan *et al.* (2016:297)	• *"The contracts are the means to which the participating actors align their self-interests with the common interests […] and in this respect contribute to superior system performance."* (Flygansvær *et al.* 2008:8) • *"Collaboration also leads to greater RL performance."* (Olorunniwo & Li, 2010:460) • *"[…] because of the complexities of the RL process, communication and information sharing in the RL process has a significant influence on RL performance."* (Huscroft *et al.* 2013b:316) • *"Successful cooperation with its supplier can smooth a product return process and result in […] significant performance improvement."* (Sharif *et al.* 2012:2527) • *"By cooperating, reverse supply chain members can collectively enhance their performance."* (Sheu & Gao, 2014:324)
	Facilitate and improve RLM	Bernon and Cullen (2007:46)	• *"Communication is critical in managing returns effectively."* (Breen, 2006:546) • *"Supply chain coordination is another dynamic capability which is important for reverse logistics management. Coordination can be achieved via different governing mechanisms such as […] contracts, and partnership arrangements."* (Vlachos, 2016:4) • *"[…] supplier relationship management form the critical links in the supply chain and returns management is coordinated by them."* (Janse *et al.* 2010:511) • *"Managing reverse logistics is not the activity of just one […] actor in a supply chain. […] collaboration of all relevant […] channel partners is fundamental in realising improvements." (Janse et al. 2010:508)* • *"[…] integrated their reverse logistics systems and processes with those of their supply chain partners, allowing them to establish returns management initiatives that benefit all stakeholders."* (Partida, 2011:64)

CATEGORY	SUB-CATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
			• *"Incorporation of cost-sharing, among the supply chain members […] to managing product returns."* (Narayana *et al.* 2014:395)
	Facilitate decision-making	None	• *"[…] one critical issue that the supply chain nodes must consider is to be able to share information to support any decision level (strategic, tactical and operational) […]."* (Hernández *et al.* 2011:83) • *"[…] reverse logistic process, the decision-making process results in a complex process […] Therefore to support these complexities, the trend is […] collaborative configurations […] to exchange the proper information among each other […]."* (Hernández *et al.* 2011:80)
	Facilitate information management	None	• *"[…] collaboration in supply chains helps to achieve efficient information management."* (Hernández *et al.* 2011:83) • *"[…] if almost all members in the supply chain adapt the barcode system for information management, the remaining members will be pressured to develop the technology and infrastructure for integration* (Ho *et al.* 2012:43)
	Facilitate RPA practices	None	• *"There is evidence that an integrated supply chain approach to the issues would lead to significant avoidance of product returns."* (Bernon & Cullen, 2007:55) • *"In practice, when the retailers receive the returned product, they redirect the product to their forward suppliers through some cooperation mechanisms […]."* (Xu *et al.* 2015:89) • *"Collaboration with supply chain partners helps organizations [sic] avoid unnecessary product returns […]."* (Partida, 2011:63) • *"[…] electronic data interchange system (EDI) and other information technologies to establish an information sharing platform […] reduces the actual occurrence of reverse logistics […]."* (Shi *et al.* 2012:222)
Environmental outcomes	***Environmental sustainability***	None	• *"[…] integrated supply chain approach […] have a positive effect on sustainable distribution."* (Bernon & Cullen, 2007:55)
	Increase environmental responsibility	None	• *"Companies may enforce regulatory requirements in the contracts to meet the criteria for […] environmental perspectives."* (Agrawal *et al.* 2016d:20) • *"[…] a cooperative reverse supply chain can increase […] environmental responsibility."* (Sheu & Gao, 2014:324)
Market-related outcomes	***Competitiveness/ competitive advantage***	None	• *"[…] cooperative reverse supply chain can increase the competitiveness of all chain members […]."* (Sheu & Gao, 2014:324) • *"[…] effectiveness of following information sharing arrangements with partners […] as a strategic competitive tool."* (Li & Olorunniwo, 2008:384) • *"Strategic alliances (SA) are often used to […] improve the overall competitive position of a company."* (Agrawal & Choudhary, 2014:20) • *"[…] combination of collaboration and an IT competency produce a complex resource that will be difficult for competitors to replicate."* (Morgan *et al.* 2016:298) • *"Mutual access to databases among partners was considered important for competitive advantage […]."* (Li & Olorunniwo, 2008:384)
	Market growth and development	Beh *et al.* (2016:23)	• *"There is a need for collaborative initiatives in the supply chain and amongst retailers in order that market development, business growth and diversification may happen in the existing aftermarket."* (Abraham, 2011:225) • *"Establishing formal agreements […] providing a complete logistics solution related to the returns flows of goods results in more business […]."* (Genchev, 2009:143)
	Increase sales	None	• *"Such information exchange enhances operational efficiency in RL […], which can in turn lead to […] increased sales […]."* (Olorunniwo & Li, 2010:456)
	Identify and meet consumer needs/demands	None	• *"[…] communication is essential to meeting customer needs […]."* (Huscroft *et al.* 2013b:320) • *"With collaborations […] the market product match can be optimized [sic]."* (Abraham, 2011:225) • *"When information sharing is employed, all participants in the supply chain have access to the customer demand information."* (Chatfield & Pritchard, 2013:166)
	Improve consumer service and satisfaction	None	• *"Accurate and timely communication is important for […] maintaining customer satisfaction."* (Huscroft *et al.* 2013b:316) • *"[…] information integration in the reverse logistics, improving service levels […]."* (Shi *et al.* 2012:222) • *"Such information exchange enhances operational efficiency in RL […], which can in turn lead to […] improved customer satisfaction […]."* (Olorunniwo & Li, 2010:456)
SC outcomes	***Address SC barriers***	None	• *"[…] the lack of […] infrastructure and technology may be an obstacle to collaboration."* (Lau & Wang, 2009:459) • *"[…] barriers to SCI both in internal cross-functional processes and inter-organizational [sic] practices […]."* (Bernon *et al.* 2016:600)
	SC benefits	None	• *"[…] collaborate with suppliers, distributors, and 3PL providers using information technology to further optimize [sic] the whole supply chain operation […]."* (Lau & Wang, 2009:459) • *"All players in the reverse supply chain stand to gain through collaborations."* (Jayaraman *et al.* 2008:416)
	Facilitate SC relationships	None	• *"Communication is essential […] to strengthen and grow business relationships."* (Huscroft *et al.* 2013a:238) • *"Performance measure […] Relationships […] Maintain long term relations and alliances among RL partners."* (Shaik & Abdul-Kader, 2012:30) • *"[…] RL integrated strategic planning […] using appropriate incentives […] to establish long-term partnering for mutual benefits."* (Das, 2012:1439)
	Improve SC coordination	Huscroft *et al.* (2013b:320)	• *"Some incentives to coordinate […] the supply chain can be offered through contracts."* (Ruiz-Benitez & Muriel, 2014:574) • *"Communication is essential to coordinating […] interactions and it helps to strengthen and grow business relationships."* (Huscroft *et al.* 2013a:238) • *"To manage hurdle free coordination among SC partners, collaboration should be required."* (Prakash & Barua, 2015:602)

CATEGORY	SUB-CATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
			• *"To achieve better coordination in the closed-loop supply chain, it is necessary to design a […] sharing mechanism among the supply chain members."* (Shi *et al.* 2015:389) • *"Make e-collaboration for fast and effective coordination among SC members."* (Prakash & Barua, 2015:603) • *"Inter-firm coordination and collaboration is almost impossible if not preceded by intra-firm coordination through information sharing."* (Olorunniwo & Li, 2010:456)
	Enhance SC collaboration	Hernández *et al.* (2011:81) Morgan *et al.* (2016:297)	• *"SC collaboration practice may be achieved by sharing up-stream information […]."* (Cannella *et al.* 2016:46) • *"[…] information sharing leads to greater collaboration in RL […]."* (Olorunniwo & Li, 2010:460) • *"Inter-firm coordination and collaboration is almost impossible if not preceded by intra-firm coordination through information sharing."* (Olorunniwo & Li, 2010:456)
	Improve SC communication	None	• *"Communication can be facilitated through the contractual process […] reviewing relationship progress between businesses […]."* (Breen, 2006:546) • *"Loyalty and trust within a customer–supplier relationship are needed in order to promote a high-level communication […]."* (Breen, 2006:535) • *"Collaboration through electronic media would enable fast, effective, efficient and timely communication […]."* (Prakash & Barua, 2015:603)
	Facilitate SC information sharing	None	• *"[…] firms collaborate to share and integrate necessary information in the reverse supply chain in order to utilise timely and correct information."* (Jayaraman *et al.* 2008:424) • *"It has been shown that strong collaborative process relationships increase the likelihood that companies will exchange more critical information required […]."* (Olorunniwo & Li, 2010:457) • *"[…] all players in the supply chain must work collaboratively and utilize [sic] the same system and processes […] This ensures real time information flow which streamlines the ability for the reverse supply chain logistics."* (Kumar *et al.* 2009:197)
	Enhance SC trust	None	• *"[…] supply chain partners […] between producers and retailers, […] and enhance mutual trust between producer and vendor by sharing of information, both on performance as well as on cost."* (Janse *et al.* 2010:500) • *"[…] for staff to recognise and appreciate the internal commitment to providing a reverse logistics function as part of the wider supply chain, hence, engendering trust among supply-chain participants […]."* (Sharif *et al.* 2012:2523)
	Enhance SC visibility and predictability	None	• *"With collaborations, the supply chain may become more predictable […]."* (Abraham, 2011:225) • *"Loyalty and trust within a customer–supplier relationship are needed […] to promote […] visibility of information."* (Breen, 2006:535) • *"[…] integrating reverse logistics systems and processes with those of supply chain partners; establishing visibility of returns information throughout the reverse channel […]."* (Partida, 2011:64) • *"Such information exchange […] provides greater supply chain visibility […]."* (Olorunniwo & Li, 2010:456)

Source: Compiled by the researcher

Table 6.11 shows that SCI practices in RL associate with economic, operational, organisational, environmental, social, market-related and SC outcomes, which will be discussed in subsequent sections.

6.4.1.2.1 Economic outcomes of SCI practices in RL

The economic outcomes of SCI practices include (1) addressing economic barriers, (2) economic benefits and asset recovery, (3) reducing investment and asset requirements, (4) economies of scale, (4) cost savings and reduction, and (5) profitability. Like IT practices (section 6.3), SCI practices can *address economic barriers* in RL (like high financial investments and RL costs) (see section 2.3.1). Particularly, organisations can mitigate high financial investments through the general SCI strategy of collaboration, and high RL costs through a cost-benefit analysis (general strategies), strategic collaborative relationships (form of strategic SC relationship), management involvement and CFI (organisational requirements), emphasising strategic sharing initiatives of costs, infrastructure, IT and resources (section 6.4.1.1.3).

Furthermore, organisations can realise *economic benefits* and improve *asset recovery* through strategic collaborative relationships and *reduce investment* and *asset requirements* through strategic SC relationships, like consortiums and collaborative relationships, and strategic sharing of information. For example, sharing facilities in a joint consortium means that organisations can pool resources into one facility instead of investing into a new facility. Additionally, organisations can achieve *economies of scale* in RL through strategic reverse SC (RSC) coordination (general strategy), SC consortiums (strategic SC relationship), strategic sharing of infrastructure/facilities and responsibilities (strategic sharing initiatives), and management involvement (organisational requirement).

Various SCI practices can *reduce* or *save costs* in RL, including the (1) general SCI strategies of a strategic approach (integrated SCM), strategic collaboration in the SC and strategic coordination in the RSC, (2) SC relationships of SC consortiums, strategic alliances and strategic collaborative relationships, (3) strategic sharing initiatives of joint planning, and sharing of information, facilities and responsibilities, and (4) organisational requirement of management involvement. Particularly, an integrated SC approach can reduce total RL costs, consortiums and strategic alliances can reduce RL operational costs, and collaborative relationships, sharing facilities (such as collection centres) and sharing responsibilities (such as collection) can reduce RL collection and transport costs.

Finally, *profitability* can be enhanced through general SCI strategies, including a strategic integrated SC approach, negotiations, SC coordination and RSC cooperation, and strategic collaborative relationships, which demonstrate the importance of performing a cost-benefit analysis for SCI. Essentially, organisations with financial challenges in RL can benefit from the implementation of SCI practices for the effective management of consumer returns.

6.4.1.2.2 Operational outcomes of SCI practices in RL

Several operational outcomes associate with SCI, including (1) addressing operational barriers, (2) addressing forecasting and visibility problems, (3) addressing IT barriers in RL, (4) facilitating product return tracking, (5) reduce uncertainties of product returns, (6) facilitating and supporting RL processes and activities, (7) improving RL process speed, efficiency and effectiveness, and (8) operational efficiency and inventory control.

Specifically, *operational barriers*, including problems with product returns (e.g. uncertainties in quality, quantity and timing) and a lack of IT and infrastructure, can be *addressed* through strategic collaborative relationships, strategic information sharing, and utilisation of IT (requirement). Evidently, organisations can *address forecasting* and *visibility problems* in product returns by prioritising SCI (general strategy), engaging in strategic collaborative relationships and sharing information with SC

partners. Similarly, *IT barriers* in RL can be *addressed* through strategic collaboration (general strategy), strategic collaborative relationships and strategic information sharing, which emphasise the strategic integration and sharing initiatives related to integrated IT systems or shared IT systems in SC relationships (see section 6.4.1.1.3).

Moreover, *product return tracking* can be *facilitated* through strategic collaborative relationships, strategic sharing and integration of information and IT, and utilisation of IT (requirement), emphasising the importance of SCI for improved visibility of product returns. Consequently, organisations can *reduce product return uncertainties* through SCI practices, including strategic collaboration (general strategy) and strategic information sharing (such as timely and accurate information).

Several SCI practices can *facilitate* and *support RL processes*, including (1) general SCI strategies related to utilisations of contracts, communication, cooperation and collaboration, (2) strategic SC relationships, like SC agreements and partnerships, (3) strategic information sharing, and (4) IT requirements related to IT competency and IT utilisation. Likewise, various SCI practices can *improve* the *speed*, *efficiency* and *effectives* of *RL processes*, including (1) general SCI strategies related to cooperation and collaboration, (2) strategic SC relationships, like SC agreements, contractual relationships and strategic partnerships, (3) strategic sharing and integration initiatives, like sharing information, resources, infrastructure/facilities and responsibilities, and implementing integrated SCM, and (4) the IT requirement of compatible IT.

Particularly, SC coordination, collaboration, information sharing, strategic partnerships and compatible IT can be important for speedy, efficient and effective return processing. Additionally, SC coordination and collaboration can enhance the speed and efficiency of collection and sorting processes, SC collaboration and SC arrangements can enhance the effectiveness of product disposition, and strategic sharing of resources can enhance the speed of redistribution.

Finally, organisations can enhance *operational efficiency* through strategic communication, cooperation (general SCI strategies) and strategic information sharing, which can lead to better *inventory control*. Essentially, SCI practices can be critical for organisations that experience operational barriers and inefficiencies in the RL processes of consumer returns.

6.4.1.2.3 Organisational outcomes of SCI practices in RL

Several *organisational outcomes* can associate with SCI practices, including (1) facilitating RL planning, design and development, (2) successful RL implementation, (3) successful RL function, (4) focussing on core competencies, (5) enhancing RL competencies, (6) facilitating RL innovation, (7)

enhancing RL performance, (8) facilitating and improving RLM, (9) facilitating decision-making, (10) facilitating information management, and (11) facilitating RPA practices.

Particularly, SCI strategies, like strategic cooperation and collaboration in the RSC (general strategy), strategic collaborative relationships, strategic joint meetings and strategic sharing of resources, can *facilitate RL planning, design* and *development.* Furthermore, organisations can *successfully implement RL* through (1) general SCI strategies, like strategic considerations (e.g. appropriate and capable partners), attaining RL support from SC partners, utilising contracts, SC cooperation, coordination and collaboration, and developing SC trust, (2) strategic long-term relationships and (3) strategic integration and sharing of information. Consequently, a *successful RL function* can be realised through strategic cooperation and collaboration, strategic development of trust, strategic long-term relationships and strategic information sharing.

Furthermore, strategic alliances (SC relationship form) enable organisations to *focus* on their *core competencies.* However, organisations that seek to enhance *RL competencies* can consider SC collaboration (general strategy) or combining collaboration with IT competency (IT requirement). Moreover, strategic collaborative relationships can *facilitate RL innovation,* which can relate to the marketing-related outcomes of obtaining a competitive advantage and developing new markets (see section 6.4.1.2.4).

Additionally, the SCI strategies related to utilisation of contracts, communication, cooperation and collaboration in the SC, cooperation in the RSC (general strategies), alignment of interest and information sharing (strategic sharing initiatives) can *enhance RL performance*, which emphasise the operational outcomes related to RL process speed, efficiency and effectiveness (section 6.4.1.2.2). Moreover, organisations can *facilitate* and *improve RLM* through the (1) general SCI strategies related to utilisation of contracts, communication, collaboration, coordination and SC relationship management, (2) strategic SC relationships of SC arrangements, partnerships and collaborative relationships, and (3) strategic integration and sharing initiatives related to integration of RL processes and IT, cost sharing and the implementation of integrated SCM.

Additionally, strategic considerations (e.g. capabilities of partners), strategic collaboration and strategic information sharing between SC parties can *facilitate RL decision-making,* including strategic, tactical and operational decisions, which can add to the effective RLM of consumer returns. Moreover, strategic collaboration (general strategy), strategic collaborative relationships, and IT requirements, like IT systems and infrastructure, can *facilitate information management* in RL, emphasising the important link between IT practices and SCI practices.

Finally, SCI practices, including the (1) general SCI strategies of an integrated SC approach and SC cooperation, (2) strategic partnerships or collaborative relationships, (3) strategic information sharing, and (4) utilisation of IT (such as EDI) (IT requirement), can *facilitate RPA* (return prevention and avoidance) practices in RL (section 6.9.3). For example, cooperating with suppliers, a retailer may direct certain consumer returns (such as warranty and defects) directly to the supplier, which enables the retailer to reduce and avoid unnecessary consumer returns.

6.4.1.2.4 Environmental and market-related outcomes of SCI practices in RL

The *environmental outcomes* of SCI practices relate to environmental sustainability and increasing environmental responsibility. Particularly, adopting an integrated SC approach (strategic approach) enables *environmental sustainability*, and strategic utilisation of contracts and strategic cooperation in the RSC (general SCI strategies), can *increase environment responsibility*. For example, contracts can stipulate that SC parties implement environmentally responsible RL policies, which can enhance the environmental performance of the entire SC.

The *market-related outcomes* of SCI practices can include (1) competitiveness / competitive advantage, (2) market development and growth, (3) increasing sales, (4) identifying and meeting consumer demands/needs and (4) improving consumer service and satisfaction. Particularly, organisations can obtain *competitiveness* or a *competitive advantage* through several SCI practices, including strategic SC collaboration and RSC cooperation (general strategies), SC arrangements, strategic partnerships and alliances (strategic SC relationships), strategic information sharing, and IT competency (combine with collaboration) and utilisation (IT requirements).

Furthermore, strategic collaborative initiatives (general strategy) and SC agreements (relationship strategy) can enable *market development* and *growth* (of secondary markets), and strategic information sharing can *increase sales*, emphasising the economic outcome of profitability (see section 6.4.1.2.1). Additionally, organisations can *meet consumer* (or market) *demand/needs* through strategic communication, collaboration and information sharing between SC parties.

Likewise, strategic communication and strategic integration and sharing of information in the SC can *improve consumer service* and *satisfaction*, emphasising the RL process and operational efficiency outcomes of SCI (section 6.4.1.2.2). Consequently, the market-related outcomes demonstrate the importance of SCI for the effective and efficient RLM of consumer returns.

6.4.1.2.5 SC outcomes of SCI practices in RL

Several SC outcomes can associate with SCI practices, including (1) addressing SC barriers, (2) SC benefits, (3) facilitating SC relationships, (4) improving SC coordination, (5) enhancing SC collaboration, (6) improving SC communication, (7) facilitating SC information sharing, (8) enhancing SC trust, and (9) enhancing SC visibility and predictability.

Particularly, SCI requirements can *address SC barriers* in RL, for instance, a lack of SC collaboration and integration (see section 2.3.4) can be address through IT utilisation and infrastructure (IT requirements), and CFI (organisational requirement). Additionally, strategic collaboration in the SC (general SCI strategy) and utilisation of IT (requirement) can bring *SC benefits*, including enhanced operational efficiency of the entire SC and benefits for the RSC. Furthermore, SCI strategies, including communication, utilising incentives, developing of PM for SCI (general strategies), and implementing integrated RL strategic plans (strategic integration initiative), can *facilitate SC relationships* (such as strategic long-term relationships, partnerships and alliances).

Although SC coordination, collaboration, communication, information sharing and trust form part of the SCI strategies, various SCI practices can facilitate and improve the key strategic elements of SCI. Specifically, *SC coordination* can be *improved* through the strategic utilisation of contracts, communication, collaboration and incentives (general SCI strategies), utilisation of IT (requirement), and cross-functional integration (CFI) (organisational requirement). Additionally, strategic sharing of information and CFI can *enhance SC collaboration*, emphasising the importance of internal and external information sharing in RL. *SC communication* can be *improved* through strategic utilisation of contracts, SC collaboration, development of loyalty and trust (general strategies), and utilisation of IT (requirement) for SCI.

Additionally, *SC information sharing* can be *facilitated* through the (1) general SCI strategies of collaboration in the (R)SC, (2) strategic collaborative relationships, and (3) strategic integration and sharing initiatives of integrated RL processes and IT sharing. Moreover, SCI practices can *enhance SC trust*, including strategic partnerships, strategic information sharing and organisational commitment to RL (organisational requirement), demonstrating the importance of attaining RL commitment and support from SC partners (see section 6.4.1.1.1).

Finally, several SCI strategies can *enhance SC visibility* and *predictability*, including the (1) general SCI strategies of collaboration, trust and loyalty in the SC, (2) strategic SC relationship of partnerships, and (3) strategic integration and sharing initiatives of integrated RL processes, information sharing and integrated IT. Enhancing SC visibility and predictability emphasise the operational outcomes related to

addressing operational barriers (such as a lack of visibility and forecasting in RL), product return tracking and reducing product return uncertainty (section 6.4.1.2.2), demonstrating that SCI can provide operational excellence both internally (within the organisation) and externally (within the SC).

Essentially, SCI practices can address economic, operational, and SC barriers in RL (see section 2.3) and provide several economic, operational, organisational, environmental, market-related and SC benefits, which can contribute to the effective RLM of consumer returns.

In the next section, a description and conceptual framework of SCI practices will be presented and analysed.

6.4.1.3 Description and conceptual framework of SCI practices to manage consumer returns

Based on the findings presented in section 6.4.1, SCI practices can be important for the management of consumer returns, and will be described as follows:

> SCI practices for the management of consumer returns involve (1) general SCI strategies, including strategic approaches, prioritising SCI practices, strategic considerations, cost-benefit analyses, benefit-driven strategies, strategic definition of SCI, attainment of commitment and support from SC parties, negotiations, development and utilisation of contracts, communication, collaboration, cooperation and coordination in the SC, collaboration, cooperation and coordination in the RSC, utilisation of incentives, development of transparency, trust and loyalty, SC relationship management, development of PM for SCI, and review, assess and maintain SC practices, (2) forms of strategic SC relationships, including SC consortiums, agreements and arrangements, contractual relationships, strategic long-term relationships, partnerships, alliances and collaborative relationships, (3) strategic integration and sharing initiatives, including implementing an integrated strategic plan for RL, strategic alignment of interest, integration and standardisation of RL processes, strategic sharing goals and objectives, joint meetings, planning, problem solving and PM, sharing of knowledge, integration and sharing of information and IT, sharing of resources, infrastructure/facilities, responsibilities, costs, risks and rewards, and implementation of integrated SCM, and (4) SCI requirements, including economic requirement (costs), IT requirements (IT competency, utilise IT, IT infrastructure and compatible IT) and organisational requirements (management involvement, organisational commitment to RL and CFI).
>
> The SCI strategies and requirements can result in several outcomes, including (1) economic outcomes (address economic barriers, economic benefits and asset recovery, reduce investment and asset requirements, economies of scale, cost savings/reduction and profitability), (2) operational outcomes (address operational, forecasting, visibility and IT barriers, facilitate product tracking, reduce product return uncertainty, facilitate/support RL processes, improve RL process speed, efficiency and effectiveness, operational efficiency and inventory control), (3) organisational outcomes (facilitate RL design, design and development, successful RL implementation and function, focus on core competencies, enhance RL competencies, facilitate RL innovation, enhance RL performance, facilitate and improve RLM, and facilitate decision-making, information management and RPA), (4) environmental outcomes (sustainability and environmental responsibility), (5) market-related outcomes (competitiveness/ competitive advantage, market development and growth, increase sales, identify and meet consumer needs/demands, and improve consumer service and satisfaction), and (6) SC outcomes (address SC barriers, SC benefits, enhance SC relationships, improve SC coordination, enhance SC collaboration, improve communication, facilitate information sharing, and enhance SC trust, visibility and predictability).

Figure 6.12 provides a conceptual framework of SCI practices, which includes the SCI strategies, requirements and outcomes to manage consumer returns.

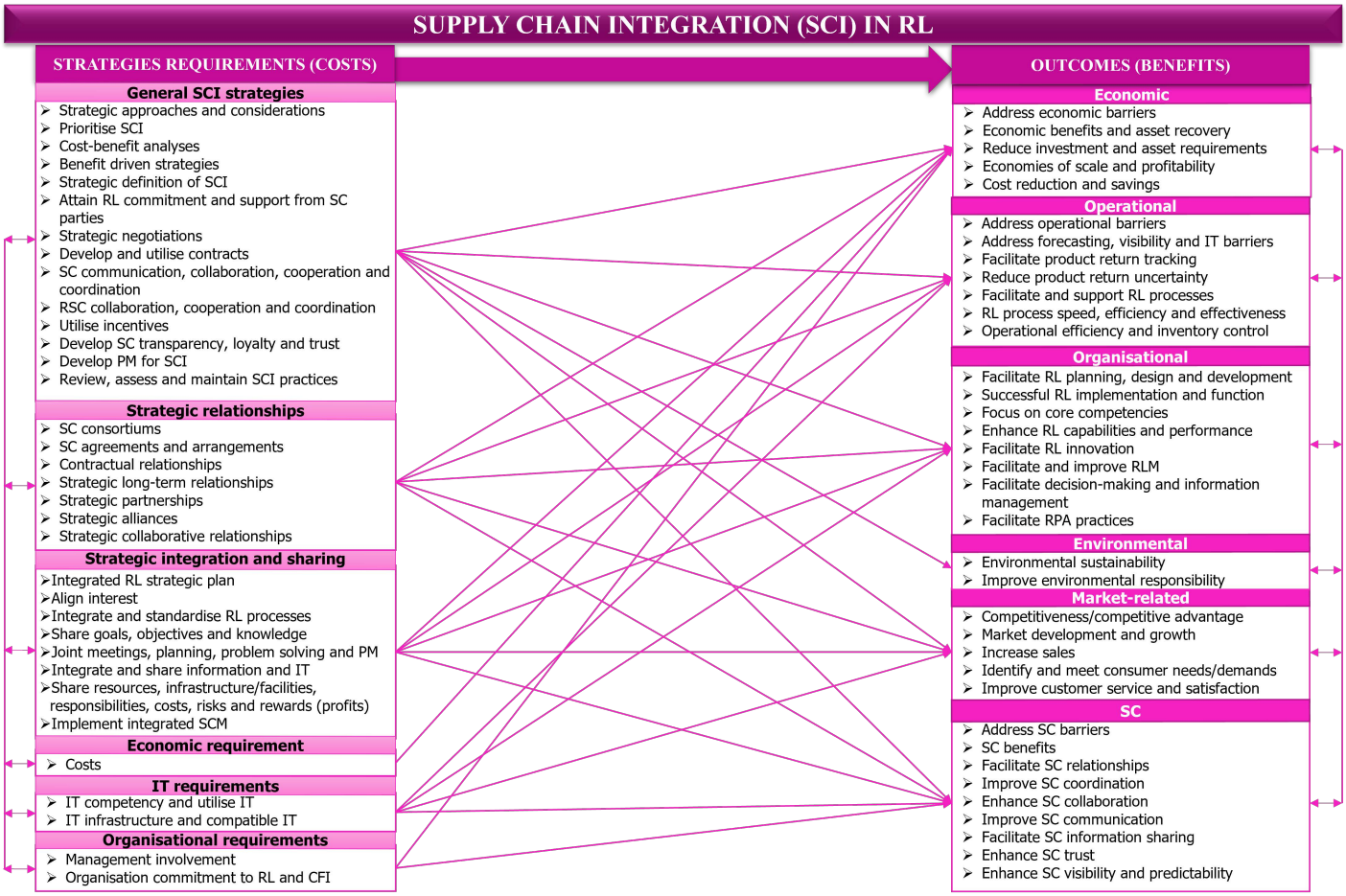


Figure 6.12 Conceptual framework of SCI practices to manage consumer returns
Source: Compiled by researcher

Figure 6.12 illustrates the links between the strategies, requirements and outcomes of SCI, demonstrating a cost and benefit relationship. For example, the links between SCI strategies and requirements can be demonstrated by the organisational requirement of management involvement, which links with general SCI strategies (such as performing cost-benefit analyses and (R)SC collaboration, coordination and cooperation), strategic relationships (such as strategic partnerships and alliances) and strategic sharing initiatives (sharing of RL responsibilities), and the economic requirement of cost. Similarly, the IT requirement of utilising IT for SCI, links with general SCI strategies (such as contracts, strategic communication, collaboration, development of transparency and trust), and strategic integration and sharing of information and IT.

Regarding the links between SCI strategies, requirements and outcomes, the framework demonstrates that general SCI strategies can be the most significant practice category, linking with all the SCI outcomes, including economic, operational, organisational, environmental, market-related and SC outcomes. Therefore, organisations must pay attention to general SCI strategies to achieve optimum results to manage consumer returns. From the SCI requirements, IT requirements contribute to the most outcome categories (four out of six), while the economic requirement contributes only to one outcome category.

Regarding the outcomes of SCI practices, economic and SC outcomes can be the most significant (associated with most of the practice categories), which means that SCI practices can be the most beneficial for organisations that experience economic and SC barriers and problems in RL. However, organisations with operational, organisational and market-related barriers can also benefit from SCI practices. In contrast, the environmental outcomes can be the least significant category, meaning that SCI practices may be less important for organisations that seek environmental benefits through RL practices.

Finally, the framework shows that the SCI outcome categories can be linked, for example, the operational outcome of RL process speed, efficiency and effectiveness can link with cost reduction/savings (economic outcome), enhanced RL performance (organisational outcome), increased consumer service (market-related outcome) and the SC benefit of improved operational efficiency (SC outcome).

Essentially, the links between the SCI strategies, requirements and outcomes demonstrate the importance of a holistic approach to the management of consumer returns, meaning that organisations must carefully consider and analyse the costs (strategies and requirements) and benefits (outcomes) of SCI for the effective management of consumer returns. In the next section, using CI as an integration RL practice to manage consumer returns will be explored.

6.4.2 Consumer[18] integration (CI) practices to manage consumer returns

Since the RL process starts with the consumer (Ravi & Shankar, 2015:890) the ability to satisfy consumers in the return process can be critical for the success of any organisation (Huscroft *et al.* 2013b:315). Despite being labelled as a critical practice, Bernon *et al.* (2011:497) indicated that limited RL research focuses on consumer integration (CI), which corresponds with the findings of this study (see Figure 6.**11**).

Like SCI practices, this study used CI practices in RL as an umbrella term for consumer relationship management, consumer-centric policies, processes, services and support initiatives, communication and information sharing with consumers, which can be important for the effective management of consumer returns. Therefore, CI represent RL practices that focusses on developing relationships with consumers and implementing RL strategies, processes and practices that can be positive for both the

[18] RL literature often regards the terms consumer and customer as synonyms. Since this study focuses on consumer returns the term consumer is used throughout.

organisation (e.g. profits and increase sales) and consumers (e.g. positive return experience and satisfaction).

Based on the findings (identified from the QCA of RL literature) CI practices in RL involves (1) strategies and requirements of CI and (2) outcomes of CI, which will be presented and discussed in subsequent sections, and concluded with a description and conceptual framework of CI practices to manage consumer returns.

6.4.2.1 Strategies and requirements of CI practices

CI practices involve CI strategies and a few requirements, including economic, IT, operational, organisational and SC requirements, which can contribute to the effective RLM of consumer returns. Table 6.12 provides an overview of the findings related to the *strategies* and *requirements* of *CI* practices to manage consumer returns, including the categories, subcategories, supporting sources for the subcategories and key quotations that support both the subcategories and the discussion of the findings.

Table 6.12 Findings related to the strategies and requirements of CI practices to manage consumer returns

CATEGORY	SUB-CATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
CI strategies	***Strategic approach***	None	• *"[…] a life-cycle approach for products and materials is important and should include learning and knowledge-sharing programs for customers […]."* (Sarkis *et al.* 2010:347)
	Prioritise CI	None	• *"Educating the customer about the importance of accurate returns claims became a priority."* (Genchev, 2009:144)
	Strategic considerations	Genchev (2009:147) Yan *et al.* (2012:256) Xu *et al.* (2015:88)	• *"LSPs can provide value-added activities to enhance the buyer-seller relationships through improved customer service/satisfaction."* (Yuan *et al.* 2016:188) • *"[…] having a formalized [sic] process may complement […] customers […] coordination."* (Huscroft *et al.* 2013b:318) • *"[…] returns service and related logistics issues and be flexible to provide money back for any returns or replace the product depending on customers' demand."* (Ahsan & Rahman, 2016:628) • *"[…] the retailer needs to carefully consider a trade-off incurred by the return policy."* (Yoo *et al.* 2014:106) • *"[…] a lenient return policy is accompanied by a product with high quality."* (Li *et al.* 2013:458) • *"[…] a lenient return policy also leads to increased returns and high return cost […]."* (Li *et al.* 2013:456) • *"When a lenient return policy is in effect […] the retailer clearly prefers popular products; they have lower demand variability and they are less likely to be returned."* (Alptekinoğlu, & Grasas, 2014:885)
	Perform cost-benefit analyses for CI practices	Janakiraman *et al.* (2015:233) Mukhopadhyay and Setaputra (2011:5319) Wang *et al.* (2007:351) Yoo *et al.* (2014:106)	• *"[…] liberal return policies, which serve as a pervasive sales tool but cause costs […] A cost-versus-benefit analysis should help determine an appropriate balance."* (Olorunniwo & Li, 2011:7) • *"[…] though it likely costs more in the short run for a firm to have a lenient product return policy, in the long run, retailers and managers can use information from each customer's product return […] for […] long-term relationship growth and […] profitability."* (Petersen & Kumar, 2009:49) • *"[…] though retailers incur costs […] rather than pass them on to the consumer, as the subsequent loyalty and enhanced relationship value maybe more than enough to offset these costs."* (Griffis *et al.* 2012:291) • *"[…] providing consumers with a variety of means to support their returns may lead to […] increased sales for the retailers; however, it requires an efficient returns process to keep costs down."* (De Leeuw *et al.* 2016:725)
	Strategic development of customer service elements	None	• *"[…] critical service determinants of product returns are […] communication support service for customer, money back for any type of returns, customer support access, user-friendly interaction, and product replacement."* (Ahsan & Rahman, 2016:606) • *"[…] customer service dimension and the speed at which customers receive a credit from a returned product […]."* (Bernon *et al.* 2016:599)

	Strategic design of a return service system	None	• *"[…] designing an effective returns service system managers must emphasise on the […] service category and be flexible to give money back for any returns or replace the product depending on customers' demand."* (Ahsan & Rahman, 2016:625)
	Strategic development and implementation of consumer-centric return policies	Alptekinoğlu and Grasas (2014:885) Asdecker (2015:2) Bokade and Raut (2013:44) De Leeuw *et al.* (2016:711) Griffis *et al.* (2012:291) Hong *et al.* (2008:177) Li and Olorunniwo (2008:385) Mukhopadhyay and Setaputra (2006:717) Petersen and Kumar (2009:49) Tiwari (2013:242) Wang *et al.* (2007:351)	• *"[…] lenient return policies, which are policies that facilitate returns by not only allowing refunds, exchanges, and merchandise credits, but also by imposing minimal restrictions on consumers making returns."* (Bonifield *et al.* 2010:1059) • *"[…] retailer's strategy is to […] offering more lenient monetary and/or lower effort return-policies may be more effective […]."* (Janakiraman *et al.* 2015:233) • *"[…] the retailer can implement two strategies: either a lower refund with a long return deadline, or a generous refund with a short return deadline. Both improve consumer satisfaction and reduce potential returns."* (Xu *et al.* 2015:93) • *"[…] a lenient return policy, such as a full refund policy and an additional return compensation policy […]."* (Li *et al.* 2013:457)
	Strategic development and implementation of consumer-centric RL processes	Ahsan and Rahma, (2016:624, 625) Bower and Maxham (2012:121) Mollenkopf *et al.* (2007:242)	• *"In order for the customers to be fully satisfied with the returns outcome, the process has to be robust and customer-focused."* (Li & Olorunniwo, 2008:382) • *"Speeding up the process can be done by providing consumer-friendly returns processes that are easy to execute for consumers."* (De Leeuw *et al.* 2016:723) • *"[…] liberal policy implies that it is easy to receive authorisation (and credit) for returns. […]."* (Hong *et al.* 2008:177)
	Strategic utilisation of RL for CI	None	• *"[…] offering easy returns methods […] are important aspects of providing good customer service […]."* (De Leeuw *et al.* 2016:719) • *"[…] retailers and managers can use information from each customer's product return […] as a tool for realizing [sic] long-term relationship growth […]."* (Petersen & Kumar, 2009:49) • *"Gate keeping […] is the first step towards collaboration that occurs at the customer-retailer interface when the product is returned."* (Jayaraman *et al.* 2008:416) • *"[…] speed at which customers receive a credit from a returned product […] processed."* (Bernon *et al.* 2011:495) • *"[…] proper disposal of products can create substantial customer loyalty […]."* (Agrawal & Choudhary, 2014:20)
	Strategic development and implementation of consumer service and support initiatives	Bernon *et al.* (2011:495) Mazahir *et al.* (2011:94) Ravi and Shankar (2015:884) Yuan *et al.* (2016:188)	• *"Customer support: involves […] established customer service levels […]."* (Huscroft *et al.* 2013b:309) • *"Customer relationships […] a membership card system that rewards purchasers' loyalty […] a superior service experience […] by providing access to personal sales assistants."* (Beh *et al.* 2016:18) • *"[…] providing consumers with a variety of means to support their returns […]."* (De Leeuw *et al.* 2016:725) • *"An efficient communications support service is necessary to provide acknowledgement of returns claim […]."* (Ahsan & Rahman, 2016:625)
	Strategic development of consumer education and training initiatives	Stock and Mulki (2009:53)	• *"Educating the customer about the importance of accurate returns claims became a priority."* (Genchev, 2009:144) • *"[…] should include learning and knowledge-sharing programs for customers, […]."* (Sarkis *et al.* 2010:347)
	Strategic attainment of consumer input and participation	Agrawal and Choudhary (2014:20) Dixit and Badgaiyan (2016:125) Xie and Breen (2014:457)	• *"Engage customers […] of a reverse logistics program, customer input is crucial."* (Genchev, 2009:147) • *"[…] managers should involve clients and customers in the reverse process […]."* (Bouzon *et al.* 2016:193) • *"Successful reverse logistics requires the whole-hearted participation of […] end-users."* (Lau & Wang, 2009:459)
	Strategic communication and information sharing with consumers	Ahsan and Rahman (2016:624, 628) Huscroft *et al.* (2013b:316) Yuan *et al.* (2016:188)	• *"Permanent contact with customers is recommended to reduce uncertainty […]."* (García-Rodríguez *et al.* 2013:588) • *"[…] the value of reverse logistics is communicated clearly to customers […]."* (Genchev, 2009:143) • *"[…] providing customers with adequate information about the returns process are important aspects of providing good customer service […]."* (De Leeuw *et al.* 2016:719) • *"[…] involve […] customers in the reverse process […] by sharing information […]."* (Bouzon *et al.* 2016:193)
	Strategic interaction with consumers	Vlachos (2016:16)	• *"[…] consumers prefer to connect with others through social media, therefore firms may also explore the possible use of social media and social groups to engage consumers."* (Dixit & Badgaiyan, 2016:125) • *"[…] good and healthy interactions with the customers are essential for successful reverse logistics programs."* (Ravi & Shankar, 2015:884) • *"Friendly interaction could be in the form of listening to the customer, giving time to air out their issues, and ensuring all returns issues are answered in a friendly/apologetic manner."* (Ahsan & Rahman, 2016:610) • *"Maintaining timely interaction and communication throughout the returns process is considered a critical […]."* (Ahsan & Rahman, 2016:628) • *"[…] reduce this uncertainty through improved service levels and better co-ordination with the end users."* (Mazahir *et al.* 2011:94)

	Strategic implementation of CRM and CSM	None	• *"Customer relationship management […] form the critical links in […] returns management […]."* (Janse *et al.* 2010:511) • *"A strong relationship with the customer is important; if possible, the integration with the customer should be as high as possible."* (Östlin *et al.* 2008:345) • *"[…] customer service management […] in the reverse logistics and returns process […]."* (Kumar *et al.* 2009:195)
	Strategic development of PM for CI	None	• *"Customer support: involves […] established customer support metrics."* (Huscroft *et al.* 2013b:309) • *"[…] measures aimed at reducing returns […] which were connected to the retail-customer interface."* (Bernon *et al.* 2011:497)?
	Strategic implementation of CI	None	• *"[…] integration between the customer and retailer as mechanism for managing returns […] was a critical area for managing down return levels."* (Bernon *et al.* 2011:497) • *"[…] strong relationship with the customer […] the integration with the customer should be as high as possible."* (Östlin *et al.* 2008:345)
Economic requirements	***Costs and expenses***	DSe Leeuw *et al.* (2016:717) Janakiraman *et al.* (2015:233) Olorunniwo & Li, (2011:7) Petersen and Kumar, (2009:49) Yan *et al.* (2012:256) Yoo *et al.* (2014:106)	• *"Liberal returns policies will have a significant effect on the cost of reverse logistics […]."* (Bokade & Raut, 2013:44) • *"[…] reducing consumer costs and decreasing the hurdles associated with returns can increase the repurchases […]."* (Bower & Maxham, 2012:121) • *"[…] to a customer's return situation, the manner in which customers are compensated for problems […]."* (Mollenkopf *et al.* 2007:242) • *"[…] be flexible to give money back for any returns […]."* (Ahsan & Rahman, 2016:625) • *"[…] full money back […] that retailers must emphasise upon to resolve customer returns."* (Ahsan & Rahman, 2016:628) • *"[…] the lenient return policy, the e-tailer provides […] pays for return postage, does not charge a restocking fee, and issues refunds […]."* (Bonifield *et al.* 2010:1061) • *"A convenient returns policy […] is a costly activity due to additional rent fees or construction costs; transportation costs and inventory holding costs."* (Wang *et al.* 2007:351) • *"[…] though retailers incur costs […] rather than pass them on to the consumer, as the subsequent loyalty and enhanced relationship value […]."* (Griffis *et al.* 2012:291)
IT requirements	***Utilise IT***	None	• *"[…] implementation of this interactive and easy to-use online tool […] improved relationships with customers […]."* (Genchev, 2009:145) • *"[…] accessibility of knowledgeable customer service representatives […] through online chats) during the return process […]."* (Mollenkopf *et al.* 2007:242)
	Appropriate IT	None	• *A capable IS allows a firm to cooperate and share information with its customers* (Sharif *et al.* 2012:2527)
Operational requirement	***Efficient RL process***	None	• *"[…] returns may lead to loyalty and, thus, increased sales for the retailers; however, it requires an efficient returns process […]."* (De Leeuw *et al.* 2016:725)
Organisational requirements	***Top management support***	None	• *"Top management support […] is needed to […] effectively managing relationships with […] customers."* (Huscroft *et al.* 2013b:315)
	Management involvement	None	• *"[…] though it likely costs more in the short run for a firm to have a lenient product return policy, in the long run, […] managers can use information from each customer's product return […] for […] long-term relationship growth and […] profitability."* (Petersen & Kumar, 2009:49) • *"[…] for designing an effective returns service system managers must emphasise on the interactive fairness service category […]."* (Ahsan & Rahman, 2016:625) • *"[…] initiation of a reverse logistics program, customer input is crucial. Managers in charge of developing and implementing the program […]."* (Genchev, 2009:147) • *"[…] managers should involve […] customers in the reverse process, in order to bring stability to the reverse flow […]."* (Bouzon *et al.* 2016:193)
	Knowledgeable or trained staff	None	• *"[…] accessibility of knowledgeable customer service representatives (live or through online chats) during the return process […]."* (Mollenkopf *et al.* 2007:242) • *"Training […] personnel was considered as a key dimension […] to provide support to customers […]."* (Bernon *et al.* 2011:497)
	RL expertise	None	• *"[…] generous return policy, therefore, involves both a cost […] and an expertise in handling the reverse flow […]."* (Mukhopadhyay & Setaputra, 2006:717)
	RC in RL	None	• *"Resource commitments to reverse logistics […] to develop lasting linkages with customers […]."* (Hsu *et al.* 2016:95)
SC requirement	***Efficient reverse SC (RSC)***	None	• *"Customers do respond to companies' behaviors [sic] […] Efficient reverse supply chains can mean happier customers […]."* (Agrawal & Choudhary, 2014:20)

Source: Compiled by the researcher

Table 6.12 shows that CI includes several strategies and requirements, which will be discussed in subsequent sections.

6.4.2.1.1 Strategies of CI practices in RL

The strategies of CI in RL include (1) a strategic approach, (2) prioritising CI practices, (3) strategic considerations, (4) performing cost-benefit analyses, (5) strategic development of customer service

elements, (6) strategic design of a return service system, (7) strategic development and implementation of consumer-centric return policies and RL processes, (8) strategic utilisation of RL for CI, (9) strategic development and implementation of consumer service and support, and consumer education and training initiatives, (10) strategic attainment of consumer input and participation, (11) strategic communication, information sharing and interaction with consumers, (12) strategic implementation of customer relationship/service management (CRM and CSM), (13) strategic development of PM for CI, and (14) strategic implementation of CI.

Like SCI (section 6.4.1.1), CI strategies must be initiated by developing and adopting a *strategic approach* that drive effective CI practices. For example, organisations can adopt a life-cycle approach for managing consumer returns, focussing on education and engagement initiatives to inform consumers on the importance of RL. Based on the strategic approach, organisations must *prioritise CI practices* to manage consumer returns, for example, prioritising consumer education programmes for effective return initiation (request) from consumers.

Several *strategic considerations* can be important for effective CI practices in RL. Specifically, organisations need to consider (1) RL outsourcing, (2) formalisation of RL, (3) consumer demand (such as service expectations) and (4) the implications of consumer-centric return policies and processes. For instance, organisations can consider other RL practices, like RL outsourcing and formalisation [part of strategic planning and procedure (SPP) practices], to facilitate CI practices (e.g. coordination and relationship management). Additionally, for lenient return policies, organisations must consider product quality and demand, and higher return rates and RL costs.

Subsequently, *performing cost-benefit analyses* can be an important strategy for CI practices. For example, organisations can perform cost-benefit analyses for (1) a lenient return policy, identifying costs (such as high short-term RL costs) and potential benefits (such as profitability, increase sales, and improve consumer loyalty and relationships), and (2) consumer support initiatives, identifying costs (such as high costs or RL expertise and efficient RL processes) and potential benefits (such as increase sales and consumer retention). Consequently, organisations must identify the strategies and requirements of CI (see section 6.4.2.1.2) as the costs, and the potential outcomes of CI practices as the benefits (see section 6.4.2.2).

Based on the outcomes of the strategic considerations and cost-benefit analyses, organisations can *strategically develop customer service elements*, which can include definitions for the CI practices organisations aim to implement for the effective management of consumer returns. For example, a retailer that aims to implement a lenient return policy and consumer support initiatives for may define communication support, friendly interaction, efficient RL processes and customer compensation

initiatives, like free returns and fast refunds, as service elements. Furthermore, organisations can *strategically design return service systems* that reflects the consumer demand (strategic considerations) and developed customer service elements (such as effective communication, speedy RL processes and quick refunds).

Accordingly, organisations can *strategically develop* and *implement consumer-centric return policies* for effective CI practices in RL. Several degrees of consumer-centric return policies can be developed and implemented, including a (1) full-lenient return policy, with no or limited return restrictions (such as free returns, easy returns and long return duration), (2) monetary-lenient return policy (such as a full-refund or full-compensation policy), (3) hassle-free return policy (limited effort required, like no proof of purchase or authorisation needed), and (4) time-lenient return policy (such as 90-day returns). Consequently, organisations must develop an appropriate return policy based on the strategic considerations, cost-benefit analysis and established customer service elements.

Similarly, organisations need to *strategically develop* and *implement consumer-centric RL processes* that complements the established consumer service elements and consumer-centric return policy. For example, a hassle-free return policy must be complimented with a flexible, quick and easy return process, or a monetary-lenient return policy must be complimented with efficient return processing (issuing fast refunds or exchanges). Therefore, for effective CI all stages of the RL process from the customer return request, gatekeeping, collection, transportation, receiving, processing, inspection/sorting, disposition to the redistribution process must be consumer-focussed (aimed at satisfying consumers).

Evidently, organisations can *strategically utilise RL* for effective *CI* practices. For example, organisations can (1) offer easy return options for good customer service, (2) use the customer return request (CRR) process to obtain information for CRM, (3) use the gatekeeping process to effectively engage with the consumer (e.g. responding favourable to the CRR), (4) use return processing to issue speedy refunds, and (4) use effective disposition to develop loyalty from environmentally conscious consumers (see chapters 4 and 5).

Linking with the established consumer service elements for CI, organisations can *strategically develop* and *implement consumer service* and *support initiatives* for effective CI practices in RL. For example, implementing initiatives that focus on improving consumer service and support levels by establishing effective communication platforms, using membership cards or point systems (e.g. consumers can keep purchase points for product returns), and providing customer service assistants to engage with and support consumers in the return process.

Additionally, the *strategic development* of *consumer education* and *training initiatives* can be important for effective CI practices in RL. For example, educating consumers on the importance of completing return forms accurately to avoid delays or additional charges in the return process can benefit both the organisation and consumer in the RL process. Moreover, *strategic attainment of consumer input* and *participation* through active engagement with consumers can be valuable in implementing a consumer-centric RL process, enhancing consumer service and promoting CI in RL.

Like SCI practices, *strategic communication* and *information sharing* with *consumers* can be important for developing lasting relationships. Additionally, communication and information sharing can reduce uncertainty in the RL process and complement other CI strategies, like customer support/service initiatives, education, and consumer input and participation. Similarly, *strategic consumer interaction* and *coordination* can promote consumer relationships and CI, which can be essential for effective RLM of consumer returns. For example, organisations can use popular social media platforms (e.g. Facebook or Twitter) to engage with consumers, which can be viewed as a more personal interaction. Additionally, being responsive, interacting in a friendly manner and listening to consumers about product return related issues can reduce frustration, uncertainty and dissatisfaction in the RL process.

Subsequently, organisations can use the CI strategies for the *strategic implementation* of *CRM* and *CSM*, which can be important for the maintenance and management of consumer relationships and CI practices. Additionally, like SCI (section 6.4.1.1), organisations must *strategically develop PM* for *CI* to measure, review and possibly implement improvement initiatives for maintaining successful CI practices in RL. Consequently, PM practices in RL can be important for managing external relationships with SC parties and consumers. Finally, organisations can *strategically implement CI* as an overall RL strategy to not only develop sustainable relationships with consumers but also for the effective management of consumer returns.

6.4.2.1.2 Requirements of CI practices in RL

The requirements of CI practices in RL include economic, IT, operational, organisational and SC requirements. The *economic requirements* of CI involve *costs* and *expenses* related to CI strategies, including developing and implementing consumer-centric RL policies and processes and other consumer support and service initiatives. Particularly, for effective CI, organisations must be willing to pay for RL costs, compensate consumers for expenses related to product return problems (such as a full refund), and incur additional expenses related to lenient return policies (such as facility, transportation, handling and inventory carrying costs). Essentially, CI practices can be expensive and can increase RL costs, demonstrating the importance of performing cost-benefit analyses for CI.

The *IT requirements* of CI involve IT utilisation and appropriate IT for CI practices, emphasising the link between integration and IT practices (see section 6.3). For instance, organisations can *utilise* Internet or web-based *IT* (such as online return and communication platform) to support, communicate and share information with consumers in the RL process. Consequently, organisations must implement *appropriate IT*, capable of supporting CI strategies, including consumer support and service initiatives, and consumer input, participation, communication, information sharing and interaction (see section 6.4.2.1.1).

Although CI strategies involve the development of consumer-centric RL processes, the *operational requirement* of CI involves efficient RL processes. Therefore, organisations must implement various RL practices, like IT and SCI (see sections 6.3 and 6.4.1), to establish *efficient RL processes* to support CI practices. Consequently, inefficient RL processes may hamper the organisation's ability to respond quickly to the customer return request (CRR), causing delays in gatekeeping (e.g. issuing quick authorisation), collection (e.g. slow pickup), processing (e.g. slow refunds/credits), inspection (e.g. slow verification and testing) and disposition (e.g. slow repairs or replacements).

CI in RL involves several *organisational requirements*, including (1) top management support, (2) management involvement, (3) RL expertise, (4) knowledgeable or trained staff, and (5) RC in RL. *Top management support* can be critical for the effective implementation of RL processes and practices, including CI practices (see section 6.9.5.2). Consequently, a lack of top management support can hamper effective implementation of CI practices to manage consumer returns.

Likewise, *management involvement* can be critical for several CI strategies, including (1) performing a cost-benefit analysis, (2) developing consumer service elements, (3) designing a return service system, (4) developing and implementing consumer-centric RL policies and processes, (5) utilising RL processes for CI, (6) attaining consumer input and participation, and (7) managing consumer relationships. Furthermore, CI requires *RL expertise* to not only support consumer-centric RL processes but also establish efficient RL processes (operational requirement) for effective CI in RL. Similarly, *knowledgeable* and *trained staff* must be available to support consumers in the RL process, emphasising the CI strategy of providing access to personal assistants as a consumer service and support initiative (see section 6.4.2.1.1). Evidently, CI requires *RC* (resource commitment) *in RL*, which may involve financial resources (to manage RL costs), infrastructure and IT resources, human resources (e.g. managerial skills and trained staff) and RL process resources (e.g. RL expertise) (see section 6.9.1).

Finally, like the operational requirement of an efficient RL process, the *SC requirement* for CI involves an *efficient reverse SC (RSC)*, which means that all (R)SC parties must collaborate and cooperate to improve the RSC (see section 6.4.1.2).

Essentially, for effective CI in RL, organisations must consider and/or implement several RL practices, including IT (section 6.3), SCI (section 6.4.1), RL outsourcing (section 6.5), PM (section 6.7), RC (section 6.9.1), SPP (formalisation) (section 6.9.4), and management and staff practices (section 6.9.5). In the next section, the outcomes of CI practices to manage consumer returns will be explored.

6.4.2.2 Outcomes of CI practices

The outcomes of CI practices can be described as the benefits of incorporating CI strategies and requirements as a RL practice for the effective management of consumer returns. The outcomes of CI practices in RL include (1) economic, (2) operational (3) organisational (4) environmental, (5) social and (6) market-related outcomes.

Table 6.13 provides an overview of the findings related to the *outcomes of CI* practices to manage consumer returns, including the categories, subcategories, supporting sources for the subcategories and key quotations that support both the subcategories and the discussion of the findings.

Table 6.13 Findings related to outcomes of CI practices to manage consumer returns

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
Economic outcomes	***Economic benefits***	None	• *"[…] the liberal policies on product return will turn out to an increase in customer satisfaction and will gain a cost advantage."* (Bokade & Raut, 2013:44)
	Cost reduction and control	None	• *"Educating the customer about the importance of accurate returns claims became a priority […] was related to cost reduction implications for returns handling, not only for WCC, but even more importantly for the customer as well."* (Genchev, 2009:144) • *"[…] providing consumers with a variety of means to support their returns may lead to […] increased sales for the retailers; however, it requires an efficient returns process to keep costs down."* (De Leeuw *et al.* 2016:725) • *"A capable IS allows a firm to cooperate and share information with its customers with […] low costs."* (Sharif *et al.* 2012:2527)
	Profitability	De Leeuw *et al.* (2016:717) Yan *et al.* (2012:256)	• *"[…] that though it likely costs more in the short run for a firm to have a lenient product return policy, in the long run, retailers and managers can use information from each customer's product return […] as a tool for […] profitability."* (Petersen & Kumar, 2009:49) • *"A convenient returns policy may trigger more demand, thus leading to higher profit; however, designing a returns policy is […] costly […]."* (Wang *et al.* 2007:351) • *"[…] the voice of the customer is the most important aspect […]and the goodwill developed through reverse logistics and proper disposal of products can create substantial customer loyalty. Efficient reverse supply chains can mean […] higher profits."* (Agrawal & Choudhary, 2014:20)
Operational outcomes	***Improve visibility***	None	• *"The enhanced communication between WCC and customers results in increased visibility […] of reverse logistics […]."* (Genchev, 2009:143)
	Reduce product return uncertainty	None	• *"[…] reduce this uncertainty through improved service levels and better co-ordination with the end users."* (Mazahir *et al.* 2011:94) • *"Permanent contact with customers is recommended to reduce uncertainty as to the quantity of products […]."* (García-Rodríguez *et al.* 2013:588)
	Support RL processes	None	• *"An efficient communications support service is necessary to provide acknowledgement of returns claim, decision outcome and claim tracking or feedback."* (Ahsan & Rahman, 2016:627) • *"Communicating with customers […] to coordinate the return is key to the RL process […]."* (Huscroft *et al.* 2013b:316) • *"[…] managers should involve […] customers in the reverse process, in order to bring stability to the reverse flow by sharing information […]."* (Bouzon *et al.* 2016:193)
	Improve RL process speed and effectiveness	None	• *"Speeding up the process can be done by providing consumer-friendly returns processes that are easy to execute for consumers."* (De Leeuw *et al.* 2016:723) • *"Managers in charge […] must account for clients' expectations and requirements […]*

			customers' input be vital in providing complete solutions from initiation to disposition of returned products […].” (Genchev, 2009:147)
Organisational outcomes	***Facilitate RL implementation***	None	• *“Engage customers […] initiation of a reverse logistics program, customer input is crucial. Managers in charge of developing and implementing the program must account for clients' expectations and requirements.”* (Genchev, 2009:147)
	Successful RL function	Xie and Breen (2014:457)	• *“Successful reverse logistics requires the whole-hearted participation of all the parties in the supply chain […] including […] end-users.”* (Lau & Wang, 2009:459) • *“[…] good and healthy interactions with the customers are essential for successful reverse logistics programs.”* (Ravi & Shankar, 2015:884)
	Enhance RL performance	None	• *“Customer support: involves issues such as effectively and efficiently […] achieving established customer support metrics.* (Huscroft *et al.* 2013b:309) • *“[…] management realized [sic] that unless the value of reverse logistics is communicated clearly to customers […] improving program performance can be problematic.”* (Genchev, 2009:143)
	Enhance RLM	None	• *“[…] for RL management is to improve customer service […].”* (Yuan *et al.* 2016:188) • *“Customer Satisfaction […] the voice of the customer is the most important aspect of reverse logistics management.”* (Agrawal & Choudhary, 2014:20) • *“Maintaining timely interaction and communication throughout the returns process is considered a critical aspect of effective return management.”* (Ahsan & Rahman, 2016:628) • *Customer relationship management […] form the critical links in the supply chain and returns management is coordinated by them.”* (Janse *et al.* 2010:511) • *“[…] integration between the customer and retailer as mechanism for managing returns.”* (Bernon *et al.* 2011:497)
	Facilitate return prevention and avoidance (RPA) practices	None	• *“[…] the retailer can implement two strategies: either a lower refund with a long return deadline, or a generous refund with a short return deadline. Both […] reduce potential returns.”* (Xu *et al.* 2015:93) • *“A considerable level of returns could be reduced through improved customer service routines and clearer product information […].”* (Bernon *et al.* 2011:495) • *“Through proper interaction with the customer, retailers can come to recognise the root causes of return and other related returns issues which could be solved […].”* (Agrawal & Choudhary, 2014:20) • *“[…] integration between the customer and retailer as mechanism for managing returns […] was a critical area for managing down return levels.”* (Bernon *et al.* 2011:497)
Environmental and social outcomes	***Environmental protection***	None	• *“[…] consumers may not be aware […] that they can participate in environment protection by participating in reverse logistics programs […].”* (Dixit & Badgaiyan, 2016:124)
	Environmental responsibility	None	• *“They can also take a step further and engage consumers to increase their awareness on […] environmental responsibility […].”* (Vlachos, 2016:16)
	Social responsibility	None	• *“They can also take a step further and engage consumers to increase their awareness on social […] responsibility […].”* (Vlachos, 2016:16)
	Enhance corporate/brand image	Tiwari (2013:242)	• *“[…] liberal return policies have become a […] major component of the corporate image for many firms in […] business-to-consumer markets.”* (Gonçalves & Silva, 2016:71) • *“[…] engage consumers […] which can have a direct influence on their brand image.”* (Vlachos, 2016:16)
Market-related outcomes	***Competitive advantage and sustainable business***	Li and Olorunniwo (2008:385) Yoo (2014:146)	• *“[…] offer liberal return policies […] developing a service-based competitive advantage which puts pressure on competitors to do the same.”* (Jack *et al.* 2010:232) • *“Customer relationships […] operates a membership card system that rewards purchasers' loyalty in an effort to enhance business sustainability.”* (Beh *et al.* 2016:18)
	Increase sales and demand	Asdecker (2015:2) Mukhopadhyay and Setaputra (2006:717) Wang *et al.* (2007:351) Yan *et al.* (2012:256)	• *“[…] lenient return policies […] increases purchase […] despite the substantial expense associated with product returns […].”* (Janakiraman *et al.* 2015:233) • *“Being flexible in accepting returns and providing consumers with a variety of means to support their returns may lead […] increased sales for the retailers […].”* (De Leeuw *et al.* 2016:725) • *“Offering free returns increases repurchasing […].”* (De Leeuw *et al.* 2016:717) • *“[…] returns may lead to loyalty and, thus, increased sales for the retailers; however, it requires an efficient returns process […].”* (De Leeuw *et al.* 2016:725) • *“The more lenient the return policy, the higher the demand. However, a lenient return policy also leads to increased returns and high return cost.”* (Li *et al.* 2013:456)
	Improve customer service and responsiveness	Bernon *et al.* (2016:599)	• *“[…] critical service determinants of product returns are related to communication support service for customer, money back for any type of returns, customer support access, user-friendly interaction, and product replacement.”* (Ahsan & Rahman, 2016:606) • *“[…] being flexible with returns authorizations [sic], offering easy returns methods and providing customers with adequate information about the returns process are important aspects of providing good customer service […].”* (De Leeuw *et al.* 2016:719) • *“Customer support: involves issues such as effectively and efficiently meeting established customer service levels […].”* (Huscroft *et al.* 2013b:309) • *“[…] offers a superior service experience to its customers, e.g. by providing access to personal sales assistants.”* (Beh *et al.* 2016:18) • *“[…] to improve customer service through […] exchanging information […].”* (Yuan *et al.* 2016:188) • *A capable IS allows a firm to cooperate and share information with its customers with high accuracy, fast response time […].”* (Sharif *et al.* 2012:2527)
	Increase consumer satisfaction	De Leeuw *et al.* (2016:711)	• *“[…] the liberal policies on product return will turn out to an increase in customer satisfaction […].”* (Bokade & Raut, 2013:44) • *“[…] the retailer can implement two strategies: either a lower refund with a long return deadline, or a generous refund with a short return deadline. Both improve consumer satisfaction […].”* (Xu *et al.* 2015:93) • *“In order for the customers to be fully satisfied with the returns outcome, the process has to be robust and customer-focused.”* (Li & Olorunniwo, 2008:382)

			• *"Offering free returns increases […] consumer satisfaction and revenue for the retailers."* (De Leeuw *et al.* 2016:717) • *"Efficient reverse supply chains can mean happier customers […]."* (Agrawal & Choudhary, 2014:20)
	Enable consumer retention	None	• *"[…] reducing consumer costs and decreasing the hurdles associated with returns can increase the repurchases to retailers and result in long-term benefits."* (Bower & Maxham, 2012:121) • *"[…] liberal returns policies as critical to retaining consumers […]."* (Jack *et al.* 2010:228) • *"[…] communication support is a prime opportunity for retailers to recapture their customers."* (Ahsan & Rahman, 2016:628) • *"[…] proper interaction with the customer, retailers can come to recognise the root causes of return and other related returns issues which could be solved promptly for customer retention."* (Ahsan & Rahman, 2016:628)
	Enhance consumer loyalty, trust and commitment	None	• *"[…] though retailers incur costs […] rather than pass them on to the consumer, as the subsequent loyalty and enhanced relationship value maybe more than enough to offset these costs."* (Griffis *et al.* 2012:291) • *"[…] developing customer loyalty through liberal returns […]."* (Griffis *et al.* 2012:283) • *"[…] the voice of the customer is the most important aspect […] and the goodwill developed through reverse logistics and proper disposal of products can create substantial customer loyalty."* (Agrawal & Choudhary, 2014:20) • *"Being flexible in accepting returns and providing consumers with a variety of means to support their returns may lead to loyalty […]."* (De Leeuw *et al.* 2016:725) • *"The ability to respond promptly and appropriately to a customer's return situation, the manner in which customers are compensated for problems, and the accessibility of knowledgeable customer service representatives (live or through online chats) during the return process all have a strong influence on a customer's perceived value of the returns offering, which in turn affects the customer's loyalty intentions."* (Mollenkopf *et al.* 2007:242) • *"One common way of building trust and increasing the likelihood of ordering is the establishment of liberal return policies."* (Asdecker, 2015:2) • *"[…] to gain consumers attention and commitment, their participation in […] could be of utmost importance […]."* (Dixit & Badgaiyan, 2016:125)
	Enhance customer relationship management (CRM)	Griffis *et al.* (2012:291)	• *"[…] that though it likely costs more in the short run for a firm to have a lenient product return policy, in the long run, retailers and managers can use information from each customer's product return […] for realizing [sic] long-term relationship growth […]."* (Petersen & Kumar, 2009:49) • *"Retailer emphasis on training customers […] can help in improving customer relations […]."* (Stock & Mulki, 2009:53) • *"[…] strong relationship with the customer […] the integration with the customer should be as high as possible."* (Östlin *et al.* 2008:345) • *"[…] implementation of this interactive and easy to-use online tool […] improved relationships with customers […]."* (Genchev, 2009:145) • *"Top management support […] is needed to […] effectively managing relationships with […] customers."* (Huscroft *et al.* 2013b:315)
	Enhance CI	None	• *"LSPs can provide value-added activities to enhance the buyer-seller relationships through improved customer service/satisfaction."* (Yuan *et al.* 2016:188) • *"[…] having a formalized [sic] process may complement […] customers […] coordination."* (Huscroft *et al.* 2013b:318) • *"Gate keeping […] is first step towards collaboration that occurs at the customer-retailer interface when the product is returned."* (Jayaraman *et al.* 2008:416) • *"A capable IS allows a firm to cooperate and share information with its customers with high accuracy […]."* (Sharif *et al.* 2012:2527) • *"Resource commitments to reverse logistics […] to develop lasting linkages with customers […]."* (Hsu *et al.* 2016:95)

Source: Compiled by the researcher

Table 6.13 shows that CI practices involve several outcomes, including economic, operational, organisational, environmental, social and market-related outcomes, which will be discussed in subsequent sections.

6.4.2.2.1 Economic outcomes of CI practices in RL

The economic outcomes of CI practices involve economic benefits, cost reductions and control, and profitability, which can mitigate some of the economic requirements of CI (section 6.4.2.1.2). Particularly, *economic benefits* may be achieved through the CI strategy of developing and implementing consumer-centric return policies. Consequently, despite the high costs of a lenient return

policy, cost advantages can be expected due to increased consumer satisfaction, demonstrating the importance of performing a cost-benefit analysis for CI practices.

Additionally, *cost reduction* and *control* can be realised through (1) CI strategies, including prioritising CI, cost-benefit analysis, consumer support and education initiatives, and consumer information sharing, (2) appropriate IT (requirement), and (3) efficient RL processes (operational requirement). For example, prioritising education initiatives in RL, like educating consumers on the importance of completing an accurate return request, can reduce unnecessary handling costs that may be incurred due to inaccurate return information.

Similarly, *profitability* can be increased through the (1) CI strategies of performing a cost-benefit analysis, implementing consumer-centric return policies, using RL processes for CI and attaining consumer input, (2) economic requirements related to costs of lenient return policies, (3) organisational requirement of management involvement, and (4) SC requirement of an efficient RSC. Consequently, although organisations may experience initial short-term costs and expenses, CI practices (such as implementing lenient return policies) can increase demand/sales and improve profitability that positively impacts the bottom line.

Essentially, the economic outcomes of CI associates with the market-related outcomes of CI (section 6.4.2.2.5), including higher demand, increase sales, consumer satisfaction and loyalty, which demonstrates the importance of CI practices for the efficient RLM of consumer returns.

6.4.2.2.2 Operational outcomes of CI practices in RL

The operational outcomes of CI practice in RL can include (1) improving visibility, (2) reducing product return uncertainty, (3) supporting RL processes and (4) improving RL process speed and effectiveness. Consequently, unlike IT and SCI (see sections 6.3 and 6.4.1), CI practices associate with limited operational outcomes, implying that CI practices may be less appropriate for organisations that experience operational barriers in RL. Nevertheless, the CI strategies of communicating with consumers, consumer service initiatives and consumer interaction can *improve visibility* and *reduce uncertainty* in the quality and quantity of *product returns*, which can mitigate the operational barriers (such as lack of visibility and uncertainty in quantity of product returns) in RL (see section 2.3.2).

Additionally, consumer service and support initiatives, consumer input, effective communication and information sharing with consumers (CI strategies), and management involvement (organisational requirement) can *support RL processes*. For example, effective communication and consumer support facilitate CRR (acknowledge the return request), gatekeeping (authorisation of returns) and processing (providing feedback on the refund status) processes.

Finally, the CI practices of implementing consumer-centric RL processes, attaining consumer input (strategies) and management involvement (organisational requirement) can *improve RL process speed* and *effectiveness*. Therefore, implementing RL processes that aim to satisfy consumers and managers attaining consumer input regarding their expectations/requirements (in the return process) may improve the overall efficiency and effectiveness of RL processes.

6.4.2.2.3 Organisational outcomes of CI practices in RL

The organisational outcomes of CI practices in RL can include (1) facilitating RL implementation, (2) successful RL function, (3) enhancing RL performance, (4) enhancing RLM and (5) facilitating RPA (return prevention and avoidance) practices. Particularly, attaining consumer input (before implementing RL), interacting with consumers (CI strategies) and management involvement (organisational requirement) can *facilitate RL implementation,* ensuring that organisations implement consumer-centric RL processes and practices. Additionally, consumer participation and effective interaction with consumers (CI strategies) can be important for a *successful RL function,* emphasising the importance of consumers in RL.

Furthermore, strategic development of consumer support initiatives, strategic communication, strategic development of PM (metrics) for CI (strategies), and management involvement (organisational requirement) can *enhance RL performance*, reemphasising the link between CI and PM practices in RL (see section 6.4.2.1). Several CI strategies can *enhance RLM,* including consumer service and support initiatives, attaining consumer input and participation, communicating and sharing information with consumers, consumer interaction, implementation of CRM and implementation of CI, emphasising the importance of CI for the effective management of consumer returns.

Finally, the CI strategies of consumer-centric return policies, consumer service and support initiatives, consumer interaction and implementing CI can *facilitate RPA* practices in RL (section 6.9.3). For example, through proper communication and interaction with consumers, organisations can identify the root causes of product returns (e.g. breakage due to poor packaging and handling) and implement preventative measures (e.g. improved packaging) to avoid future returns.

6.4.2.2.4 Environmental and social outcomes of CI practices in RL

The *environmental outcomes* of CI practices in RL involve environmental protection and environmental responsibility, which can be achieved by attaining consumer participation and interaction (CI strategies). For example, organisations can engage with consumers to create awareness on the importance of RL for the environment, implying that CI practices can contribute to the environmental drivers and benefits of RL (see section 2.3.1.3).

The *social outcomes* of CI practices in RL involve social responsibility and corporate/brand image. Like the environmental outcomes, attaining consumer participation and interaction can demonstrate *social responsibility,* which can further drive organisations to implement and effectively manage RL. Moreover, organisations can *enhance* their *corporate* or *brand image,* especially, through the CI strategies related to consumer-centric return policies and consumer interactions. Evidently, CI practices can link with the corporate social responsibility (CSR) driver in RL (see section 2.3.1.4), emphasising the importance of CI practices for RL implementation (organisational outcome) (section 6.4.2.2.3).

6.4.2.2.5 Market-related outcomes of CI practices in RL

Although CI practices associate with limited economic, operational and organisational outcomes (in comparison to IT and SCI), various market-related outcomes can be realised through CI practices, including (1) competitive advantage and sustainable business, (2) increasing sales and demand, (3) improving customer service and responsiveness, (4) increasing consumer satisfaction, (5) enabling consumer retention, (6) enhancing consumer loyalty, trust and commitment, (7) enhancing CRM, and (8) enhancing CI.

Organisations can gain *competitive advantages* and enhance *business sustainability* through consumer-centric return policies and consumer support and service initiatives (e.g. keeping purchased reward points for returned products). Subsequently, organisations can *increase sales* and *demand* through CI practices, including (1) CI strategies related to strategic considerations (e.g. impact of lenient return policy), cost-benefit analyses, consumer-centric return policy, utilising RL for CI and consumer service and support initiatives, (2) economic requirements of costs and expenses, and (3) the operational requirement of efficient RL processes. Consequently, an increase in sales/demand can enhance profitability (see section 6.4.2.2.1), mitigating the costs and expenses of CI practices.

Several CI practices can *improve customer service* in RL, including the (1) CI strategies of developing customer service elements, consumer centric return policies and processes, utilising RL processes, customer service and support initiatives, and communicating and sharing information with consumers, and (2) the economic requirement of costs (e.g. full refund). Moreover, *responsiveness* can be *improved* through the IT requirement of appropriate IT for CI practices, emphasising the importance of IT for effective integration practices in RL.

Subsequently, organisations can *increase consumer satisfaction* through CI practices, like performing a cost-benefit analysis, consumer-centric return policies and processes, using RL for CI (strategies), costs (economic requirement) and an efficient RSC (SC requirement). Additionally, *consumer retention* can be realised through cost-benefit analyses, consumer-centric return policies and processes, using RL for

CI, consumer support initiatives, communication, interaction (CI strategies) and reducing consumer costs (economic requirement).

Likewise, several CI practices can *enhance consumer loyalty, trust* and *commitment*, including the (1) CI strategies of performing cost-benefit analyses, consumer-centric return policies and processes, using RL for CI, consumer support and service initiatives, attaining consumer input and participation, and (2) CI requirements of incurring costs (economic requirement), utilising IT for CI (IT requirement), and trained or knowledgeable staff (organisational requirement).

Consequently, organisations can *enhance CRM* through various CI practices, including the (1) CI strategies related to cost-benefit analyses, consumer-centric return policies and processes, using RL for CI, consumer education initiatives and CI implementation, and (2) CI requirements of costs (economic requirement), utilising IT for CI (IT requirement), top management support and management involvement (organisational requirements).

Finally, certain CI practices can further *enhance CI* in RL, like the strategic considerations related RL outsourcing and formalisation, utilising RL processes (e.g. gatekeeping that promote collaboration) (strategies), utilising IT (requirement) and RC in RL (organisational requirement), emphasising the importance of implementing various RL practices for the effective management of consumer returns.

Essentially, based on the findings presented in section 6.4.2.2, the most significant CI practices for the effective management of consumer returns, involve strategic development of consumer-centric return policies and attainment of consumer input and participation. However, performing a cost-benefit analysis, using RL processes for CI and incurring costs can also lead to several benefits, which reemphasise the importance of considering the costs (strategies and requirements) and benefits (outcomes) for the effective management of consumer returns.

In the next section, a description and conceptual framework of CI practices in RL will be presented and analysed.

6.4.2.3 Description and conceptual framework of CI practices to manage consumer returns

Based on the findings presented in section 6.4.2, CI practices can be important for the management of consumer returns, and will be described as follows:

> CI practices for the management of consumer returns involve (1) CI strategies, including a strategic approach, prioritisation of CI, strategic considerations, cost-benefit analyses, development of customer service elements, design of a return service system, development and implementation of consumer-centric return policies and RL processes, utilisation of RL for CI, development and implementation of consumer service, support, education and training initiatives, attainment of consumer input and participation, consumer communication, information sharing and interaction, implementation of CRM and CSM, development of PM, and implementation of CI, and (2) CI requirements, including economic requirements (costs and expenses), IT requirements (utilise IT and appropriate IT), an operational requirement (efficient RL process), organisational requirements (top management support,

management involvement, RL expertise, knowledgeable or trained staff, and RC) and a SC requirement (efficient RSC).

The CI strategies and requirements can result in several outcomes, including (1) economic outcomes (economic benefits, cost reduction and control, and profitability), (2) operational outcomes (improve visibility, reduce product return uncertainty, support RL processes and RL process speed and effectiveness), (3) organisational outcomes (facilitate RL implementation, successful RL function, enhance RL performance and RLM, and facilitate RPA practices), (4) environmental outcomes (environmental protection and responsibility), (5) social outcomes (social responsibility and enhance corporate/brand image), and (6) market-related outcomes (competitive advantage and sustainable business, increase sales/demand, improve customer service and responsiveness, increase consumer satisfaction, enable consumer retention, enhance consumer loyalty, trust and commitment, and enhance CRM and CI).

Figure 6.13 provides a conceptual framework of CI practices, which includes the CI strategies, requirements and outcomes to manage consumer returns.

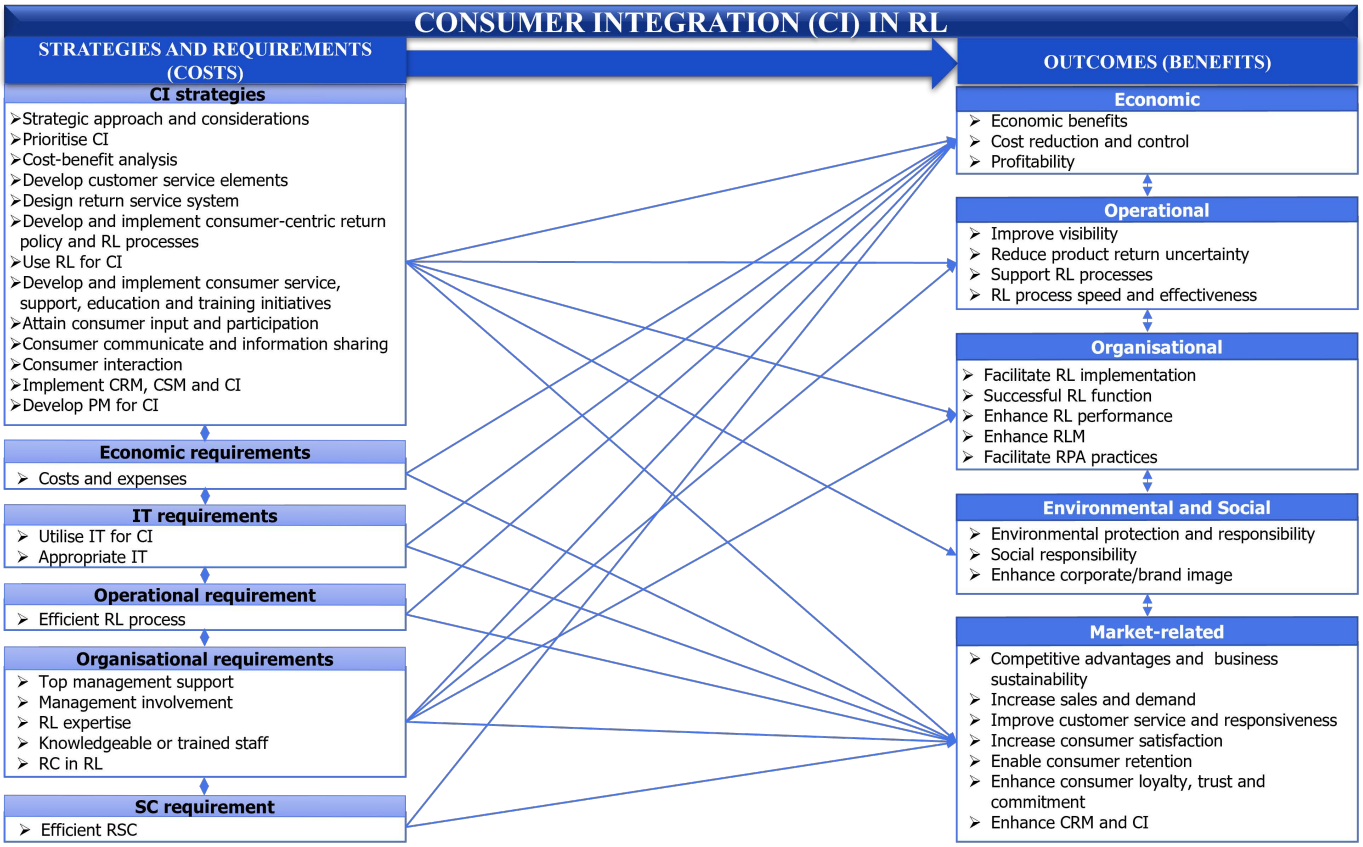


Figure 6.13 Conceptual framework of CI practices to manage consumer returns
Source: Compiled by researcher

Figure 6.13 illustrates the links between the strategies, requirements and outcomes of CI practices, demonstrating a cost and benefit relationship. For example, the links between CI strategies and requirements can be demonstrated by the CI strategies of a cost-benefit analysis and consumer-centric return policies, which links with the economic requirements of costs, IT requirement of utilising IT, the operational requirement of efficient RL processes, organisational requirements of top management commitment and management involvement and the SC requirement of an efficient RSC.

Regarding the links between CI strategies, requirements and outcomes, the framework demonstrates that CI strategies can be the most significant practice category, linking with all the CI outcomes, including economic, operational, organisational, environmental, social and market-related outcomes.

Therefore, organisations must pay attention to CI strategies to achieve optimum results to manage consumer returns. From the CI requirements, organisational requirements contribute to the most outcome categories (four out of five), demonstrating that human resources and commitment can be important for effective CI in RL.

From the outcomes of CI practices, economic and market-related outcomes can be the most significant (associated with all the practice categories), which emphasise the significance of performing a cost-benefit analysis for CI in RL. Consequently, organisations that experience economic challenges (e.g. profitability problems) and market-related challenges (e.g. limited sales, and poor customer service, satisfaction and retention) can benefit from implementing CI practices. In contrast, the environmental and social outcomes can be the least significant categories, meaning that CI practices may be less important for organisations that seek environmental and social benefits through RL practices.

Finally, the framework shows that the CI outcome categories can be linked, for example, the (1) market-related outcome of increased sales can link with the economic outcome of profitability, (2) environmental and social outcomes (RL drivers) can link with the organisational outcome of RL implementation, and (3) operational outcomes of RL process speed and effectiveness can link with the organisational outcome of enhanced RL performance.

Essentially, the links between the CI strategies, requirements and outcomes demonstrate the importance of a holistic approach to the management of consumer returns, meaning that organisations must carefully consider and analyse the costs (strategies and requirements) and benefits (outcomes) of CI for the effective management of consumer returns.

In the next section, cross-functional integration (CFI) as a RL integration practice to manage consumer returns will be explored.

6.4.3 Cross-functional integrations (CFI) practices to manage consumer returns

Up to this point of the integration practices, the focus was on external relationships between SC parties and consumers in RL, which are critical for the RLM of consumer returns. However, due to the interdisciplinary and cross-functional nature of RL (Dowlatshahi, 2010b:4200), cross-functional integration (CFI) between organisational functions (departments) is equally important for the RLM of consumer returns (Asham & Rahman 2021: 21; Hjort *et al.* 2019:784). Despite the need for CFI in RL, limited RL literature (from the QCA) focus on CFI as a RL practice to manage consumer returns, showing a gap in literature. Nevertheless, like other integration practices, the CFI practice categories included (1) CFI strategies and requirements and (2) CFI outcomes, which will be presented and discussed in the rest of this section.

Table 6.14 provides an overview of the findings related to *CFI practices* to manage consumer returns, including the categories, subcategories, supporting sources for the subcategories and key quotations that support both the subcategories and the discussion of the findings.

Table 6.14 Findings related to CFI practices to manage consumer returns

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
CFI strategies	***Strategic approach***	None	• *"Functional integration […] a more integrated and aligned approach to managing returns […]."* (Bernon *et al.* 2011:496)
	Strategic identification of functions in RL	Dowlatshahi (2010b:4200) (Hazen *et al.* 2015:160)	• *"Mapping out the reverse logistics program and identifying the different departments directly or indirectly involved in returns handling […]."* (Genchev, 2009:148) • *"[…] RL activities cuts across several functional areas such as marketing, operations, logistics, distribution and transportation. Other areas such as finance and accounting, customer services, quality and reliability, purchasing and design/engineering could also become heavily involved in the RL process."* (Dowlatshahi, 2012:1265)
	Strategic assignment of functional roles and responsibilities in RL	Genchev *et al.* (2011:255) (Hernández *et al.* 2011:84)	• *"Clear responsibilities must be assigned to accounting, sales, finance, marketing, etc. regarding […] the reverse logistics program."* (Genchev, 2009:148) • *"[…] firms assign the return task to functional areas based on the type of returns. For instance, product rejection is assigned to the quality department, whereas after-sales or service department handles product warranty."* (Shaharudin *et al.*, 2015:222)
	Strategic establishment of cross-functional teams	None	• *"[…] a cross-functional team should be established […]."* (Dowlatshahi, 2010a:1376) • *"[…] functions are involved in the reverse logistics process and often have members on the cross-functional teams: • procurement; • manufacturing; • finance and accounting; • sales and marketing; and • customer service."* (Partida, 2011:63)
	Strategic development of functional relationships	None	• *"The relationship between marketing and RL is a prime illustration of the cross-functional impact of RL."* (Genchev *et al.* 2011:245)
	Strategic collaboration, cooperation and coordination between functions	Hernández *et al.* (2011:84) Huscroft *et al.* (2013a:238) Lee and Lam (2012:596) Olorunniwo and Li (2010:456) Prakash and Barua, (2015:603)	• *"Company should persuade collaboration between various departments […]."* (Agarwal *et al.* 2016:3) • *"Managing reverse logistics is not the activity of just one department […] collaboration of all relevant departments (from research and development to finance/tax) […] is fundamental […]."* (Janse *et al.* 2010:508) • *"[…] managers should ensure frequent […] cooperation and collaboration among logistics, production and marketing to improve RL efficiency."* (Huang & Yang, 2014:635) • *"[…] internal coordination between marketing and procurement functions with logistics […]."* (Bernon *et al.* 2011:495)
	Strategic communication between functions	Huang and Yang, (2014:635) Lee and Lam (2012:596)	• *"[…] the value of reverse logistics is communicated clearly […] internally to the different departments involved […]."* (Genchev, 2009:143) • *"[…] it is critical for marketing managers to liaise with their logistics counterparts to ensure effective processes […]."* (Hazen *et al.* 2015:160)
	Strategic knowledge sharing between functions	None	• *"[…] exchanging their ideas and knowledge to create an innovative tool […] During internalization [sic], knowledge of the product return is shared […]."* (Ramírez, 2012:1138)
	Strategic information sharing between functions	None	• *"Finance and accounting departments must be informed in real time of any customer/ supplier returns-related requirements […]."* (Genchev *et al.* 2011:255) • *"[…] the organization [sic] to incorporate and share information on returns easily throughout the firm."* (Ramírez, 2012:1138)
	Strategic implementation of CFI	Huang and Yang (2014:620)	• *"Reverse logistics requires integration of various business functions […]."* (Khor & Udin, 2012:4) • *"Functional integration […] to managing returns was needed."* (Bernon *et al.* 2011:496)
IT requirement	***Utilise IT for CFI***	None	• *"Intranet provides link within the intra-departmental heads and logistics managers for dealing with reverse logistics operations."* (Ravi, 2014:300) • *IS facilitated internal […] communication, allowing more coordination […]."* (Sharif *et al.* 2012:2523) • *"ERP is an information system integrating all facets of an organization [sic] on a common database."* (Olorunniwo & Li, 2011:5)
Operational requirement	***Forward logistics (FL) and RL integration***	None	• *The incorporation of reverse logistics operations within the logistics effort of a firm should be the first step in the process of corporate-wide integration.* (Genchev, 2009:148)
Organisational requirements	***Top management support in RL***	None	• *"Stronger senior management support for […] better coordination among the different departments involved in handling returns […]."* (Genchev, 2009:143) • *"[…] best-practice organizations […] senior management support with cross-functional teams […] in the reverse logistics process […]."* (Partida, 2011:63)
	Management involvement	None	• *"[…] managers should ensure frequent communication, cooperation and collaboration among logistics, production and marketing […]."* (Huang & Yang, 2014:635) • *"[…] management realized [sic] that unless the value of reverse logistics is communicated […] to the different departments involved, improving program performance can be problematic."* (Genchev, 2009:143)
	PM practices in RL	None	• *"Appropriate metrics can help to shape communication and coordination across functions. For instance, reverse logistics metrics might help to […] inform marketing professionals with regard to supplier selection and retention."* (Hazen *et al.* 2015:160)

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
Economic outcomes	***Facilitate FM and control***	None	• *"[…] the problem of control and managing financial aspects of aftermarket logistics. Frequent communication, co-operation and collaboration between logistics and financial department can resolve the problem […]."* (Lee & Lam, 2012:596)
	Reduce RL costs	None	• *"[…] internal coordination between marketing and procurement functions with […] input from the logistics function, the cost of returns could be significantly lowered […]."* (Bernon *et al.* 2011:495) • *"[…] one of the key cost drivers of retail reverse logistics is poor integration between the various interfaces that exist between internal […] organisational actors."* (Bernon *et al.* 2011:495)
	Maximise value recovery	None	• *"Reverse logistics requires integration of various business functions […] to maximize the value of recoverables."* (Khor & Udin, 2012:4)
Operational outcomes	***Reduce product return uncertainty***	None	• *As the quality of the returned product is not uniform […] Frequent communication, co-operation and collaboration between logistics and financial department can resolve the problem […]."* (Lee & Lam, 2012:596)
	Improve RL process efficiency and effectiveness	None	• *"[…] managers should ensure frequent communication, cooperation and collaboration among logistics, production and marketing to improve RL efficiency."* (Huang & Yang, 2014:635) • *"[…] inter- and intra-organizational [sic] collaboration facilitates enhanced levels of RL processing effectiveness […]."* (Huscroft *et al.* 2013a:238) • *"[…] exchanging their ideas and knowledge […] and share information on returns easily throughout the firm to improve reverse logistics processes."* (Ramírez, 2012:1138) • *"[…] it is critical for marketing managers to liaise with their logistics counterparts to ensure effective processes and […] reverse logistics activities […]."* (Hazen *et al.* 2015:160)
	Enhance operational performance	None	• *"[…] internal cross-functional processes […] that affect […] operational performance."* (Bernon *et al.* 2016:600)
Organisational outcomes	***Enhance RL innovation and capabilities***	None	• *"[…] exchanging their ideas and knowledge to create an innovative tool that can be used for efficient management of returns."* (Ramírez, 2012:1138) • *"[…] another way for a firm to develop innovative capabilities is to increase cross-functional integration […]in the RL context […]."* (Huang & Yang, 2014:620)
	Improve RL program efficiency and effectiveness	None	• *"[…] identifying the different departments directly or indirectly involved in returns handling can prove to be a valuable initiative. Clear responsibilities must be assigned to accounting, sales, finance, marketing, etc. regarding increasing the efficiency and effectiveness of the reverse logistics program."* (Genchev, 2009:148)
	Enhance RL performance	None	• *"[…] management realized [sic] […] the value of reverse logistics is communicated clearly […] to the different departments involved, improving program performance […]."* (Genchev, 2009:143)
	Facilitate and improve RLM	None	• *"Functional integration […] that a more integrated and aligned approach to managing returns was needed."* (Bernon *et al.* 2011:496) • *"In order to manage the process well, some firms assign the return task to functional areas based on the type of returns."* (Shaharudin *et al.* 2015:222) • *"Managing reverse logistics is not the activity of just one department […] collaboration of all relevant departments (from research and development to finance/tax) […] is fundamental in realising improvements."* (Janse *et al.* 2010:508) • *"[…] exchanging their ideas and knowledge […] that can be used for efficient management of returns."* (Ramírez, 2012:1138) • *"Intranet provides link within the intra-departmental heads and logistics managers for dealing with reverse logistics operations."* (Ravi, 2014:300)
	Facilitate RL decision-making	None	• *"[…] a cross-functional team should be established in order to make crucial and ongoing decisions regarding RL opportunities."* (Dowlatshahi, 2010a:1376) • *"[…] to incorporate and share information on returns easily throughout the firm. […] During internalization [sic], knowledge of the product return is shared and understood by people with no background in handling product returns, thereby improving decision-making."* (Ramírez, 2012:1138)
	Facilitate internal communication and coordination	None	• *IS facilitated internal […] communication, allowing more coordination […]."* (Sharif *et al.* 2012:2523) • *"Stronger senior management support for […] better coordination among the different departments involved in handling returns […]."* (Genchev, 2009:143) • *"Appropriate metrics can help to shape communication and coordination across functions."* (Hazen *et al.* 2015:160)
	Enhance CFI	None	• *"The incorporation of reverse logistics operations within the logistics effort of a firm should be the first step in the process of corporate-wide integration."* (Genchev, 2009:148)
	Facilitate RPA	None	• *"Poor internal coordination between marketing and procurement functions with logistics were found to lead to significant levels of returns. For example, the terms contained within the customer returns policy should be based on an understanding of the impact to the business as a whole."* (Bernon *et al.* 2011:495)
Market-related outcomes	***Meet customer needs***	None	• *"[…] a cross-functional team should be established […] regarding RL opportunities […] the team determines that the needs of the customer can be reasonably met […]."* (Dowlatshahi, 2010a:1376)
	Increase consumer service, satisfaction and sales	None	• *"[…] internal cross-functional […] practices that affect customer service […]."* (Bernon *et al.* 2016:600) • *"Stronger senior management support for […] better coordination among the different departments involved in handling returns are all justified by increased customer*

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
			satisfaction, resulting in more business." (Genchev, 2009:143) • *"[…] it is critical for marketing managers to liaise with their logistics counterparts to ensure effective processes and customer satisfaction."* (Hazen *et al.* 2015:160)
SC outcomes	***Facilitate SCI practices***	Bernon *et al.* (2016:600)	• *"Inter-firm coordination and collaboration is almost impossible if not preceded by intra-firm coordination through information sharing."* (Olorunniwo & Li, 2010:456)

Source: Compiled by the researcher

In the subsequent sections these categories of CFI practices, presented in Table 6.14, will be discussed and concluded with a description and conceptual framework of CFI practices to manage consumer returns.

6.4.3.1 Strategies of CFI practices in RL

The CFI strategies can be viewed as organisational actions to enhance and implement CFI practices in RL, and include (1) a strategic approach, (2) strategic identification of functions in RL, (3) strategic assignment of functional roles and responsibilities in RL, (4) strategic establishment of cross-functional teams, (5) strategic development of functional relationships, (6) strategic collaboration, cooperation and coordination between functions, (7) strategic communication between functions, (8) strategic knowledge sharing between functions, (9) strategic information sharing between functions, and (10) strategic implementation of CFI.

Like SCI and CI (sections 6.4.1 and 6.4.2), CFI strategies must start with a *strategic approach* to guide the development and implementation of CFI practices to manage consumer returns. Particularly, organisations must adopt an internal integrated approach, which means that various organisational functions must integrate to manage consumer returns. Accordingly, *strategic identification* of *functions* in *RL* can be important for effective CFI. Depending on the organisational structure, the possible functions that may be directly and indirectly involved in RL include marketing, customer service, finance, operations and logistics (including distribution and transportation), quality, after-sales, purchasing/procurement and design/engineering,

Furthermore, organisations must *strategically assign functional roles* and *responsibilities* in *RL*, which demonstrate the importance of CFI in RL. For example, the RL roles and responsibilities of the (1) customer service function can be handling the customer return request (CRR) and gatekeeping processes, (2) logistics and operations function can be collection, transport, receiving, sorting, processing of replacements and exchanges, and return to stock disposition and redistribution, (3) finance/accounting function can be processing of consumer refunds/credits and supplier credit, (4) quality function can be inspection, testing and verification, and (5) after-sales function can be product recovery (e.g. repair) and return to the supplier disposition.

Subsequently, organisations must *strategically establish cross-functional teams* that consist of individual representatives from the different functions involved in RL. For example, a cross-functional team for RL can include the customer service manager, logistics manager, accounting officer, quality manager, marketing manager, after-sales manager and a procurement officer. Consequently, the cross-functional teams can be utilised for the *strategic development* of *functional relationships,* which can be important for maintaining effective CFI practices in RL.

Furthermore, effective CFI practices in RL rely on *strategic collaboration, cooperation* and *coordination* between functions, meaning that the functional departments involved in RL must work collectively to manage consumer returns effectively. Subsequently, *strategic communication* between functions can be important for developing functional relationships and supporting functional collaborative efforts in RL.

Like SCI (section 6.4.2.1), CFI strategies involve strategic sharing initiatives, like knowledge and information sharing between functions, which can be for effective RLM. For instance, functions can *strategically share knowledge* and ideas (e.g. brainstorming sessions) on improving RL processes and practices to manage consumer returns. Additionally, functions can *strategically share information* on the status of a consumer product return, for example, logistics informing finance about the outcomes of consumer returns for accurate return processing (e.g. issue refunds to consumers).

Finally, organisations can *strategically implement CFI* as an overall RL strategy to maintain cross-functional relationships in RL, promoting effective collaboration, cooperation, coordination, communication and strategic sharing between functions for the effective management of consumer returns. In the next section, the requirements of CFI in RL will be discussed.

6.4.3.2 Requirements of CFI practices in RL

CFI practices in RL involves a few requirements, which include IT, operational and organisational requirements (see Table 6.14). The *IT requirement* involves the *utilisation of IT* for CFI, which emphasise the importance of communication and information sharing as part of CFI strategies. Specifically, organisations can use internal systems, like an Intranet, or TLIT, like ERP systems, to facilitate CFI initiatives, reemphasising the important link between integration and IT practices for effective RLM of consumer returns.

The *operational requirement* for CFI relates to integrated facility/location practices, which involve forward logistics (FL) and RL integration (see section 6.8.3). Accordingly, effective CFI may require combining RL and FL as one function because logistics can be viewed as a traditional function that may involve preestablished functional integration or may be more favourable as a functional unit for

CFI. Since RL involves several organisational barriers, like management inattention, resistance to change and lack of internal coordination (see section 2.3.3), integrating RL and FL may be the only solution for effective CFI practices in RL.

Finally, the *organisational requirements* for CFI include top management support, management involvement and PM in RL. Evidently, like CI practices (section 6.4.2.1), *top management support* can be important for the development and implementation CFI practices. Moreover, *management involvement* can be critical for driving cross-functional efforts, like collaboration, coordination and communication between functions, and communicating the importance of RL, which may address the resistance to change and lack of internal coordination barriers in RL.

Although SCI and CI practices involve PM as strategies, successful CFI practices need *PM practices* in RL. Consequently, developing and implementing metrics for RL can be important for CFI practices (such as facilitating coordination and communication between functions), emphasising the importance of a holistic approach to the RLM of consumer returns.

Essentially, like SCI and CI practices, organisations must implement several RL practices for successful CFI, including IT (section 6.3), PM (section 6.7), (combined) facility/location practices (section 6.8.3), and management and staff practices (section 6.9.5). In the next section, the outcomes of CFI practices to manage consumer returns will be discussed.

6.4.3.3 Outcomes of CFI practices in RL

Table 6.14 shows that CFI practices involve several outcomes, including economic, operational, organisational, market-related and SC outcomes, which can be important for the effective management of consumer returns.

The *economic outcomes* of CFI involve facilitating financial management (FM) and control, reducing RL costs and maximising value recovery. Particularly, organisations can *improve FM* and *control* in RL through the CFI strategies of collaboration, cooperation and communication between functions (such as finance and logistics), indicating that CFI can be important for effective FM practices in RL (see section 6.9.2). Similarly, *RL costs* can be *reduced* through the CFI strategies of coordination between functions (e.g. logistics, marketing and procurement) and implementation of CFI, implying that CFI practices can address the economic barrier of high RL costs (see section 2.3.1). Lastly, implementing CFI in RL (strategy) can *maximise value recovery*, demonstrating a potential link between CFI and disposition practices (aimed at maximum value recovery) (see section 6.6).

The *operational outcomes* of CFI involve (1) reducing product return uncertainty, (2) improving RL process efficiency and effectiveness, and (3) enhancing operational performance. Like the economic

outcome of improved FM and control, *product return uncertainty* can be *reduced* through the CFI strategies of collaboration and communication between functions and the CFI organisational requirement of management involvement, which indicates that CFI practices can address the operational barriers in RL (see section 2.3.2). Moreover, strategic collaboration, communication, knowledge sharing and information sharing between functions can *improve RL process efficiency* and *effectiveness*. Evidently, implementing CFI in RL (strategy) can enhance the *operational performance* of the RL process, which can be important for managing consumer returns effectively.

Several *organisational outcomes* associate with CFI practices, including (1) enhancing RL innovation and capabilities, (2) improving RL program efficiency and effectiveness, (3) enhancing RL performance, (4) facilitating and improving RLM, (5) facilitating RL decision-making, (6) facilitating internal communication and coordination, (7) enhancing CFI, and (8) facilitating return prevention and avoidance (RPA) practices. Particularly, knowledge sharing between functions and implementing CFI (CFI strategies) can *enhance RL innovation* and *capabilities*, which can be important for continuous improvement initiatives in RLM. Moreover, the CFI strategies of identifying functions and assigning functional roles and responsibilities in RL can *improve RL program efficiency* and *effectiveness*, emphasising the operational outcome related to RL process efficiency and effectiveness. Similarly, CFI practices related to communication (CFI strategy) and management involvement (organisational requirement) can *enhance RL performance*, which emphasise the operational performance outcome of CFI.

Several CFI practices can *facilitate* and *improve RLM*, including the (1) CFI strategies of adopting a strategic (internal integrated) approach, assigning RL roles and responsibilities to functions, collaborating and knowledge sharing between functions, and implementing CFI, and (2) IT requirement of utilising IT systems (e.g. Intranet) for CFI. Additionally, the CFI strategies of establishing cross-functional teams and knowledge and information sharing between functions can *facilitate RL decision-making*, which can further contribute to the effective RLM of consumer returns.

Several CFI practices can contribute to outcomes related to CFI initiatives, for example, utilising IT systems (IT requirement), management involvement and PM in RL (organisational requirements) can enhance *internal coordination* and *communication*. Likewise, the operational requirement of integrating RL with FL can *facilitate CFI*, reemphasising the importance of implementing various RL practices for effective RLM. Consequently, effective CFI practices, like strategic coordination between functions, can *facilitate RPA* practices in RL, emphasising the important link between integration practices and RPA practices (also see sections 6.4.1.2 and 6.4.2.2).

Although limited, the *market-related outcomes* of CFI, including meeting consumer needs and improving consumer service, satisfaction and sales, can be important for the effective management of

consumer returns. Specifically, the strategic establishment of cross-functional teams for RL means that more focus can be placed on *meeting consumer needs*. Consequently, departments that may be less focussed on the consumer (e.g. finance and procurement) can be motivated through cross-functional teams to consider the needs of consumers. Additionally, strategic implementation of CFI (strategy) can *increase customer service*, and strategic coordination and communication between functions (CFI strategies), top management support and management involvement (organisational requirement) can *increase customer satisfaction,* which can result in more business and an *increase in sales.*

Finally, CFI practices involve the *SC outcome* of *facilitating SCI practices,* which emphasise the impact of internal integration on the effectiveness of external integration. Consequently, CFI strategies, like coordination and information sharing between functions, can facilitate SCI strategies of SC collaboration and coordination (also see section 6.4.1).

Essentially, CFI practices can provide several economic, operational, organisational, market-related and SC benefits, which can be important for the effective management of consumer returns. In the next section, a description and conceptual framework of CFI in RL will be presented and analysed.

6.4.3.4 Description and conceptual framework of CFI practices to manage consumer returns

Based on the findings presented in section 6.4.3, CFI practices can be important for the management of consumer returns, and will be described as follows:

> CFI practices for the management of consumer returns involve (1) CFI strategies, including a strategic approach, identification of functions in RL, assignment of functional roles and responsibilities in RL, establishment of cross-functional teams, development of functional relationships, strategic collaboration, cooperation, communication, knowledge sharing and information sharing between functions, and strategic implementation of CFI, and (2) CFI requirements, including IT requirement (utilise IT for CFI), operational requirement (RL and FL integration), and organisational requirements (top management support, management involvement and PM practices). The CFI strategies and requirements can result in several outcomes, including (1) economic outcomes (facilitate FM and control, RL cost reductions and maximise value recovery), (2) operational outcomes (reduce product return uncertainty, improve RL process efficiency and effectiveness and enhance operational performance), (3) organisational outcomes (enhance RL innovation and capabilities, improve RL program efficiency and effectiveness, enhance RL performance, facilitate and improve RLM, facilitate RL decision-making, internal communication and coordination, enhance CFI and facilitate RPA), (4) market-related outcomes (meet consumer needs and increase consumer service, satisfaction and sales), and (5) SC outcomes (facilitate SCI).

Figure 6.14 provides a conceptual framework of CFI practices, which includes the CFI strategies, requirements and outcomes to manage consumer returns. Specifically, Figure 6.14 illustrates the links between the strategies, requirements and outcomes of CFI, demonstrating a cost and benefit relationship. For example, the links between CFI strategies and requirements can be demonstrated by the CFI strategy of communication between functions, which links with the IT requirement (utilise IT) and organisational requirements (management involvement and PM in RL). Similarly, the CFI strategy of CFI implementation links with the operational requirement of FL and RL integration), and the CFI

strategy of establishing cross-functional teams links with the organisational requirement of top management support.

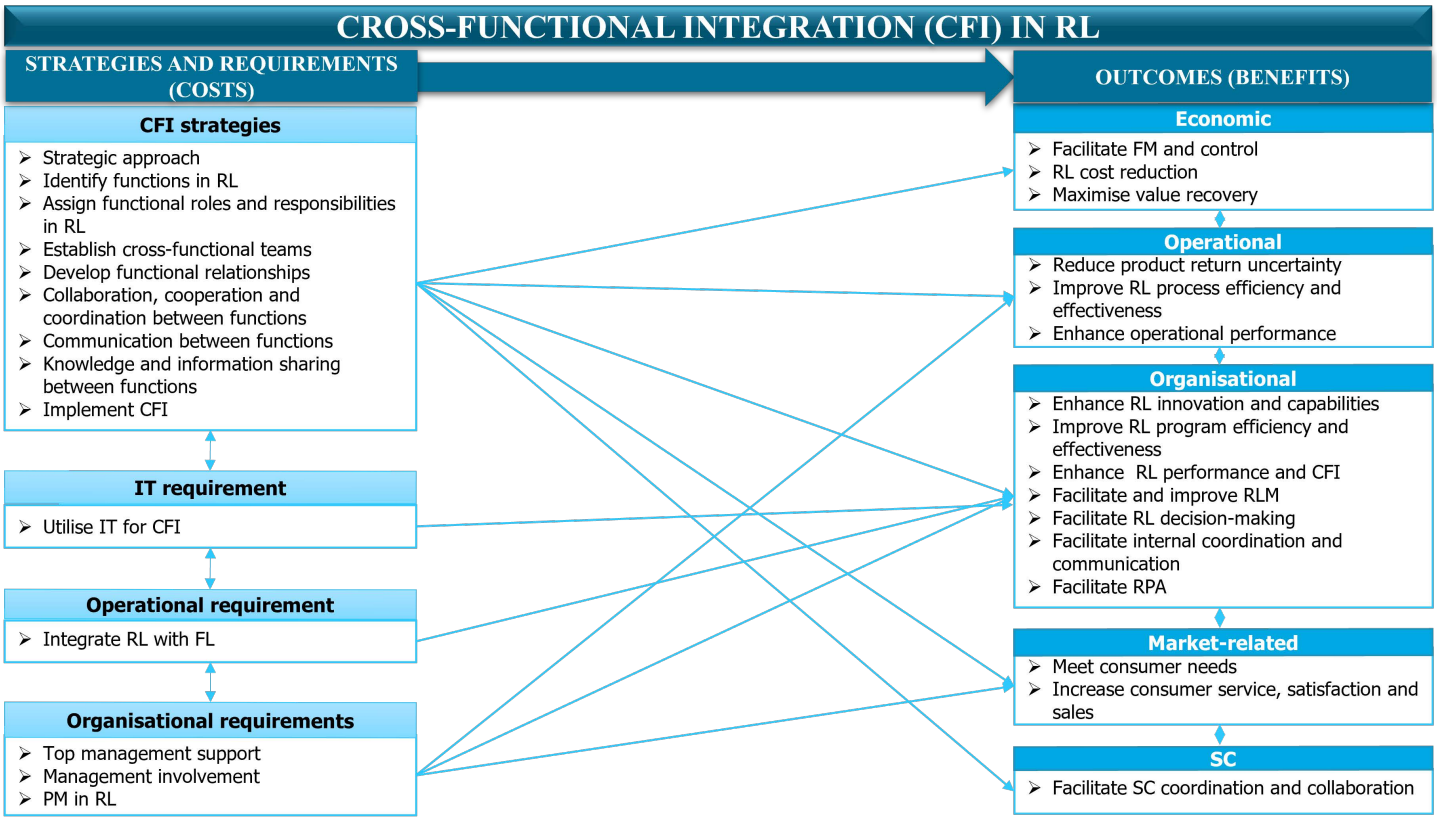


Figure 6.14 Conceptual framework of CFI practices to manage consumer returns
Source: Compiled by researcher

Regarding the links between CFI strategies, requirements and outcomes, the framework demonstrates that CFI strategies can be the most significant practice category, linking with all the CFI outcomes, including economic, operational, organisational, market-related and SC outcomes. Therefore, organisations must pay attention to CFI strategies to achieve optimum results to manage consumer returns. From the CFI requirements, the organisational requirements contribute to the most outcome categories (three out of five), while the IT and operational requirements respectively contribute to only one outcome category.

In terms of the outcomes of CFI practices, organisational outcomes can be the most significant outcome category (associated with all practice categories), which means that CFI practices can be the most beneficial for organisations that seek organisational benefits through RL practices. In contrast, the economic and SC outcomes can be the least significant categories (only associated with CFI strategies), meaning that CFI practices may be less important for organisations that experience economic and SC barriers in RL.

Finally, the framework shows that the CFI outcome categories can be linked, for example, the operational outcome of RL process efficiency and effectiveness can link with cost reduction/savings

(economic outcome), RL program efficiency and effectiveness (organisational outcome) and increased consumer service (market-related outcome). Additionally, the organisational outcome of internal coordination and communication can link with the SC outcome of SCI.

Essentially, the links between the CFI strategies, requirements and outcomes demonstrate the importance of a holistic approach to the management of consumer returns, meaning that organisations must carefully consider and analyse the costs (strategies and requirements) and benefits (outcomes) of CFI for the effective management of consumer returns.

In the next section, a conceptual framework and summary of findings for integration practices (discussed in section 6.4) to manage consumer returns will be presented and described.

6.4.4 Conceptual framework and summary of findings for integration practices to manage consumer returns

This section provides a conceptual framework and summary of the findings for integration practices to manage consumer returns. The findings presented in section 6.4. showed that all the integration practices, including supply chain integration (SCI), consumer integration (CI) and cross-functional integration (CFI) can be important for the management of consumer returns.

Figure 6.15 provides a conceptual framework for integration practices to manage consumer returns. Specifically, the conceptual framework illustrates a summary of the findings related to the integration practices, including SCI, CI and CFI, focusing on the combined strategies, requirements and outcomes, as well as the relationship between the strategies and requirements (costs), integration types and the outcomes (benefits). Furthermore, the strategies, requirements and outcomes that associate with all integration practices are emphasised through *italics*, and the unique strategies, requirements and outcomes (only applicable to a single practice) are emphasised with a coloured asterisk* (linked to the practice colour). The strategies, requirements and outcomes without italics and asterisks associate with two integration practices.

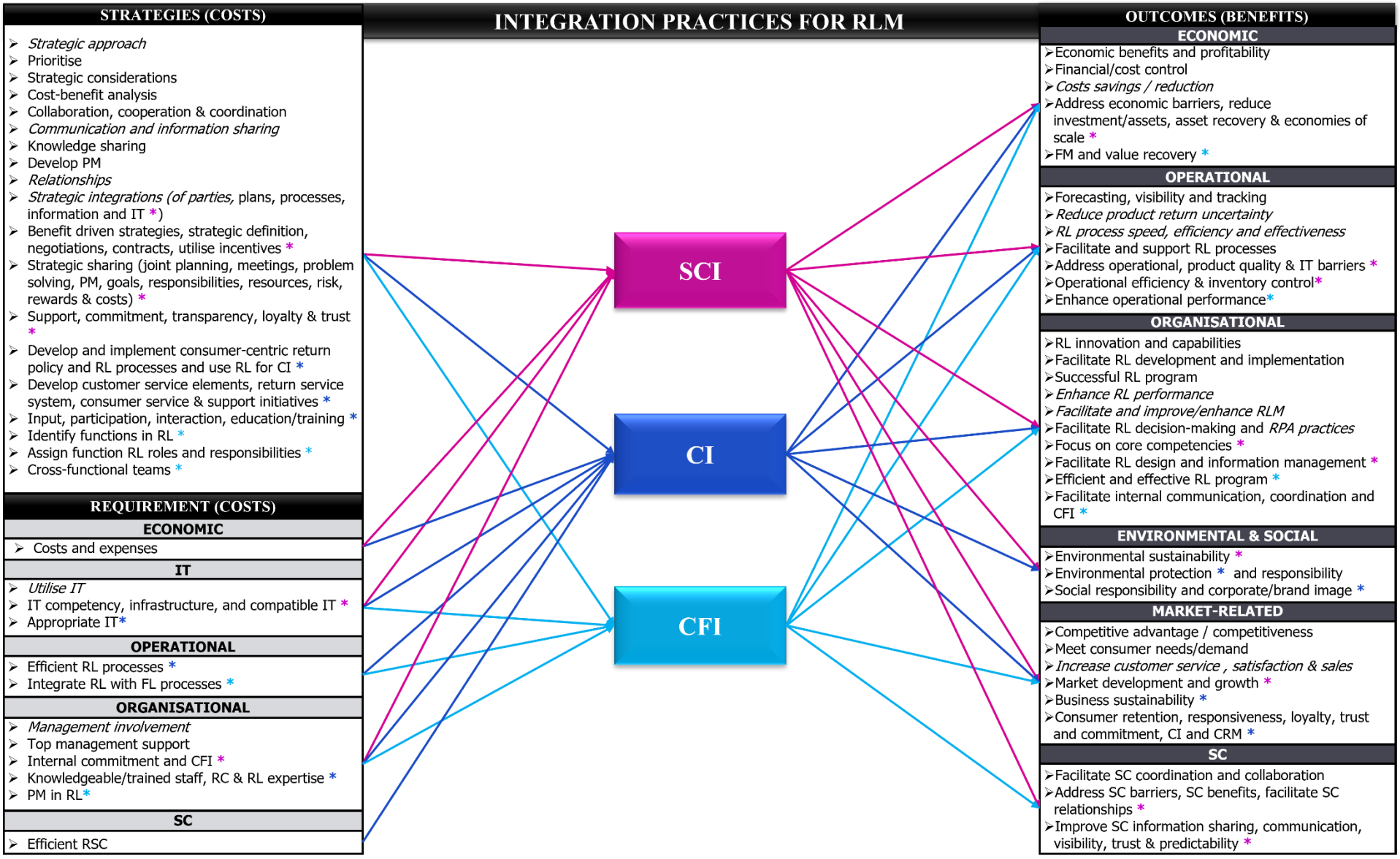


Figure 6.15 Conceptual framework of integration practices to manage consumer returns
Source: Compiled by the researcher

Based on Figure 6.15 and the discussions given in section 6.4, Table 6.15 provides a summary of the findings and managerial implications for the integration practices to manage consumer returns.

Table 6.15 Summary of findings and managerial implications for integration practices to manage consumer returns

CATEGORY	KEY FINDINGS	MANAGERIAL IMPLICATIONS
Strategies	•All integration practices, including SCI, CI and CFI involve strategies •All integration practices involve strategies related to strategic approach, information-sharing, communication, relationships and integrations •SCI and CI practices must be prioritised for RL •SCI and CI practices involve strategic considerations, cost-benefit analyses and development of PM •SCI and CFI practices involve strategic collaboration, cooperation, coordination, knowledge sharing and information sharing •Only SCI practices involve benefit-driven strategies, strategic commitment and support, negotiations, contracts, transparency, loyalty, trust and incentives •Only SCI practice strategic sharing and integration initiatives related to plans, processes, goals, problem solving, meetings, PM, resources (including infrastructure and IT), responsibilities, costs, risk, profits and SCM •Only CI practices involve strategies related to consumer-centric return policies and process, using RL, customer service elements, return service systems, customer service, support, education and training initiatives, consumer input, participation and interaction •Only CFI practices involve strategies related to identifying functions in RL, assigning functional roles and responsibilities in RL and cross-functional teams	•For successful integrations in RL, organisations must focus on integration strategies •For any type of integration in RL, organisations must focus on adopting strategic approaches, relationship development and management, information sharing, communication and strategic integrations •Organisations must focus on prioritising external integrations (SCI and CI) to manage consumer returns •For effective external integrations (SCI and CI) strategies, organisations must focus on strategic considerations, performing cost-benefit analyses and developing PM •For effective SCI and CFI strategies, organisations must focus on collaboration, cooperation, coordination, knowledge sharing and information sharing initiatives •For SCI strategies, organisations must focus on benefit-driven strategies, strategic commitment and support, negotiations, contracts, transparency, loyalty, trust, incentives, and strategic sharing and integration initiatives •For CI strategies, organisations must focus on consumer-centric return policies and processes, using RL, customer service elements, return service systems, customer service, support, education and training initiatives, consumer input, participation and interaction •For CFI strategies, organisations must focus on identifying functions in RL, assigning functional roles and responsibilities in RL and implementing cross-functional teams
Requirements	•CI practices associate with all requirements, including economic, IT, operational, organisational and SC requirements •SCI and CI practices involve *economic requirements* related to costs and expenses •All integration practices include *IT requirements*, including IT utilisation, but uniquely SCI requires IT competency, infrastructure and compatible IT, and CI requires appropriate IT •CI and CFI practices involve *operational requirements*, but uniquely CI requires efficient RL processes and CFI requires integration of RL and FL processes •All integration practices include the *organisational requirement* of management involvement, but uniquely SCI requires internal commitment and CFI, CI requires trained and knowledgeable staff, resource commitment (RC) and RL expertise, and CFI requires PM in RL •CI and CFI practices involve the organisational requirement of top management support •Only CI practices involve the *SC requirement* of efficient RSC	•Before implementing CI practices to manage consumer returns, organisations must consider various economic, IT, operational, organisational and SC requirements •For effective external integrations (SCI and CI) organisations must recognise and incur costs •For effective internal and external integrations, organisations must utilise IT and implement appropriate IT practices •Organisations must focus on operational requirements of efficient RL processes for CI practices and FL/RL integration for CFI practices •Organisations must involve management for successful internal (CFI) and external (SCI and CI) integrations •Successful CI and CFI requires top management support •For successful SCI practices organisations must implement CFI practices •For successful CI practices, organisations must train or allocate knowledgeable staff, commit resources and attain RL expertise •For successful CFI practices, organisations must implement PM practices •For successful CI practices, organisations must establish an efficient RC
Outcomes	•All integration practices involve benefits to manage consumer returns •Apart from social benefits, SCI include all outcome (benefit) categories, including economic, operational, organisational, environmental, market-related and SC •All integration practices involve *economic outcomes*, especially, in terms of cost savings, but uniquely, SCI can address economic barriers, reduce investment/assets, asset recovery and economies of scale, and CFI can facilitate FM in RL and value recovery •SCI and CI practices involve the economic outcomes of economic benefits and profitability •CI and CFI practices involve the economic outcome of cost control •All integration practices involve *operational outcomes*, including reducing product return uncertainty and improving RL process speed, efficiency and effectiveness, but uniquely, SCI can address operational, product quality and IT barriers and improve operational efficiency and inventory control, and CFI can enhance operational performance •SCI and CI practices involve the operational outcomes of improving product return forecasting, visibility and tracking, and facilitating and supporting RL processes •All integration types provide *organisational outcomes*, especially, improving RL performance and RLM, and facilitating RPA, but	•Organisations that experience various economic, operational, organisational, environmental, market-related and SC challenges in RL can consider implementing SCI practices •Organisations that seek to reduce costs in RL can consider integration practices in RL •Organisations that experience economic barriers and high asset/investment requirements in RL can consider SCI practices •For economies of scale and asset recovery organisations can consider SCI practices •Organisations that experience FM challenges in RL can consider CFI practices •To maximise recovery value, organisations can implement CFI •Organisations that seek economic benefits and profitability must focus on external integrations (SCI and CI) in RL •To control RL costs, organisations can consider CI and CFI practices •To reduce product return uncertainty, organisations can consider implementing SCI, CI and CFI practices •Organisations that seek to improve RL process speed, efficiency and effectiveness can implement integration practices •Organisations that experience operational barriers, including product quality and IT barriers, in RL must consider implementing SCI practices •To enhance operational performance, organisations can consider internal integration (CFI) practices •To improve product return forecasting, visibility and tracking and

	uniquely, SCI can enable focus on core competencies, and facilitate RL design and information management, and CFI can improve RL program efficiency and effectiveness and facilitate internal coordination, communication and integration •SCI and CI practices involve the organisational outcomes of facilitating RL development and implementation and ensuring a successful RL program •SCI and CFI involve the organisational outcomes of enhancing RL innovation and capabilities and facilitating RL decision-making •SCI and CI practices involve *environmental outcomes*, especially, environmental responsibility, but uniquely, SCI can enhance environmental sustainability and CI can result in environmental protection •Only CI can result in the *social outcomes* of social responsibility (CSR) and corporate/brand image •All integration practices involve *market-related outcomes*, especially, increasing customer service, satisfaction and sales, but uniquely, SCI can facilitate market development and growth, and CI can enhance business sustainability, consumer retention, responsiveness, loyalty, trust and commitment, CI and CRM •SCI and CI practices involve the market-related outcomes of a competitive advantage or competitiveness •SCI and CFI practices involve the market-related outcome of meeting consumer needs •SCI and CFI practices involve *SC outcomes*, especially, improvements in SC coordination and collaboration •SCI provide many SC benefits in RL, including addressing SC barriers, realising SC benefits, facilitating SC relationships and improving SC information sharing, communication, visibility, trust and predictability	support RL processes, organisations can consider external integration (SCI and CI) practices •Organisations can implement integration practices to enhance RL performance, facilitate and improve RLM and facilitate RPA •Organisations can consider SCI practices to focus on core competencies and facilitate RL design and information management •Organisations can consider CFI practices to improve RL program efficiency and effectiveness and facilitate internal communication, coordination and integration •For RL development and implementation and a successful RL program, organisations can consider external integration (SCI and CI) practices •For effective RL innovation, capabilities and decision-making, organisations can consider SCI and CFI practices •Organisations that seek to demonstrate environmental responsibility can consider external integrations (SCI and CI) in RL •To enhance environmental sustainability organisations can implement SCI practices •For environmental protection, organisations can consider CI practices •Organisations that seek to demonstrate CSR and enhance corporate/brand image can consider implementing CI •To increase consumer service, satisfaction and sales, organisations can consider implementing integration practices in RL •For market development and growth, organisations can implement SCI practices •Organisations that seek to enhance business sustainability, consumer retention, responsiveness, loyalty, trust, commitment, CI and CRM can implement CI practices in RL •To achieve a competitive advantage, organisations can consider implementing external integration (SCI and CI) practices in RL •To meet consumer needs/demands, organisations can consider SCI and CFI practices •For SC coordination and collaboration, organisations can implement SCI and CFI practices •Organisations that experience SC barriers in RL can implement SCI practices •Organisations that seek SC benefits, including improvements in SC relationships, information sharing, communication, visibility, trust and predictability, in RL can implement SCI •Organisations with specific RL problems and inefficiencies in consumer returns can implement the relevant integration practices to address the specific RL problems and inefficiencies

Source: Compiled by the researcher

Based on Figure 6.15 and the discussions given in section 6.4, Table 6.15 provides a summary of the findings and managerial implications for the integration practices to manage consumer returns.

Table 6.15 provides an in-depth understanding into the value of integration practices to manage consumer returns. Essentially, the findings show that SCI, CI and CFI practices can be important for the management of consumer returns, but before implementing a specific integration practice in RL a cost-benefit analysis must be performed. The importance of integration practices in RL, will further be explored in the interviews with industry experts (chapter 8).

In the next section, outsourcing/insourcing practices in RL will be presented, discussed and analysed.

6.5 RL INSOURCING AND OUTSOURCING PRACTICES TO MANAGE CONSUMER RETURNS

RL insourcing and outsourcing [hereafter in/outsourcing] as RL practices involve keeping RL inhouse versus outsourcing RL to third parties. Figure 6.16 provides a distribution of in/outsourcing practices based on the results of the QCA of RL literature (see Appendix C.4).

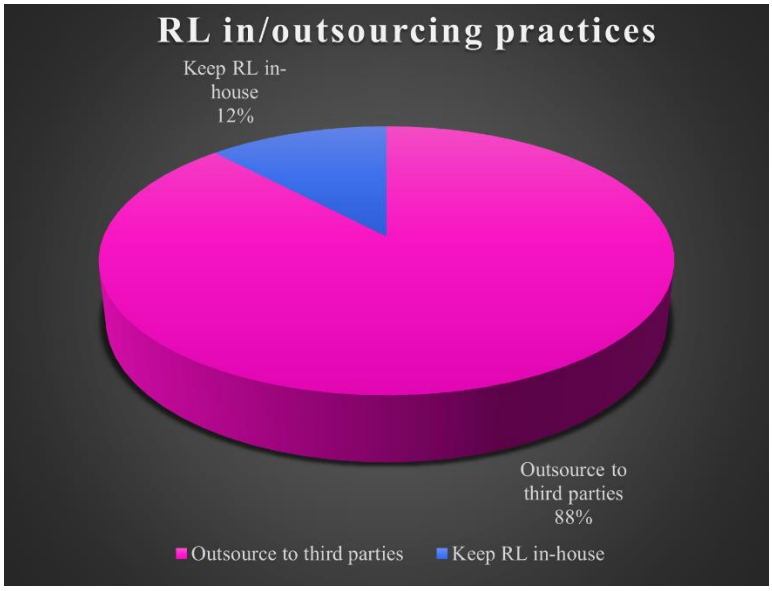


Figure 6.16 Distribution of in/outsourcing RL practices
Source: Compiled by the researcher

Figure 6.16 shows that outsourcing RL to third parties (88%) dominates RL literature (from the QCA), while insourcing RL (or keeping RL inhouse) covers a mere 12%. This finding confirms Janse *et al.* (2010:508), claiming that few publications in RL focus on insourcing of RL. Consequently, RL literature focusses significantly on outsourcing, indicating that outsourcing can be an important practice to manage consumer returns. Wang, Dang *et al.* (2021:1) confirmed this by claiming that outsourcing to third-party RL (3PRL) providers can be one of the most important RLM strategies in online retailing. Additionally, due to the complexity of consumer return processes, organisations lacking good knowledge of RL processes prefer partial or full RL outsourcing to third-party RL (3PRL) providers (Wang, Dang *et al.* 2021:2).

Alternatively, as Janse *et al.* (2010:508) and Stock and Mulki (2009:51) suggest outsourcing of RL is widely discussed in literature and in business case studies (or other industry articles) but findings suggest that most organisations prefer to keep RL inhouse. Additionally, few studies in RL literature focus on the negative impact of RL outsourcing (Agrawal *et al.* 2015:88). Therefore, the lack of literature of insourcing means that organisations rather need to focus on other RL practices for effective RLM, while being aware of the strategies and opportunities that outsourcing of RL can bring.

Nevertheless, certain degrees of RL in/outsourcing exist, which includes a (1) full insourcing strategy, meaning that the organisation performs all RL processes inhouse, (2) partial in/outsourcing, meaning that the organisation can choose to outsource some RL process(es) to third parties (3Ps) (e.g. collection, transportation and disposition), while keeping the remainder RL processes inhouse (e.g. inspection, sorting and processing), and (3) full outsource strategy, meaning that the organisation outsource all RL processes to 3Ps (Agrawal *et al.* 2016c:48; Prajapati *et al.* 2021:2398).

Since limited QCA findings of RL literature focused on RL insourcing, RL in/outsourcing was combined as a strategy that either supports full outsourcing, partial outsourcing/inhouse or full insourcing. Like IT and integration practices, RL in/outsourcing involves strategies, requirements and outcomes, which will be discussed and analysed in subsequent sections. The section concludes with a description, conceptual framework and summary of findings for RL in/outsourcing practices to manage consumer returns.

6.5.1 Strategies and requirements of RL in/outsourcing practices

RL in/outsourcing practices consist of (1) RL in/outsourcing strategies, including strategic considerations and analyses for RL in/outsourcing decisions and strategic decisions and strategies for RL outsourcing, and (2) RL in/outsourcing requirements, including economic, IT, operational and infrastructure, organisational and SC requirements. These strategies and requirements of RL in/outsourcing can contribute to the outcomes of RL in/outsourcing, discussed in section 6.5.2. Table 6.16 provides an overview of the findings related to the *strategies* and *requirements* of *RL in/outsourcing practices* to manage consumer returns, including the categories, subcategories, supporting sources for the subcategories and key quotations that support both the subcategories and the discussion of the findings.

Table 6.16 Findings related to strategies and requirements of RL in/outsourcing to manage consumer returns

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
Strategic considerations and analysis for RL in/outsourcing decisions	***Economic considerations for RL in/outsourcing decisions***	Lau and Wang (2009:460-461)	• *"[…] organizations [sic] have considered the economic criteria like cost, investment, economies of scale […]."* (Agrawal *et al.* 2016c:42)
		None	• *"[…] selfsupport system […] will likely be used when reverse logistics is regarded as a source of long-term profit."* (Lau & Wang, 2009:460) • *"[…] the transaction cost of setting up and managing a self-support reverse logistics system is higher than that of outsourcing."* (Lau & Wang, 2009:456)
		Alshamsi and Diabat (2015:589) Li and Olorunniwo (2008:385)	• *"Financial reasons […] Avoiding large investments […] Cost advantages due to economies of scales […] Reduction in operating and transaction costs […] Diverting capital investment/improving return on assets […]."* (Orboobadi, 2009:836) • *"In this competitive era where companies are trying to reduce cost of their operations; only outsourcing option could be available, possible and feasible alternative with them."* (Prakash & Barua, 2015:602) • *"Since product returns are uncertain, high variation in asset recovery and economies of scale are difficult to achieve; 3rd party RL partner can play crucial role […]."* (Prakash & Barua, 2016b:67)
	Operational considerations for	None	• *"The large amount of recoverable materials should motivate […] to become directly and proactively involved in various product recovery activities […] instead of relying on a third*

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
	RL in/outsourcing decisions		*party firm to handle their product returns."* (Shaharudin *et al.* 2015:2) • *"Enterprises that require an independent reverse logistics system generally have a large quantity of products that must be collected."* (Zhou & Zhou, 2015:60)
		Agrawal *et al.* (2016c:42, 51) Cheng and Lee (2010:1118) Du and Evans (2008:2619) Kumar and Putnam (2008:313, 314) Prakash and Barua (2015:603) Prakash and Barua (2016ba:68) Serrato *et al.* (2007:4307) Sharif *et al.* (2012:2517) Tavana *et al.* (2016a:17)	• *"[…] some companies prefer to outsource their logistics process to the 3PRLP […] because of the low volume […] returned by customers […]."* (Guarnieri *et al.* 2016:1115) • *"A lack of available space could necessitate the use of a new or third party warehousing facility."* (Dowlatshahi, 2012:1273) • *"[…] not have chance to develop a RL network due […] operational capability constraints. Thus, a need of third party RL […] occurs."* (Ayvaz *et al.* 2015:402) • *"The clients themselves, not having strong geographic distribution network, are attracted by the 3PL's […]."* (Li & Olorunniwo, 2008:385) • *"Third-party providers concentrate on core RL operations and continuously improve them."* (Mahmoudzadeh *et al.* 2013:2) • *"Since reverse logistics activities are extremely complex […] companies have begun to outsource their RL activities to third-party providers."* (Mahmoudzadeh *et al.* 2013:2) • *"[…] reverse logistics is difficult to predict […] insufficient […] capabilities compared to the external 3PLs."* (Cheng & Lee, 2010:1118) • *"[…] the management of return flow usually requires a specialized [sic] infrastructure with special information systems for tracking and dedicated equipment for the processing of returns. Therefore, industries are turning to third-party reverse logistics providers (3PRLPs)."* (Kannan *et al.* 2009:28) • *"[…] if organisations find that they have infrastructural problems with regard to reverse logistics, they should consider outsourcing their reverse logistics function."* (Badenhorst, 2016:10)
	Organisational considerations for RL in/outsourcing decisions	None	• *"[…] organizations have considered the […] capability; resource capacity; quality of service, core competency and other strategic […] parameters for the outsourcing decisions."* (Agrawal *et al.* 2016c:42)
		Bernon *et al.* (2011:494)	• *"Enterprises that require an independent reverse logistics system generally […] implementing reverse logistics […]."* (Zhou & Zhou, 2015:60) • *"[…] perceive reverse logistics activities as core business, and managers indicated that activities actually had been in-sourced."* (Janse *et al.* 2010:509) • *"High core competencies are performed in-house."* (Orboobadi, 2009:838) • *"[…] setting up one's own system […] develop intangible resources […] that are very difficult for other competitors to imitate in a short period of time."* (Lau & Wang, 2009:456) • *"Outsourcing reverse logistics […] There are some negatives also, that is, the company loses the information and data which help detecting the product quality, customer buying pattern which are very necessary for the company."* (Subhashini, 2016:9) • *"Outsourcing […] can be a means of relinquishing control of the returns facility to a company specializing [sic] in this area."* (Breen, 2006:547)
		Agrawal *et al.* (2015:88) Agarwal *et al.* (2016:3) Ayvaz *et al.* (2015:402) Bernon *et al.* (2011:494) Breen (2006:547) Cheng and Lee (2010:1118) Efendigil *et al.* (2008:270) Kannan *et al.* (2016:2, 5) Kumar and Putnam (2008:313) Li and Olorunniwo (2008:385) Petersen and Kumar (2009:35) Prakash and Barua (2016ba:68) Prakash and Barua, (2016b:64) Stock and Mulki, (2009:34) Subhashini (2016:9) Tavana *et al.* (2016a:3)	• *"[…] many companies are not capable of or may be unwilling to enter the reverse logistics business. These companies are therefore outsourcing all or part of the reverse logistics process […]."* (Kannan *et al.* 2009:28) • *"[…] most companies are not able to […] implement an effective RL plan. As a result, companies need to outsource part or all of their RL activities."* (Tavana *et al.* 2016b:544) • *"[…] retailers are considering the outsourcing of reverse logistics and product returns since it is not a strategic core competency of their business."* (Du & Evans, 2008:2618) • *"This is critical as companies outsource the services for which they do not have […] expertise."* (Dowlatshahi, 2010b:4203) • *"Many companies do not possess enough resource or competence to manage their reverse logistics activities, thus they have to choose the third-party reverse logistics provider to those activities."* (Saen, 2010:409) • *"Many companies are not willing to commit their people, system or their limited resources to operate a product return system. Therefore, these companies outsource their reverse logistics operation needs to third-party providers."* (Du & Evans, 2008:2619) • *"[…] small firms with limited resources usually rely on outsourcing to 3PL to implement reverse logistics in the initial stage."* (Lau & Wang, 2009:450) • *"[…] the outsourcing […] in reverse logistics […] to transfer the risk to the third parties."* (Kinobe *et al.* 2015:90) • *"Strategic reasons […] Expansion to new markets […] differentiation from competitors […]."* (Orboobadi, 2009:836)
	External considerations for RL in/outsourcing decisions	Xie and Breen (2014:460)	• *"If reverse logistics is implemented mainly for observing environmental laws and regulations, outsourcing is usually used to allow the company to focus resources on its core competency."* (Lau & Wang, 2009:460) • *"Customer requirements, governmental regulations, and socially responsible business practices often mandate using designated third-party logistics providers […]."* (Genchev *et al.* 2011:254)
	Organisational (internal) analysis for RL in/outsourcing decisions	None	• *"[…] it is important to make systematic analysis from various business perspectives before taking outsourcing decisions."* (Agrawal *et al.* 2016c:42) • *"[…] increasingly important dimension for retailers will be […] the capability retailers have to develop their own solutions or engage with specialist service providers […]."* (Bernon *et al.* 2016:599) • *"Closely examining the internal resources and capabilities of firms and comparing them*

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
			with those of outsider service providers to implement reverse logistics practices reveals that outsourcing is a viable strategic solution." (Cheng & Lee, 2010:1114) • *"There was recognition that reverse logistics networks are not as efficient as forward logistics and the use of third-party logistics companies could lessen […] impact."* (Bernon *et al.* 2011:494)
	Cost-benefit analysis for RL in/outsourcing decisions	None	• *"[…] it is important to explore and examine the pros and cons of outsourcing before taking decision to outsource reverse logistics […]."* (Agrawal *et al.* 2016c:42) • *"Firms must first determine if reuse activities are profitable in-house, or if partnerships should be made with third-party logistics providers […]."* (Jayaraman, 2006:983) • *"The operational activities are outsourced as long as the outsourcing option is financially justified."* (Orboobadi, 2009:834) • *"[…] outsourcing costs exceed the costs of performing the activity in-house […]."* (Orboobadi, 2009:838) • *"If organisations find the costs of reverse logistics too much of a challenge, they can make use of third-party logistics (3PL) providers."* (Badenhorst, 2013:5)
	Core competency assessment for RL in/outsourcing decisions	None	• *"Core competency check. Core competencies refer to activities that distinguish a company from its competitors."* (Orboobadi, 2009:837) • *"[…] criteria to identify a process/activity as core competency […] by using the following questions: Does the activity need highly specialized [sic] skills? Does the activity have a high impact on what customers perceive as the most important product attribute? Does the activity provide potential access to a wide variety of possible future markets? Is the activity difficult for competitors to duplicate? […] The company can set standards based on the number of positive answers provided to these questions. For instance the company could consider an activity to be a high core competency if there are at least three ''yes'' answers to the questions asked."* (Orboobadi, 2009:838) • *"Activities that have very low significance are good candidates for being outsourced to a third party […]."* (Orboobadi, 2009:839) • *"[…] highly significant activities in-house, the impact on the organization [sic] is too significant to let a third party perform these activities."* (Orboobadi, 2009:839)
	Market analysis for RL in/outsourcing decisions	Sasikumar and Kannan (2008b:240)	• *"When considering outsourcing decisions for reverse logistics, the fundamental factor to consider is whether there is a viable third party reverse logistics provider (3PRLPs) for the type of reverse logistics network required."* (Kannan *et al.* 2009:28)
Strategic decisions and strategies for RL outsourcing	***Strategic approach***	None	• *"[…] the outsourcing approach […] in reverse logistics […]."* (Kinobe *et al.* 2015:90)
	Prioritise RL outsourcing strategies	None	• *"[…] ranked as the top priority […] outsourcing RL activities makes the organizations concentrate on issues relative to their main business."* (Tavana *et al.* 2016b:554) • *"The management is also seeking prioritization [sic] of the RL selection criteria and wants to select the best partner among alternatives."* (Prakash & Barua, 2016b:17)
	Develop an outsource strategy	Prakash and Barua (2015:603)	• *"Develop outsourcing strategy for […] reverse logistics […]."* (Agarwal *et al.* 2016:3)
	Strategic decisions on the degree of outsourcing	Efendigil *et al.* (2008:270)	• *"At the strategic level, the decisions are high-level, such as […] deciding whether to subcontract RL activities in part or as a whole […]."* (Lambert *et al.* 2011:563) • *"[…] decision making with respect to completely or partly outsourcing the product […] reuse, […] repair […] activities, and conditions under which these activities must be outsourced."* (Agrawal *et al.* 2015:88) • *"Firms may outsource the reverse logistics activities partly or fully depending on the various parameters and business environment."* (Agrawal *et al.* 2016c:43) • *"Typically, a firm that chooses to outsource the fulfillment [sic] portion of its business does so for that entire function […]."* (Mukhopadhyay & Setaputra, 2006:717) • *Third party logistics services providers are available […] PI could think of outsourcing these activities in a phased manner […]."* (Ravi & Shankar, 2006:93)
	Strategic decisions on the types of RL processes and services to outsource	Ko and Evans (2007:347)	• *"The decision regarding outsourcing of activities in reverse supply chain is considered a strategic decision."* (Orboobadi, 2009:842) • *"Transportation, among others, is one of the operations that companies may choose to outsource."* (Alshamsi & Diabat, 2015:589) • *"[…] process or part of RL functions outsourcing. For example, inspection, sorting, and disposition may also be outsourced […]."* (Agrawal *et al.* 2015:82) • *"Typically, a firm that chooses to outsource […] receiving, storage, pick/pack, shipment, and returns processing."* (Mukhopadhyay & Setaputra, 2006:717) • *"Typical service needs of the reverse logistics chain include—customer service, depot repair, […] IT management, recycling, refurbishing/ screening, replacement management, returns authorization [sic], […] transportation, warehousing and warranty management."* (Kumar & Putnam, 2008:314) • *"IT management and conventional physical distribution service requirements such as transportation and warehouse management are considered as the two essential activities for outsourcing because the demand of reverse logistics is difficult to predict […]."* (Cheng & Lee, 2010:1118)
	Strategic decisions on the type of 3Ps	Agrawal *et al.* (2016c:51) Badenhorst and van Zyl (2015:153) Bai and Sarkis (2013:310) Du and Evans (2008:2618) Efendigil *et al.* (2008:272) Govindan *et al.* (2012:209)	• *"[…] third-party transportation option will gain more acceptance and be used by many companies in the future."* (Dowlatshahi, 2010b:4203) • *"For home deliveries, all of our retailer's utilized [sic] specialist parcel carriers […]."* (Bernon *et al.* 2016:595) • *"[…] a third-party software provider provided real-time information systems related to returned products."* (Bernon & Cullen, 2007:51) • *"[…] space could necessitate the use of a new or third party warehousing facility."*

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
		Guarnieri *et al.* (2015:211) Guarnieri *et al.* (2016:1115) Jack *et al.* (2010:242) Kannan (2009:398, 339) Kannan *et al.* (2009:28, 29) Kannan *et al.* (2016:5) Ko and Evans (2007:364) Mukhopadhyay and Setaputra (2006:717) Prakash and Barua (2016a: 67, 68) Prakash and Barua (2016b:64, 67, 70) Ravi and Shankar (2006:93) Saen (2010:409) Sasikumar and Kannan (2008b:240) Sharif *et al.* (2012:2522) Shi *et al.* (2012:223) Subhashini (2016:9) Tavana *et al.* (2016a:3) Tavana *et al.* (2016b:545) Yan *et al.* (2012:252)	(Dowlatshahi, 2012:1273) • *"[…] using third party collection stores […]."* (Luitel *et al.* 2014:94) • *"Economic factors suggest that the most suitable recovery option would be a 3P recovery service provider (RSP) […]."* (Das & Chowdhury, 2012:210) • *"[…] business practices often mandate using designated third-party logistics providers specializing [sic] in customized [sic] disposition alternatives."* (Genchev *et al.* 2011:254) • *"Specialists from a third-party refurbishing company were used to recover some cash from the returns."* (Bernon & Cullen, 2007:51) • *"Outsourcing to a 3PRLP has been identified as one of the most important management strategies for RL networks in the recent years."* (Govindan & Murugesan, 2011:150) • *"Many companies outsource their reverse logistics operations to a third party logistics provider (3PL)."* (Lambert *et al.* 2011:563) • *"Fourth party logistics is also one of options of outsourcing […]."* (Agrawal *et al.* 2015:83)
	Strategic selection of 3P partners	Lambert *et al.* (2011:563) Lau and Wang (2009:450) Orboobadi, (2009:836)	• *"[…] the task of evaluating and selecting a 3PRLP is fundamental, since it determines the overall performance of the company […]."* (Tavana *et al.* 2016a:1) • *"It is difficult to find the best way to evaluate and select a 3PRLP, […] The selection process, however, should start with valid criteria and by understanding the interaction among those criteria."* (Kannan *et al.* 2009:29) • *"Often the third-party service provider is selected based on its ability to respond to the complexity and randomness of the reverse supply chain. Information systems and physical infrastructures are also key factors in the success of the reverse supply chain."* (Kumar & Putnam, 2008:314) • *"[…] a combination of IS and resource commitment factors (either internal or external to the supply chain) are incumbent upon the reverse third-party logistics (R3PL) process."* (Sharif *et al.* 2012:2520) • *"The choice of carrier depends on the location of the returned products, the services the carriers offer, and the costs of those services."* (De Leeuw *et al.* 2016:722) • *"Co-ordination and reliability of partner is very important aspect while outsourcing RL operations."* (Prakash & Barua, 2016b:64) • *"[…] those 3PLs that are willing to implement an optimal strategy of handling product returns can bring in millions of dollars of potential cost savings."* (Min & Ko, 2008:176) • *"Preferably, these services are integrated, or "bundled" together by the provider."* (Mukhopadhyay & Setaputra, 2006:717) • *"[…] third-party organisations […] capabilities […] that offer customers a range of services, including sortation, grading, refurbishment and final product dispositioning routes […]."* (Bernon & Cullen, 2007:54) • *"[…] specialized [sic] firms in the market now that have already developed core competency in many of the business processes involving reverse logistics, and are rapidly becoming the preferred outsourcing alternatives for the firms."* (Mukhopadhyay & Setaputra, 2006:717) • *"Ability of outsourcing partner to manage product acquisition/gatekeeping, collection, inspecting and sorting and disposition decisions."* (Prakash & Barua, 2016a:70)
	Strategic development of terms and PM for 3PS	None	• *"[…] identify an outsourcing partner and define the terms of engagement, and also the financial outlay for this service."* (Breen, 2006:547) • *"3PL […] dimensions, IS capability, IS compatibility, and IS technology, were used to measure […] their RL performance."* (Sharif *et al.* 2012:2522)
Economic requirements	***Investment***	Mahmoudzadeh *et al.* (2013:2)	• *"Developing a self-support system, for example, will involve heavy financial investment […]."* (Lau & Wang, 2009:460) • *"Firms that do not outsource need to strategically invest in reverse logistics functions […]."* (Vlachos, 2016:16) • *"[…] to manage return flows, it requires investing in specialised technology and relatively high handling costs. This has given rise to demand for reverse logistics services from third party logistics providers (3PLs)."* (Lee *et al.* 2012:5616)
	Costs	None	• *"[…] full-scale self-support system requires such high set up and running costs […]."* (Lau & Wang, 2009:460) • *"For the payment it receives from the seller, the RSP will handle any return from the customer […]."* (Mukhopadhyay & Setaputra, 2006:718) • *"Companies that purchase reverse logistics services from 3PLs […]."* (Cheng & Lee, 2010:1112) • *"Cost calculation for outsourcing. The costs associated with outsourcing […] to a third party include: information costs, transportation costs, price (sub-contract costs), and administrative costs."* (Ordoobadi, 2009:841)
IT	***Appropriate and***	Ko and Evans (2007:347)	• *"Self-support system requires possession of all the necessary technology […]."* (Lau &

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
requirements	***customised IT***		Wang, 2009:461) • *"Third-party logistics have also become important players in reverse logistics since the implementation of return operations requires […] special information systems for tracking/capturing data […] for the processing of returns […]."* (Kannan *et al.* 2009:28) • *"The 3PRL partner has to deal with […] return products along with various activities like product acquisition/gate keeping, collection, inspection & sorting, storage, and processing. These activities require […] customized [sic] information systems [...]."* (Prakash & Barua, 2016b:64)
Operational and infrastructure requirements	***Facilities***	None	• *"To run a selfsupport system […] the company will be responsible for everything ranging from maintenance of […] facilities […]."* (Lau & Wang, 2009:461) • *"The 3PRL partner has to deal with […] activities like product acquisition/gate keeping, collection, inspection & sorting, storage, and processing. These activities require […] warehousing facilities [...]."* (Prakash & Barua, 2016b:64)
	Equipment	Kannan *et al.* (2009:28)	• *"Self-support system requires possession of […] special equipment […]."* (Lau & Wang, 2009:461) • *"The 3PRL partner has to deal […] with various activities like product acquisition/gate keeping, collection, inspection & sorting, storage, and processing. These activities require […] dedicated transportation, material handling equipment's [...]."* (Prakash & Barua, 2016b:64)
	Infrastructure	Ko and Evans (2007:347) Luitel *et al.* (2014:94)	• *"[…] the management of return flow usually requires a specialized infrastructure […] and dedicated equipment for the processing of returns. Therefore, industries are turning to third-party reverse logistics providers (3PRLPs)."* (Kannan *et al.* 2009:28) • *"The 3PRL partner has to deal with […] various activities like product acquisition/gate keeping, collection, inspection & sorting, storage, and processing. These activities require state-of-the-art infrastructure [...]."* (Prakash & Barua, 2016b:64)
Organisational requirements	***RL implementation***	None	• *"Enterprises that require an independent reverse logistics system generally […] implementing reverse logistics […]."* (Zhou & Zhou, 2015:60)
	Internal communications	None	• *"For information management, self-support system requires mainly internal communication […]."* (Lau & Wang, 2009:461)
	Management involvement	None	• *"[…] perceive reverse logistics activities as core business, and managers indicated that activities actually had been in-sourced."* (Janse *et al.* 2010:509) • *"The management is also seeking prioritization [sic] of the RL selection criteria and wants to select the best partner among alternatives."* (Prakash & Barua, 2016b:17)
	Skilled management and staff	Ko and Evans (2007:347)	• *"To run a self-support system, the demand for management skills is high as the company will be responsible for everything […]."* (Lau & Wang, 2009:461) • *"Self-support system requires possession of […] trained personnel […]."* (Lau & Wang, 2009:461) • *"The 3PRL partner has to deal […] with various activities like product acquisition/gate keeping, collection, inspection & sorting, storage, and processing. These activities require […] skilled labor [sic] [...]."* (Prakash & Barua, 2016b:64)
	Staff training	None	• *"To run a selfsupport system […] the company will be responsible for […] training of staff […]."* (Lau & Wang, 2009:461) • *"[…] through outsourcing to a third party […] instead of […] training employees […]."* (Luitel *et al.* 2014:94) • *"[…] an accurate and real-time training programme is necessary in order to produce skilled 3PL RL workers […]."* (Sharif *et al.* 2012:2523)?
SC	***SC relationships***	None	• *"[…] RL functions management is managed through a third-party relationship."* (Bai & Sarkis, 2013:308) • *"A 4PL is treated as a strategic partner, rather than a tactical one […] The RSP, therefore, is acting as a strategic partner."* (Mukhopadhyay & Setaputra, 2006:718) • *"[…] organisations can engage with 3PL providers to contract out their RL operations to them."* (Sharif *et al.* 2012:2517) • *"[…] it is recommended to do ''smart'' sourcing, that is outsourcing with close relationship with the third party to guarantee the strategic control remains with the organization. In other words, these types of activities require organizational arrangements with the third party rather than just contractual agreement."* (Orboobadi, 2009:842)
	SCI practices	Prakash and Barua, (2016ba:67)	• *"[…] the major challenge is just to maintain good communication and a cooperative relationship with the 3PL provider […] outsourcing and the collaborative approaches demand effective joint management and information exchange among partners."* (Lau & Wang, 2009:461) • *"Communicating with […] 3PLs […] to coordinate the return is key to the RL process."* (Huscroft *et al.* 2013b:316) • *"Staff mentioned that to achieve […] an efficient and productive approach to 3PL operations, it was important that team members and workers were provided with the right level of access to information from the related client company."* (Sharif *et al.* 2012:2523) • *"Collaboration with a third-party software provider […]."* (Bernon & Cullen, 2007:51) • *"[…] fourth party logistics can play a crucial role in RL through integration and collaboration."* (Agrawal *et al.* 2015:88)

Source: Compiled by the researcher

Table 6.16 shows that RL in/outsourcing practices includes several strategies and requirements, which will be discussed in subsequent sections.

6.5.1.1 Strategic considerations and analyses for RL in/outsourcing decisions

Before implementing RL in/outsourcing practices, organisations must strategically identify and determine the viability of RL in/outsourcing through several strategic considerations and analyses. In terms of the strategic considerations, organisations can consider economic, operational, organisational and external factors for effective RL in/outsourcing decisions. Part of the considerations can be the identification of potential reasons for RL in/outsourcing, which may direct organisations to the most appropriate alternatives.

The *economic considerations* for RL in/outsourcing involve, profitability, investment, costs and economies of scale. The profitability relates to the core competency and strategic plan of the organisation that favours RL insourcing. More specifically, organisations may choose to insource RL if they view RL as a source of long-term profit, which can be achieved through several RL practices that enhances profitability (e.g. IT, integration, disposition, RC and FM practices). Nevertheless, RL implementation involves high investment and costs (see section 2.3.1) that may motivate organisations to consider RL outsourcing, avoiding large capital investments. Additionally, organisations must consider economies of scales, relating to return volume (operational consideration). For instance, organisations with lower return volumes may find economies of scale difficult to achieve, favouring RL outsourcing.

The *operational considerations* and *reasons* for RL in/outsourcing involve return volume, facility/network capacity and operational capability, uncertainty and complexity of RL, and RL operational requirements. Return volume can be an important for economic and operational considerations for effective RL in/outsourcing decisions. For instance, organisations with high return volume may consider RL insourcing to benefit from disposition (recovery) processes and practices and scale benefits, while organisations with lower return volume may consider RL outsourcing to focus on core capabilities and attain scale benefits.

In terms of facility/network capacity and operational capability, organisations with limited facility space for RL, a lack of a distribution network (e.g. one warehouse without adequate transportation) and operational capability constraints can consider RL outsourcing. Additionally, the operational barriers in RL (see section 2.3.2) can motivate organisations to consider RL outsourcing to 3Ps with the operational capabilities to deal with product return uncertainties and complex RL processes. Moreover,

the operational requirements of RL involve specialised IT, infrastructure, facilities and equipment (also see section 6.5.1.3) that organisation must consider for effective RL in/outsourcing decisions.

The *organisational considerations* for RL in/outsourcing decisions include organisational strategies, core competency and expertise, resources, risk, control, and market strategies. Regarding the organisational strategies, organisations that require an independent RL function can consider RL insourcing, while organisations unwilling to adopt/implement RL strategies and functions can consider RL outsourcing. Additionally, organisations that view RL as a core function with high RL competency and expertise can consider RL insourcing, while organisations that view RL as a secondary business/function with limited RL competency and expertise can consider RL outsourcing. Similarly, organisations that seek to develop intangible resources (e.g. RL capabilities and expertise) and commit organisational resources (e.g. skilled managers and staff) for RL can consider RL insourcing, while organisations unwilling to commit or lack resources for RL (such as smaller organisations) can consider RL outsourcing, emphasising the importance of the operational considerations related to IT, infrastructure, facilities and equipment.

In terms of risk and control, organisations interested in receiving valuable market information from consumer product returns and controlling the RL function can consider RL insourcing. Alternatively, organisations interested in avoiding financial, operational and management risks in RL (see section 2.3) and less concerned with functional control can consider RL outsourcing. The market strategies involve competitive and market expansion considerations, which relates organisational capabilities and resources. For instance, organisations interested in utilising RL capabilities and resources as a competitive differentiation can consider RL insourcing. Alternatively, smaller organisations with limited resources seeking to increase competitiveness and expanding markets (e.g. secondary markets for recovered products) can consider RL outsourcing.

Finally, the *external considerations* for RL in/outsourcing relates to RL drivers, including environmental, government, social responsibility and consumer requirement drivers (see section 2.3). Particularly, organisations seeking to use RL to only observe environmental laws, comply with governmental legislation or demonstrate social responsibility can consider RL outsourcing. Additionally, organisations can consider consumer requirements (e.g. consumer-friendly product return processes) (see section 2.3.1.3) to determine the appropriateness of RL in/outsourcing.

Based on the strategic considerations for RL in/outsourcing decisions, organisations can perform *strategic analyses* (or assessments), including (1) organisational (internal) analysis, (2) cost-benefit analysis, (3) core competency assessment, and (4) market analysis, for effective RL in/outsourcing

decisions. Specifically, based on the economic, operational and organisational considerations for RL in/outsourcing an *organisational/internal analysis* must be performed, which involves analysing various organisational perspectives and examining internal resources and capabilities in RL and comparing the capabilities with external 3P organisations or competitors. Additionally, organisations can compare RL with FL operations to identify possible inefficiency or shortages, benchmarking internal RL capabilities against FL capabilities. Consequently, organisations must recognise and understand the importance of RL and the requirements for effective RLM, ensuring an accurate organisational analysis for effective RL in/outsourcing decisions.

Like IT and integration, RL in/outsourcing strategies involve *cost-benefit analyses*, exploring the advantages and disadvantages of RL in/outsourcing. For instance, organisations can perform cost-benefit analyses related to profitability (e.g. more profitable to keep RL inhouse), financial justification, costs of outsourcing versus insourcing (e.g. costs of outsourcing lower than insourcing) and RL cost problems (e.g. difficult to manage RL costs favour outsourcing), emphasising the importance of economic considerations for RL in/outsourcing decisions.

Relating to the strategic considerations and internal and cost-benefit analyses, a *core competency assessment* involves identifying the activities that form part of the organisation's core business. Organisations can perform core competency assessments for the overall RL function and for specific RL processes (e.g. collection, transportation, inspection and disposition), which may help subsequent strategic decisions for RL outsourcing (e.g. degree of outsourcing, type of RL processes and type of 3Ps) (see section 6.5.1.2). The core competency assessment in RL can be performed by exploring several questions related to degree of specialisation required (e.g. RL skills), impact on consumer perceptions, market potential and competitive factors, relating to the organisational considerations for RL in/outsourcing. Consequently, the outcomes of the core competency assessments can help organisations determine the most suitable RL in/outsourcing alternative for the effective management of consumer returns.

Finally, organisations must perform a *market analysis*, which involves assessing the availability of 3Ps in the market, before deciding between RL in/outsourcing. For instance, if RL falls outside the core competency of an organisation, outsourcing the entire RL process can only be viable if specialised 3Ps exist in the market to perform RL processes and practices effectively. Consequently, organisations must review and compare the 3P types and available RL services to determine the feasibility of outsourcing all or some parts of the RL process, which can facilitate with effective strategic decisions for RL outsourcing (section 6.5.1.2).

Essentially, organisations must establish a holistic approach by considering various economic, operational, organisational and external factors and performing several strategic analyses for appropriate RL in/outsourcing decisions.

6.5.1.2 Strategic decisions and strategies for RL outsourcing practices

While the strategic considerations and analyses focused on deciding between RL in/outsourcing, the strategic decisions and strategies for RL outsourcing can be implemented once an organisation decided to adopt *RL outsourcing* (either fully or partly) as a RL practice. Evidently, organisations that choose RL insourcing, need to explore and implement other RL strategies and practices, like IT, integration, disposition, PM, facility/location, RC, FM, RPA, SPP and management and staff practices for the effective management of consumer returns. In contrast, organisations that choose to outsource RL must implement several strategies for RL outsourcing, including (1) a strategic approach, (2) prioritising RL outsourcing strategies, (3) developing an outsourcing strategy, (4) strategic decisions on the degree of outsourcing, (5) strategic decisions on the type of RL process and services to outsourcing, (6) strategic decisions on the type of 3Ps, (7) strategic selection of 3Ps, (8) strategic development of terms, and (9) strategic development of PM for 3Ps.

Like IT and integration practices (sections 6.3 and 6.4), RL outsourcing strategies must be based on a *strategic approach*, which can guide the implementation of appropriate outsourcing strategies. For example, organisations may adopt a partial outsourcing approach that form the basis for the strategic decisions on the degree of outsourcing, type of RL activities/processes and type of 3Ps. Similarly, organisations must *prioritise RL outsourcing strategies*, ensuring effective implementation of RL outsourcing practices. For example, organisations can decide to prioritise strategic decisions related to the type of RL process/activity to outsource and/or prioritise strategic assessment and selection of the most suitable 3P partner. Consequently, based on the strategic approach and prioritised RL outsourcing strategies, organisations can develop an appropriate *RL outsourcing strategy* for the effective management of consumer returns.

As part of the RL outsourcing strategy, organisations must *strategically decide* on the *degree* of *RL outsourcing*, which can include partial, full or phased RL outsourcing. Particularly, organisations may use the initial core competency assessment (section 6.5.1.1) to determine the degree of RL outsourcing. Additionally, if the organisation outsources certain FL processes, then outsourcing similar RL processes (such as transportation) might be a viable option. Alternatively, the organisation may consider outsourcing in a phased manner, before committing to a full outsourcing strategy.

Linking with the degree of outsourcing, the *strategic decisions* on the *type* of *RL processes* and *services* to *outsource* can be based on strategic analyses for RL in/outsourcing. For example, if the core competency assessment showed that the organisation lacks product disposition skills (e.g. repair or refurbishment) the organisation may choose to outsource RL disposition processes. Accordingly, organisations may choose to outsource some or all RL processes, including collection, transportation, receiving, processing, inspection, sorting, disposition and redistribution, based on the outcomes of the core-competency assessments. Similarly, organisations that lacks service capabilities for effective RLM may choose to outsource customer services, IT, warehouse, transportation and returns management services.

The final *strategic decision* involves the *type of 3Ps* based on the degree and type of RL process/services decisions. For instance, organisations that seek partial outsourcing of one or two RL processes/services can choose 3Ps that specialise in that specific RL process(es)/services. For example, a transportation provider or courier for RL collection and transportation, a 3P software provider for IT, a 3P facility provider for warehousing solutions, or a refurbishing or repair service provider (RSP) for product recovery. Alternatively, organisations interested in full RL outsourcing solutions can consider 3PL, 3PRL (third-party RL provider) and 4PL providers.

Subsequently, with the strategic decisions in mind, organisations must *strategically select 3P partners,* which can be initiated by identifying selection criteria, like proximity/location, service offering, service costs, responsiveness to RL complexity, RL process and RLM capabilities, resources, reputation and reliability. Consequently, organisations may select a reputable and dependable 3P close in proximity, offering affordable bundled RL solutions, with optimal RL strategies (or practices), RL capabilities and resources (e.g. IT, infrastructure, equipment and staff) for the effective management of consumer returns.

Once selected, the organisation needs to *strategically develop terms* to manage the outsourcing relationship, for example, compiling a contract that sets the expectations and responsibilities of each party, types of services, costs, communication, timeframe and termination details. Finally, organisations must *strategically develop PM* to monitor the selected outsourcing partner's performance, which may involve economic, operational, organisational, environmental, market-related and SC performance (see section 6.7). Consequently, PM practices in RL can also be important for organisations that adopt RL outsourcing as a strategy, maintaining the effective RLM of consumer returns.

6.5.1.3 Requirements of RL in/outsourcing practices

Relating to the RL in/outsourcing strategies, RL in/outsourcing requirements involve economic, IT, operational/infrastructure, organisational and SC requirements. The *economic requirements* of RL in/outsourcing involve investment and cost requirements, which must be considered before making informed RL in/outsourcing decisions. On the one hand, organisations that choose RL insourcing must be willing to *invest* in RL infrastructure and resources and incur RL implementation and running/operational *costs.* On the other hand, organisations that choose to outsource RL can avoid investment, implementation and running costs but must pay outsourcing costs, which relates to the services offered by the 3P, like information costs, RL process costs (e.g. collection, transport, inspection and disposition costs) and administration costs. Evidently, the economic requirements demonstrate the importance of the RL in/outsourcing strategies related to economic considerations and cost-benefit analyses (section 6.5.1.1) and RL outsourcing strategies related to strategic decisions and selection of appropriate 3Ps (section 6.5.1.2).

The *IT requirements* for RL in/outsourcing relate to the IT practices of *appropriate* and *customised IT* to manage consumer returns. Like the economic requirements, IT requirements relate to strategic considerations for RL in/outsourcing and the strategic decisions and selection of 3Ps for RL outsourcing. Consequently, organisations that choose to keep RL inhouse must be willing to implement and use appropriate IT for effective RLM, emphasising the strategic importance of operational considerations for RL in/outsourcing decisions (section 6.5.1.1). Alternatively, organisations can choose 3Ps, like 3PLs or 3PRLs, with appropriate and customised IT solutions, emphasising the importance of strategic decisions related to the type of 3Ps and selection of 3Ps based on IT capabilities and resources (section 6.5.1.2).

Similarly, the *operational* and *infrastructure requirements* of RL in/outsourcing, relate to strategic (operational) considerations for RL in/outsourcing decisions and strategic decisions and selection of 3Ps for RL outsourcing, focussing on facilities, equipment and infrastructure. Evidently, organisations that choose RL insourcing must own, operate and maintain facilities and special equipment for effective RL operations/processes, emphasising the economic requirements of investment and costs of RL insourcing. Consequently, organisations unwilling or unable to invest, own and operate appropriate facilities, equipment and infrastructure can choose 3P partners with the appropriate facilities, transportation, materials handling equipment and infrastructure to manage consumer returns.

The *organisational requirements* of RL in/outsourcing include RL implementation, internal communication, management involvement, skilled management and staff, and staff training. *RL*

implementation can be an important requirement for organisations that adopted a RL insourcing strategy without a pre-established RL function, emphasising the economic requirement of RL implementation costs in RL insourcing. Similarly, *internal communication* between functions can be an important requirement for RL insourcing, which demonstrates the importance of implementing IT and integration (CFI) practices for an effective RL insourcing strategy. Like IT and integration practices (sections 6.3 and 6.4), *management involvement* can be important for the implementation and execution of RL practice strategies. Particularly, for RL in/outsourcing managers must be involved in strategic considerations and analyses for effective RL in/outsourcing decisions and the prioritisation of RL outsourcing strategies (like selecting appropriate 3Ps).

Skilled management and *staff* associate with human resource requirements in RL, which can be important for the RL in/outsourcing strategies related to organisational considerations, organisational analysis and core competency assessment (see section 6.5.1.1), as well as the RL outsourcing strategy related to 3P capabilities and resources as selection criteria. Subsequently, organisations that lack skilled human resources but prefer RL insourcing must *train staff* for effective RLM, linking RL insourcing practices with RC and management and staff practices (sections 6.9.1 and 6.9.5). Alternatively, organisations can choose RL outsourcing to avoid staff training requirements but must select 3Ps with effective staff training programmes for the effective management of consumer returns, reemphasising the strategic importance of selecting 3Ps based on RL capabilities, resources and strategies (see section 6.5.1.2).

Finally, the *SC requirements* of SC relationships and SCI practices associate with RL outsourcing, which can be important for the success of the outsourcing relationship. Particularly, *SC relationships* in RL outsourcing can involve strategic partnerships, SC arrangements and contractual relationships, which emphasise the strategic importance of developing terms for effective outsourcing relationship management (see section 6.5.1.2). Moreover, RL outsourcing requires *SCI practices*, involving joint management, information sharing, communication, cooperation and collaboration, indicating that organisations must also select 3Ps capable of. Evidently, organisations that choose RL outsourcing must still implement SCI practices for the effective management of consumer returns.

Essentially, RL in/outsourcing practices require a holistic approach, linking strategic considerations and analyses for RL in/outsourcing decisions, strategic decisions and strategies for RL outsourcing and RL in/outsourcing requirements, which can contribute to several outcomes discussed in the next section.

6.5.2 Outcomes of RL in/outsourcing practices

The outcomes of RL in/outsourcing practices can be described as the benefits of implementing RL in/outsourcing strategies and requirements for the effective management of consumer returns. The outcomes of RL in/outsourcing practices include (1) economic, (2) operational, (3) organisational (4) environmental, (5) social, (6) market-related and (7) SC outcomes. Table 6.17 provides an overview of the findings related to the *outcomes of RL in/outsourcing practices*, including the categories, subcategories, supporting sources for the subcategories and key quotations that support both the subcategories and the discussion of the findings.

Table 6.17 Findings related to outcomes of RL in/outsourcing practices to manage consumer returns

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
Economic outcomes	***Reduce investment, asset and capital requirements and risks***	Agrawal *et al.* (2016c:43) Alshamsi and Diabat (2015:589) Kinobe *et al.* (2015:90) Subhashini (2016:9)	• *"Financial reasons […] Avoiding large investments […] Diverting capital investment/improving return on assets […]."* (Orboobadi, 2009:836) • *"By outsourcing reverse logistics, companies can reduce their asset base, and deploy the capital released for other productive usage."* (Kannan *et al.* 2009:29) • *"[…] outsourced the RL services […] including the benefits […] in […] avoiding huge capital expenditures in facilities […]."* (Li & Olorunniwo, 2008:385) • *"Via outsourcing the RL activities […] avoid the financial risks […]."* (Suyabatmaz *et al.* 2014:75)
	Economies of scale benefits	Agrawal *et al.* (2016c:43, 51) Badenhorst and van Zyl (2015:158) Govindan and Murugesan (2011:151) Kannan (2009:399) Kannan *et al.* (2009:29) Lau and Wang (2009:453) Min and Ko (2008:179) Prakash and Barua (2016b:67) Stock and Mulki (2009:34)	• *"Financial reasons […] Cost advantages due to economies of scales […]."* (Orboobadi, 2009:836) • *"[…] greater variability in the return volume increases the uncertainty about the volume of units put into the corresponding RL system, which motivates the firm to follow an outsourcing strategy and take advantage of the economies of scale by involving a 3PRLP in managing the returned items."* (Serrato *et al.* 2007:4307) • *"Since product returns are uncertain and economies of scale are difficult to achieve, fourth party logistics can play a crucial role in RL through integration and collaboration."* (Agrawal *et al.* 2015:88) • *"Third party logistic provider takes the advantage of economy of scale […]."* (Jindal & Sangwan, 2015:396)
	Cost efficiencies and effectiveness	Stock and Mulki (2009:34)	• *"[…] outsourcing of the reverse logistics process to 3PRL providers makes sense, for it offers the organisation […] cost-effectiveness through economies of scale […]."* (Badenhorst & van Zyl, 2015:158) • *"Outsourcing reverse logistics activities can help in achieving cost efficiency […]."* (Kannan *et al.* 2009:29)
	Cost savings / reductions	None	• *"Enterprises that require an independent reverse logistics system generally have a large quantity of products […] implementing reverse logistics, enterprises can reduce the inventory carrying, transportation, and waste disposal costs."* (Zhou & Zhou, 2015:60) • *"[…] setting up one's own system helps develop intangible resources […] Accumulated knowledge and experience through repeated transactions, together with continuous investment in reverse logistics equipment and expertise, will […] reduce unit operating cost in the long run […]."* (Lau & Wang, 2009:456)
		Govindan *et al.* (2012:206) Jack *et al.* (2010:242) Kannan *et al.* (2009:28, 29) Ko and Evans (2007:347) Lee *et al.* (2012:5617) Min and Ko (2008:179) Prakash and Barua (2015:602) Prakash and Barua (2016ba:67, 68) Rogers *et al.* (2012:111) Yan *et al.* (2012:252)	• *"Third party reverse logistics provider can take advantage of economies of scale and at the same can reduce the transportation cost."* (Agrawal *et al.* 2016c:51) • *"Small individual firms see outsourcing to these firms as an attractive option to lower costs associated with processing product returns […]."* (Stock & Mulki, 2009:34) • *"Outsourcing, however, may help shift the risk to the 3PL and save the company significant equipment and infrastructure costs."* (Lau & Wang, 2009:460) • *"The use of 3PL provider for reverse logistics to comply with environmental laws and regulations can reduce […] cost."* (Lau & Wang, 2009:461) • *"[…] using third party collection stores […] has a high potential for cost savings […]."* (Luitel *et al.* 2014:94) • *"Outsourcing to 3PRL providers may benefit businesses […] financial benefits may include the reduction of reverse logistics costs […]."* (Badenhorst & van Zyl, 2015:158) • *"This includes outsourcing the return process to third parties that specialize [sic] in reverse logistics, cutting costs by simplifying the return process […]."* (Petersen & Kumar, 2009:35) • *"[…] for the selection of 3rd Party RLPs […] can reduce the cost […] significantly."*

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
			(Prakash & Barua, 2016b:77) • *"3PLs that are willing to implement an optimal strategy of handling product returns can bring in millions of dollars of potential cost savings."* (Min & Ko, 2008:176) • *"Companies that purchase reverse logistics services from 3PLs can reduce up to 10% of annual logistics costs."* (Cheng & Lee, 2010:1112) • *"[…] costs […] can be reduced through outsourcing to a third party […] instead of installing equipment and training employees […]."* (Luitel *et al.* 2014:94)
	Profitability	None	• *"[…] higher profitability can be achieved under the self-support model due to lower material cost and better customer service and corporate image in the long run."* (Lau & Wang, 2009:460-461)
		Kannan (2009:399) Serrato *et al.* (2007:4293)	• *"[…] 3PRLP […] can take advantage of the economies of scale to convert RL functions in a profit-creating activity […]."* (Govindan & Murugesan, 2011:151) • *"This includes outsourcing the return process to third parties that specialize [sic] in reverse logistics, […] getting returned merchandise back out to the distribution channel to salvage some profits."* (Petersen & Kumar, 2009:35) • *"Outsourcing to 3PRL providers may benefit businesses […] financial benefits may include […] improved profit margins."* (Badenhorst & van Zyl, 2015:158) • *"Utilizing [sic] 3PLs in […] reverse logistics […] enable businesses with the opportunity to increase their profit margins […]."* (Efendigil *et al.* 2008:270)
	Cost and asset recovery	Orboobadi (2009:836)	• *"Specialists from a third-party refurbishing company were used to recover some cash from the returns."* (Bernon & Cullen, 2007:51) • *"[…] third-party organisations are developing capabilities […] to maximise asset recovery."* (Bernon & Cullen, 2007:54)
Operational outcomes	***Address operational barriers and risks***	Subhashini (2016:9) Kinobe *et al.* (2015:90)	• *"[…] the operational barriers in reverse logistics included problems with product quality, limited forecasting and visibility, inadequate information and technology systems and developmental barriers. The practices that were identified for overcoming these barriers included […] outsourcing reverse logistics to third parties […]."* (Badenhorst, 2016:10) • *"The information systems and technology of 3PRL providers can also assist with problems in product returns."* (Badenhorst & van Zyl, 2015:153) • *"The professional knowledge of third-party logistics enterprises may […] reduce operational risks […]."* (Zhou & Zhou, 2015:60)
	Address IT barriers	Agrawal *et al.* (2016c:51) Cheng and Lee (2010:1118) Du and Evans (2008:2619) Li and Olorunniwo (2008:385) Prakash and Barua (2016b:67) Ko and Evans (2007:364) Orboobadi (2009:836) Sharif *et al.* (2012:2517)	• *"Outsourcing to 3PRL providers may benefit businesses […] benefits may include […] access to world-class technology and information systems […]."* (Badenhorst & van Zyl, 2015:158) • *"These solutions can be identified from 3PL providers […] the benefits of leveraging external information technology (IT) capability within the overall supply chain should be utilised."* (Sharif *et al.* 2012:2517) • *"Collaboration with a third-party software provider provided real-time information systems related to returned products."* (Bernon & Cullen, 2007:51)
	Address infrastructure barriers	Du and Evans (2008:2619) Ko and Evans (2007:364) Kumar and Putnam, (2008:314) Prakash and Barua (2015:603) Prakash and Barua (2016ba:68)	• *"[…] if organisations find that they have infrastructural problems with regard to reverse logistics, they should consider outsourcing their reverse logistics function."* (Badenhorst, 2016:10) • *"3PRLP is employing the state-of-the-art infrastructure, resource and technology; it offers efficient resource recovery from return products."* (Prakash & Barua, 2016b:67) • *"These solutions can be identified from 3PL providers, in terms of additional […] infrastructural resources to support […] reverse logistics."* (Sharif *et al.* 2012:2517)
	Reduce product return uncertainty	None	• *"Outsourcing to 3PRL providers may benefit businesses […] operational benefits may include […] reduction of uncertainties […]."* (Badenhorst & van Zyl, 2015:158) • *"Since product returns are uncertain […] fourth party logistics can play a crucial role in RL through integration and collaboration."* (Agrawal *et al.* 2015:88)
	Improve product return visibility	None	• *"[…] a firm attempting to enhance the visibility of its reverse logistics activities […] with 3PLs."* (Cheng & Lee, 2010:1118)
	Improve RL process flexibility	Kinobe *et al.* (2015:90) Li and Olorunniwo, (2008:385)	• *"The outsourcing approach permits […] to achieve more flexible reverse logistics operations […]."* (Lau & Wang, 2009:450) • *"Outsourcing to 3PRL providers may benefit businesses […] benefits may include […] improved flexibility […]."* (Badenhorst & van Zyl, 2015:158)
	Improve RL process speed and efficiency	Efendigil *et al.* (2008:272) Min and Ko (2008:179) Prakash and Barua (2016ba:68)	• *"3PRLP is employing the state-of-the-art infrastructure, resource and technology; it offers efficient resource recovery from return products."* (Prakash & Barua, 2016b:67) • *"Develop outsourcing strategy […] to focus on their core competency, outsourcing reverse logistics must be seen as a [sic] effective strategy for a fast and efficient recovery of the products."* (Agarwal *et al.* 2016:3) • *"[…] a 3PL provider, Company T would be able to improve the speed of customer returns by reducing errors […]."* (Sharif *et al.* 2012:2523) • *"Outsourcing candidates could use latest technology and resources to fast and efficient recovery of the products."* (Prakash & Barua, 2015:603) • *"[…] a growing number of 3PLs have begun to examine ways to improve the efficiency of product returns."* (Min & Ko, 2008:179) • *"[…] 3PL providers […] infrastructural resources to support the smooth and efficient operation of reverse logistics."* (Sharif *et al.* 2012:2517) • *"[…] many retailers are electing to outsource their returns processing through third-*

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
			party logistics arrangements in order to benefit from more efficient returns processes […].” (Jack *et al.* 2010:242)
	Facilitate and simplify RL processes	None	• *“[…] a large number of enterprises prefer to outsource their recovery operations to third party providers, since they have the necessary and effective resources to facilitate reverse logistics processes.”* (Kannan *et al.* 2016:2) • *“For the payment it receives from the seller, the RSP will handle any return from the customer including the physical movement of the goods and the payment of the published credit to the customer. The RSP then assumes the ownership of the returned goods and refurbishes the item and offers it for sale at a predetermined price.”* (Mukhopadhyay & Setaputra, 2006:718) • *“Communicating with […] 3PLs […] to coordinate the return is key to the RL process.”* (Huscroft *et al.* 2013b:316) • *“[…] outsourcing the return process to third parties that specialize [sic] in reverse logistics […] simplifying the return process […].”* (Petersen & Kumar, 2009:35)
	Facilitate operational planning	None	• *“[…] the reverse logistics 3PL IS works as an essential tool which facilitates operational planning […].”* (Sharif *et al.* 2012:2522)
	Improve operational efficiency	None	• *“[…] setting up one’s own system helps develop intangible resources […] Accumulated knowledge and experience through repeated transactions, together with continuous investment in reverse logistics equipment and expertise, will […] increase efficiency […].”* (Lau & Wang, 2009:456)
		Li and Olorunniwo, (2008:385) Prakash and Barua (2016ba:67) Prakash and Barua (2016b:64) Yan *et al.* (2012:252) Zhou and Zhou (2015:60)	• *“Outsourcing to 3PRL providers may benefit businesses […] operational benefits may include […] improved operational efficiencies.”* (Badenhorst & van Zyl, 2015:158) • *“These solutions can be identified from 3PL providers, in terms of additional human or infrastructural resources to support the smooth and efficient operation of reverse logistics.”* (Sharif *et al.* 2012:2517)
	Facilitate RL/FL integration	None	• *“To run a selfsupport system, the demand for management skills is high as the company will be responsible for everything ranging from maintenance of equipment and facilities, training of staff, internal communication among departments, […] for integrating both forward and reverse logistics of the whole supply chain.”* (Lau & Wang, 2009:461)
Organisational outcomes	***Facilitate RL implementation***	Efendigil *et al.* (2008:269) Prakash and Barua (2016a:68)	• *“[…] small firms with […] usually rely on outsourcing to 3PL to implement reverse logistics in the initial stage.”* (Lau & Wang, 2009:450) • *“3rd party RL partner can play crucial role in adoption and effective implementation RL operations.”* (Prakash & Barua, 2016b:67)
	Improve RL expertise, experience and capabilities	None	• *“[…] setting up one’s own system helps develop intangible resources, […] Accumulated knowledge and experience through repeated transactions, together with continuous investment in reverse logistics equipment and expertise, will […] develop capabilities […].”* (Lau & Wang, 2009:456)
		Li and Olorunniwo (2008:385) Subhashini (2016:9)	• *“Develop outsourcing strategy […] To utilize [sic] the expertise of the third party providers […].”* (Agarwal *et al.* 2016:3) • *“Outsourcing to 3PRL providers may benefit businesses […] benefits may include access to expertise, knowledge and experience in reverse logistics […].”* (Badenhorst & van Zyl, 2015:158) • *“[…] the benefits of outsourcing retail reverse logistics including, access to returns management expertise […].”* (Bernon *et al.* 2011:494) • *“The 3PLs providers have expertise and a broader view of how reverse logistics works because they work with multiple firms and industries.”* (Du & Evans, 2008:2618)
	Focus on core competencies	Agrawal *et al.* (2016c:43) Kannan *et al.* (2009:29) Kinobe *et al.* (2015:90) Li and Olorunniwo, (2008:385) Mukhopadhyay and Setaputra (2006:718) Orboobadi (2009:836) Prakash and Barua (2016a:67) Ravi and Shankar (2006:93) Tavana *et al.* (2016a:17) Tavana *et al.* (2016b:555) Yan *et al.* (2012:252)	• *“[…] outsourcing of the reverse logistics process to 3PRL providers makes sense, for it […] enable organisations to concentrate on core business […].”* (Badenhorst & van Zyl, 2015:158) • *“The advantages of outsourcing logistics for companies are […] commitment to core competency of their own firm […].”* (Lee *et al.* 2012:5617) • *“If reverse logistics is implemented mainly for observing environmental laws and regulations, outsourcing is usually used to allow the company to focus resources on its core competency.”* (Lau & Wang, 2009:460) • *“Develop outsourcing strategy […] to focus on their core competency […].”* (Agarwal *et al.* 2016:3) • *“Outsourcing to 3PRL providers may benefit businesses […] strategically, […] strategic benefits may include the focus on core activities (due to outsourcing of non-core processes) […].”* (Badenhorst & van Zyl, 2015:158)
	Strategic control	None	• *“[…] it is recommended to do ‘‘smart’’ sourcing, that is outsourcing with close relationship with the third party to guarantee the strategic control remains with the organization [sic]. In other words, these types of activities require organizational [sic] arrangements with the third party rather than just contractual agreement. Establishing a partnership or close relationship with the third party logistics provider will allow […] strategic control over performance of the service provider.”* (Orboobadi, 2009:842)

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
	Enhance and facilitate RLM	None	• *"The ability of 3PLs to provide advanced information systems that help […] manage complex reverse logistics activities […]."* (Cheng & Lee, 2010:1118) • *"[…] to follow an outsourcing strategy […] by involving a 3PRLP in managing the returned items."* (Serrato *et al.* 2007:4307) • *"[…] fourth party service providers work in a virtual supply chain and manages all the work […]."* (Agrawal *et al.* 2015:83) • *"[…] to manage their reverse logistics activities […] they have to choose the third-party reverse logistics provider to those activities."* (Saen, 2010:409) • *"[…] to manage return flows, it requires investing in specialised technology and relatively high handling costs. This has given rise to demand for reverse logistics services from third party logistics providers (3PLs)."* (Lee *et al.* 2012:5616) • *"[…] the management of return flow usually requires a […] special information systems for tracking […] for the processing of returns. Therefore, industries are turning to third-party reverse logistics providers (3PRLPs)."* (Kannan *et al.* 2009:28) • *"[…] RL functions management is managed through a third-party relationship."* (Bai & Sarkis, 2013:308)
	Facilitate information management	None	• *"[…] our findings identified a number of advantages from retaining returns operations in-house. The returns management process can often provide useful feedback to retailers about its products and customers."* (Bernon *et al.* 2011:494) • *"For information management, self-support system requires mainly internal communication […]."* (Lau & Wang, 2009:461)
		None	• *"[…] more companies have explored the option of outsourcing […] These service providers […] help companies in managing information."* (Ho *et al.* 2012:42) • *"For information management, […] outsourcing […] demand effective joint management and information exchange among partners."* (Lau & Wang, 2009:461)
	Facilitate RC	None	• *"[…] setting up one's own system helps develop intangible resources […]."* (Lau & Wang, 2009:456)
		Breen (2006:547)	• *"If reverse logistics is implemented mainly for observing environmental laws and regulations, outsourcing is usually used to allow the company to focus resources on its core competency."* (Lau & Wang, 2009:460) • *"Users of a 4PL can focus on core competencies to better manage and utilize company assets and resources, as to inventory and personnel."* (Mukhopadhyay & Setaputra, 2006:718) • *"These solutions can be identified from 3PL providers, in terms of additional human or infrastructural resources to support […] reverse logistics."* (Sharif *et al.* 2012:2517)
	Facilitate facility/location practices	None	• *"[…] established warehouses […] of the 3PL provider can be considered as potential locations for the installation of repair facilities and the local stores of the 3PL provider can be used as collection sites."* (Du & Evans, 2008:2620) • *"3PLs have begun to examine ways to improve the efficiency of product returns. Examples of such ways are […] A number of separate consolidation points, such as centralized [sic] warehouses […] A number of regional warehouses/ repair facilities near the customer population […] Utilization [sic] of warehouses and repair facilities for repairing returned products. Since warehousing costs are proportionately related to total space dedicated to repair operations, one should consider the option of expanding the existing capacity of warehouses or repair facilities rather than establishing new facilities."* (Min & Ko, 2008:179)
Environmental outcomes	***Environmental protection***	None	• *"There was recognition that reverse logistics networks are not as efficient as forward logistics and the use of third-party logistics companies could lessen the environmental impact."* (Bernon *et al.* 2011:494)
	Compliance with environmental laws	Lau and Wang (2009:461)	• *"Via outsourcing the RL activities, […] manage to comply with the environmental legislations […]."* (Suyabatmaz *et al.* 2014:75) • *"[…] the merger of systems and scope enables the 3PL to perform helpful functions such as regulatory compliance […]."* (Mukhopadhyay & Setaputra, 2006:717) • *"The use of 3PL provider for reverse logistics to comply with environmental laws and regulations can reduce risk […]."* (Lau & Wang, 2009:461)
Social and market-related outcomes	***Improve corporate image***	None	• *"[…] setting up one's own system helps develop intangible resources, such as enhanced corporate image […]."* (Lau & Wang, 2009:456) • *"[…] the self-support model […] better […] corporate image in the long run. […] full-scale self-support system requires such high set up and running costs […]."* (Lau & Wang, 2009:460-461)
		None	• *"This 3rd party reverse logistics partner (3PRLP) provides benefits in terms of […] better corporate image."* (Prakash & Barua, 2016b:64)
	Competitive advantage/ competitiveness	Bernon *et al.* (2016:599)	• *"[…] setting up one's own system helps develop intangible resources […] Accumulated knowledge and experience through repeated transactions, together with continuous investment in reverse logistics equipment and expertise, will […] develop capabilities that are very difficult for other competitors to imitate in a short period of time."* (Lau & Wang, 2009:456) • *"[…] the self-support model […] may give the company a sustainable competitive advantage that is difficult for its competitors […] full-scale self-support system requires such high set up and running costs […]."* (Lau & Wang, 2009:460-461)
		Bernon *et al.* (2016:599) Prakash and Barua (2016b:64)	• *"Strategic reasons […] differentiation from competitors […]."* (Orboobadi, 2009:836) • *"Companies outsource non-core activities in relation to their ability to gain competitive advantage […]."* (Tavana *et al.* 2016:a3)

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
		Sharif *et al.* (2012:2523)	• *"Utilizing [sic] 3PLs in […] reverse logistics […] enable businesses […] to differentiate their services from those of the competitors, […] and to enhance their status in the global supply chain network […]."* (Efendigil *et al.* 2008:270) • *"Outsourcing to 3PRL providers may benefit businesses […] benefits may include […] competitiveness in the supply chain."* (Badenhorst & van Zyl, 2015:158)
	Market expansion and growth	Ko and Evans (2007:347)	• *"Strategic reasons […] Expansion to new markets […]."* (Orboobadi, 2009:836) • *"The main advantage of outsourcing services to 3PRLP is that these 3PRLPs allow companies to get into a new business, a new market without interrupting forward flows […]."* (Kannan *et al.* 2009:28) • *"Utilizing [sic] 3PLs in […] reverse logistics […] enable businesses […] to attract new clients […]."* (Efendigil *et al.* 2008:270)
	Increase consumer satisfaction	None	• *"RL outsourcing decisions was the focus on the core business […] increasing customer satisfaction […]."* (Tavana *et al.* 2016b:555) • *"Reverse logistics outsourcing improves cycle time and delivery performance, thereby increasing customer satisfaction in after sales service."* (Kannan *et al.* 2009:29)
	Improve consumer service and responsiveness	None	• *"[…] the self-support model due to […] better customer service […] full-scale self-support system requires such high set up and running costs […]."* (Lau & Wang, 2009:460-461)
		Min and Ko (2008:175) Yan *et al.* (2012:252)	• *"The advantages of outsourcing logistics for companies are […] gaining high quality customer services […]."* (Lee *et al.* 2012:5617) • *"A faster response can be achieved by involving a 3PRLP […]."* (Serrato *et al.* 2007:4293) • *"[…] attention for the selection of 3rd Party RLPs […] can […] improve customer service significantly."* (Prakash & Barua, 2016b:77) • *"[…] an accurate and real-time training programme is necessary in order to produce skilled 3PL RL workers, so as to provide quick responsiveness to demand […]."* (Sharif *et al.* 2012:2523)
	Enhance consumer loyalty and retention	None	• *"Enterprises that require an independent reverse logistics system generally have a large quantity of products […] implementing reverse logistics, enterprises […] can also encourage customer loyalty and futures sales."* (Zhou & Zhou, 2015:60)
	Improve consumer relationships	None	• *"LSPs can provide value-added activities to enhance the buyer-seller relationships through improved customer service/satisfaction."* (Yuan *et al.* 2016:188)
SC outcomes	***Improve SC relationships and communication***	None	• *"[…] outsourcing of the reverse logistics process to 3PRL providers makes sense, for it offers the organisation and supply chain solutions to their reverse logistics problems, such as […] improving relations […] in the supply chain."* (Badenhorst & van Zyl, 2015:158) • *"[…] to maintain good communication and a cooperative relationship with the 3PL provider […] the outsourcing […] approaches demand effective joint management and information exchange among partners."* (Lau & Wang, 2009:461)
	Facilitate SCM and SCI	Kannan, (2009:399) Kannan *et al.* (2009:28)	• *"3PLs are playing an increasing role in supporting such integrated supply chain management using sophisticated information systems and dedicated equipments."* (Ko & Evans, 2007:364) • *"[…] 4PLs have become logical alternatives for business process outsourcing by providing […] integration across multiple enterprises."* (Mukhopadhyay & Setaputra, 2006:718)
	Improve SC collaboration	None	• *"Outsourcing to 3PRL providers may benefit businesses and supply chains […] benefits may include […] improved collaboration […] in the supply chain."* (Badenhorst & van Zyl, 2015:158)
	Improve SC visibility and transparency, efficiency	None	• *"[…] outsourcing of the reverse logistics process to 3PRL providers makes sense, for it offers the organisation and supply chain solutions to their reverse logistics problems, such as […] improving […] efficiencies in the supply chain."* (Badenhorst & van Zyl, 2015:158) • *"[…] 4PLs have become logical alternatives for business process outsourcing by providing visibility […] across multiple enterprises."* (Mukhopadhyay & Setaputra, 2006:718) • *"[…] the reverse logistics 3PL IS works as an essential tool […] making the supply chain transparent […]."* (Sharif *et al.* 2012:2522)

Source: Compiled by the researcher

Table 6.17 shows that RL in/outsourcing practices associate with economic, operational, organisational, environmental, social, market-related and SC outcomes, which will be discussed in subsequent sections.

6.5.2.1 Economic outcomes of RL in/outsourcing practices

The economic outcomes of RL in/outsourcing practices involve (1) reducing investment, asset and capital requirements and risks, (2) economies of scale benefits, (3) cost efficiency and effectiveness, (4) cost savings/reductions, (5) profitability, and (6) cost and asset recovery.

Organisations can *reduce investment, asset* and *capital requirements* and financial *risks* through the strategic considerations of economic (e.g. investment) and organisational (e.g. transfer risks) factors, favouring the adoption of a RL outsourcing strategy. Similarly, *economies of scale benefits* relate to organisations that choose RL outsourcing based on the economic and operational considerations of economies of scale and return volume (RL in/outsourcing strategies). Moreover, organisations can gain scale benefits through the development and adoption of a RL outsourcing strategy, strategic decision of appropriate 3Ps, like 3PRL, 3PL and 4PL providers, and the SC requirement of SCI practices (e.g. collaboration and integration between organisations and 3P partners).

Linking with economies of scale benefits, *cost efficiencies* and *effectiveness* associate with choosing RL outsourcing through the strategic consideration of economies of scale (economic) and strategic decision to utilise 3PRL providers, which emphasise the importance of return volume (operational consideration) for effective RL in/outsourcing decisions (see section 6.5.1.1).

Cost savings/reductions can be achieved through the adoption of RL insourcing and RL outsourcing strategies. For instance, organisations can realise long-term cost savings (e.g. operational, transportation and inventory costs) by adopting RL insourcing practices, including (1) RL insourcing strategies related to the considerations of return volume (operational), organisational strategies and resources (organisational), and (2) RL insourcing requirements related to investment (economic), equipment (operational), RL implementation and skilled management/staff (organisational).

Additionally, organisations can expect cost savings through the adoption of several RL outsourcing practices, including (1) the strategic considerations of economies of scale (economic), organisational size and risks (organisational) and environmental drivers (external), (2) strategic decisions on the degree of outsourcing, type of RL processes/services and type of 3Ps (e.g. 3P facility, 3PRL and 3PL providers), (3) strategic selection of appropriate 3Ps based on service costs, RL strategies and resources, (4) purchasing costs requirement (economic), (5) equipment and infrastructure requirements (operational/infrastructure), and staff training requirements (organisational). Consequently, the costs savings related to RL in/outsourcing demonstrates the importance of performing cost-benefit analysis for effective RL in/outsourcing decisions (see section 6.5.1.1).

Likewise, *profitability* can be realised through the adoption of either RL insourcing or outsourcing practices. Particularly, higher profitability can be achieved by organisations that strategically consider profits (economic consideration) and subsequently adopt RL insourcing practices, emphasising the market-related outcomes (e.g. corporate image and customer service) of RL insourcing (section 6.5.2.4). In terms of RL outsourcing, organisations can improve profitability through the strategic consideration of economies of scale (economic) and strategic decisions and selection of appropriate 3Ps (e.g. 3PRL or 3PL providers) that specialise in RL, reemphasising the importance of performing cost-benefit analysis for appropriate RL in/outsourcing decisions.

Finally, *cost* and *asset recovery* can be realised through the RL outsourcing strategies of strategic decisions on the type of RL processes (e.g. disposition) and 3Ps (e.g. 3P recovery specialist), and strategic selection of appropriate 3Ps based on RL capabilities, demonstrating a link between RL outsourcing and RL disposition practices (see section 6.6). Consequently, organisations that experience economic barriers in RL may benefit from implementing RL in/outsourcing practices for the cost-effective RLM of consumer returns.

6.5.2.2 Operational outcomes of RL in/outsourcing practices

The operational outcomes of RL in/outsourcing practices include (1) addressing operational barriers and risks, (2) addressing IT barriers, (3) addressing infrastructure barriers, (4) reducing product return uncertainty, (5) improving product return visibility, (6) improving RL process flexibility, (7) improving RL process speed and efficiency, (8) facilitating and simplifying RL processes, (9) facilitating operational planning, (10) improving operational efficiency, and (11) facilitating RL/FL integration.

Operational barriers and risks relate to problems with product returns (uncertainties), IT and infrastructure problems, and inventory, forecasting, consumer demand and technology risks (see section 2.3.2), which can be addressed through RL outsourcing practices. Specifically, *operational barriers* and related *risks* in RL can be addressed through RL outsourcing practices related to the (1) strategic considerations of RL complexities, uncertainties, IT, infrastructure (operational) and risks (organisational), (2) strategic decision on the type of 3Ps, like 3PRL providers, (3) strategic selection of 3P partner based on RL expertise and resources, and (4) IT requirement of appropriate IT for RL.

Moreover, organisations can *address IT barriers*, like limited access to state-of-the-art IT, lack of IT capabilities and lack of real-time IT, through several RL outsourcing practices, including the (1) strategic consideration of IT (operational), (2) strategic decisions on the type of RL services (e.g. IT management) and 3Ps (e.g. 3P software, 3PRL and 3PL providers), (3) strategic selection of a 3P

partners based on RL capabilities and resources, (4) IT requirement of appropriate IT, and (5) SC requirement of SCI (such as collaboration). Similarly, organisations can *address infrastructure barriers* by implementing/adopting RL outsourcing practices relating to the (1) strategic consideration of infrastructure (operational), (2) strategic decisions on the type of 3Ps (such as 3PRL and 3PL providers), (3) strategic selection of a 3P partners based on RL capabilities and resources, and (4) infrastructure requirements.

Likewise, organisations can *reduce product return uncertainties* by choosing RL outsourcing based on the strategic considerations of RL complexity and uncertainty (operational), strategically deciding on the type of 3P (such as 3PRL and 4PL providers) and implementing SCI and collaboration practices (SC requirements). Moreover, organisations can *improve product return visibility* through the strategic decision and selection of appropriate 3PL providers and *improve RL process flexibility* by adopting an outsourcing (strategic) approach and strategically deciding on 3PRL providers as the 3P type (RL outsourcing strategies).

Several RL outsourcing practices can *improve RL process speed* and *efficiency*, including (1) strategic considerations of IT, infrastructure (operational), core competency and resources (organisational), (2) developing an outsourcing strategy, (3) strategic decisions on the type of 3Ps, like 3P software, 3PRL and 3PL providers, (4) strategic selection of a 3P partners based on RL capabilities and resources, and (5) IT, infrastructure and SC relationship requirements. Consequently, through the RL in/outsourcing decisions-making strategies of organisational/internal analysis and core competency assessments (see section 6.5.1.1), organisations can recognise that they lack the necessary resources, capabilities and competencies for RL, and implement RL outsourcing practices for greater RL process efficiencies.

Furthermore, organisations can *facilitate* and *simplify RL processes* through several RL outsourcing practices, including (1) strategic considerations of RL complexity and uncertainties (operational), and resources (organisational), (2) strategic decisions related to the degree of RL outsourcing (e.g. partial or full RL outsourcing), types of RL processes/services and types of 3Ps (e.g. 3PRL and 3PL providers), (3) strategic selection of appropriate 3P partners based on service offerings and costs, (4) economic requirement of outsourcing (purchasing) costs, and (5) SC requirement of communication (SCI practice). Additionally, RL outsourcing practices, like strategic decisions and selection of appropriate 3PL providers (based on RL capabilities and resources), and the IT requirement of appropriate IT, can *facilitate operational planning.*

In contrast to the abovementioned operational outcomes, RL insourcing and RL outsourcing practices can *improve operational efficiency.* For instance, organisations that adopt RL insourcing can improve

operational efficiency through the strategic organisational consideration of resources and requirements of investment (economic), equipment (operational) and skilled staff (organisational). Alternatively, organisations that adopt RL outsourcing can improve operational efficiency through the strategic organisational consideration of resources, strategic decisions on the type of 3Ps (e.g. 3PRL or 3PL providers) and strategic selection of 3P partners based on RL resources, which demonstrates the importance of RC practices in RL (see section 6.9.1).

Finally, like TLIT practices (section 6.3.3), RL insourcing practices, including facility, equipment (operational), internal communication, skilled management/staff and staff training (organisational) requirements, can *facilitate RL/FL integration*, linking RL insourcing and facility/location practices (see section 6.8).

Essentially, organisations that experience various operational barriers, product return problems, RL processes inefficiencies and complexities and operational planning problems can consider implementing RL outsourcing practices. Alternatively, organisations with limited operational problems, except for operational inefficiencies and lack of RL/FL integration, can benefit from RL insourcing.

6.5.2.3 Organisational outcomes of RL in/outsourcing practices

Organisational outcomes of RL in/outsourcing include (1) facilitating RL implementation, (2) improving RL expertise, experience and capabilities, (3) focussing on core competencies, (4) enhancing and facilitating RLM, (5) facilitating information management, (6) strategic control, (7) facilitating RC, and (8) facilitating facility/location practices.

Organisations can *facilitate RL implementation* through the RL outsourcing strategies of strategic organisational considerations of size and capability, strategic decisions on the degree of outsourcing and strategic decisions on the type of 3Ps, like 3PRL and 3PL providers. Evidently, the RL implementation outcome demonstrates the importance of performing an organisational/internal analysis and core competency assessments for RL in/outsourcing decisions as well as the organisational requirement of RL implementation for RL insourcing.

Both RL insourcing and outsourcing practices can *improve RL expertise, experience* and *capabilities.* For instance, organisations can gain expertise, experience and capabilities through the RL insourcing practices of strategic organisational consideration of resources, investment (economic requirement), equipment (operational requirement) and trained/skilled staff (organisational requirements). Nevertheless, organisations unable or unwilling to implement these RL insourcing practices can gain RL expertise, experience and capabilities by adopting RL outsourcing strategies, like developing an

outsourcing strategy, strategic decisions on the type of 3Ps (e.g. 3PRL and 3PL providers) and strategic selection of a 3P partner based on RL expertise (see section 6.5.1.2).

Focussing on core competencies can be a significant advantage for organisations that choose to outsource RL. Specifically, organisations that (1) implement RL in/outsourcing strategies related to organisational consideration of core competency, external consideration of the environment, organisational/internal analysis and core competency assessments, (2) develop an outsourcing strategy, and (3) make strategic decisions on the degree of outsourcing (e.g. outsourcing only non-core processes) and type of 3Ps (such as 3PRL providers), can realise the benefit of focussing on core competencies. Nevertheless, RL outsourcing can result in a loss of control (strategic consideration) (see section 6.5.1.1), which organisations can address through the SC requirement of SC relationships (e.g. strategic partnerships) to gain *strategic control*, demonstrating the importance of SCI practices for effective RL outsourcing.

Several RL outsourcing practices can *enhance* and *facilitate RLM*, including (1) strategic considerations of costs (economic), RL complexity, IT and infrastructure (operational), (2) developing a RL outsourcing strategy, (3) strategic decision on the type of 3Ps (such as 3PRL, 3PL and 4PL providers), (4) strategic selection of a 3P partner based on RL capabilities and resources, (5) economic requirements of cost and investment, (6) IT and infrastructure requirements, and (7) SC requirement of SC relationships. Consequently, RL outsourcing can be an important practice for the effective management of consumer returns.

Nevertheless, both RL insourcing practices, like the strategic organisational consideration of information risk (e.g. losing valuable market information) and organisational requirement of internal communication, and RL outsourcing practices, like the SC requirements of SC relationships and SCI practices, can *facilitate information management.*

Similarly, RL in/outsourcing can *facilitate RC,* for instance, organisations that choose RL insourcing based on the strategic organisational consideration of resources can develop intangible resources, and organisations that choose RL outsourcing based on the strategic considerations of core competency, resources (organisational) and the environment (external) can focus resources on core competencies, emphasising the importance of organisational/internal analysis and core competency assessments for effective RL in/outsourcing decisions. Other RL outsourcing strategies that can facilitate RC (e.g. human and infrastructure resources) include strategic decisions on the type 3Ps (such as 3PL and 4PL providers) and strategic selection of a 3P partner based on resources, emphasising the infrastructure and organisational (e.g. skilled staff) requirements of RL in/outsourcing.

Finally, several RL outsourcing practices can *facilitate facility/location practices*, including (1) adopting RL outsourcing based on the strategic considerations of costs, investments (economic), facilities and network capacity (operational), (2) strategic decisions on the type RL services (e.g. facilities), (3) strategic decisions on the type of 3Ps (such as 3PL providers), (4) strategic selection of a 3P partner based on RL capabilities and resources, and (5) the operational/infrastructure requirements of facilities and infrastructure for RL. For example, RL outsourcing to 3PL providers can facilitate with location strategies (e.g. centralisation and decentralisation), effective utilisation of facility space for RL processes and strategic decisions related to expansion of current facilities versus the establishment of new facilities (see section 6.8). Despite the role of RL outsourcing in facility/location practices, the operational outcome of RL/FL integration (section 6.5.2.2) implies that RL insourcing may facilitate combine facility/location practices (see section 6.8.3).

Essentially, organisations that experience organisational challenges (e.g. RL implementation problems, problems with core competencies, strategic control and ineffective RLM) and ineffective facility/location practices can implement RL outsourcing practices. Alternatively, organisations seeking to improve RL expertise, experience and capabilities, information management and RC can implement RL in/outsourcing practices, which can facilitate with the effective RLM of consumer returns.

6.5.2.4 Environmental, social and market-related outcomes of RL in/outsourcing practices

The *environmental outcomes* of RL in/outsourcing involves environmental protection and compliance with environmental laws. In terms of *environmental protection*, organisations can through the RL in/outsourcing strategy of organisational/internal analysis identify inefficiencies in the RL process adopt RL outsourcing to improve environmental protection. Moreover, organisations can *comply with environmental laws* by choosing RL outsourcing through the strategic considerations of the environment and governmental legislation (external) and strategic decisions on the type of 3Ps, like 3PL providers, reducing the risk of non-compliance. Consequently, RL outsourcing can be an important practice for environmental sustainability, which can be important for the green image of organisations.

The *social outcome* of RL in/outsourcing involves corporate image, which organisations can improve either through the RL insourcing practices of the strategic organisational consideration of resources and economic requirement of costs (e.g. set-up and running costs), or through the RL outsourcing strategy of strategic decisions on the type of 3Ps, like 3PRL providers.

Several *market-related outcomes* associate with RL in/outsourcing, including (1) competitive advantage and competitiveness, (2) market expansion and growth, (3) increasing consumer satisfaction, (4) improving consumer service and responsiveness, (5) enhancing consumer loyalty and retention, and (6) improving consumer relationships. Like the social outcome of corporate image, *competitive advantage* and *competitiveness* can be attained through several RL in/outsourcing practices. In terms of RL insourcing, organisations can obtain a competitive advantage through strategic organisational consideration of resources, economic requirement of costs, operational requirement of equipment and the organisational requirement of skilled staff. For RL outsourcing, organisations can become more competitive through strategic organisational considerations of core competency, resources and competition, organisational/internal analysis, core competency assessments, and strategic decisions on the type of 3Ps (such as 3PRL and 3PL providers).

In contrast, organisations may *expand* or *grow markets* only through the adoption of RL outsourcing strategies related to the strategic organisational consideration of market expansion and strategic decisions on the type of 3Ps (such as 3PRL and 3PL providers). Moreover, organisations can *increase consumer satisfaction* by choosing RL outsourcing through the strategic organisational consideration of core business, emphasising the importance of performing organisational/internal analysis and core competency assessments for appropriate RL in/outsourcing decisions.

Like the corporate image and competitive advantage outcomes, *consumer service* and *responsiveness* can be *improved* through RL insourcing and RL outsourcing practices. For instance, organisations that adopt RL insourcing can improve consumer service through the economic requirement of high RL operational costs, emphasising the importance of performing a cost-benefit analysis for RL in/outsourcing decisions (see section 6.5.1.1). Alternatively, organisations can improve consumer service and responsiveness through the RL outsourcing practices of (1) strategic decisions on the type of 3Ps (e.g. 3PRL and 3PL providers), (2) strategic selection of a 3P partner-based RL strategies, capabilities and resources, and (3) skilled staff or effective staff training programmes (organisational requirements).

Nevertheless, organisations can only *enhance consumer loyalty* and *retention* through the adoption of RL insourcing practices related to the strategic consideration of return volume (operational) and organisational requirement of RL implementation, demonstrating the strategic importance of implementing RL practices for the effective management of consumer returns. Finally, organisations can *improve consumer relationships* through the adoption of RL outsourcing strategies, including the strategic decisions on the type of RL services (such as value-added activities), strategic decisions on the type of 3Ps (such as 3PL providers) and strategic selection of a 3P partner based on service offerings.

Consequently, both RL insourcing and outsourcing practices can result in market-related benefits, showing the importance of developing an appropriate RL in/outsourcing strategy for the effective management of consumer returns.

6.5.2.5 SC outcomes of RL in/outsourcing practices

Like environmental outcomes (section 6.5.2.4), the SC outcomes, including (1) improving SC relationships and communication, (2) facilitating SCM and SCI, (3) improving SC collaboration, and (4) improving SC visibility, transparency and efficiency, only associate with RL outsourcing practices. This implies that organisations deciding to adopt RL insourcing practices must focus on implementing SCI practices to attain similar SC outcomes (see section 6.4.1), discussed in subsequent paragraphs.

Organisations can *improve supply chain relationships* and *communication* through the RL outsourcing practices of adopting a strategic outsourcing approach, strategic decisions on the type of 3Ps (like 3PRL and 3PL providers), and the SC requirement of SCI practices (such as strategic sharing of management and information). Additionally, RL outsourcing practices of strategic decisions on the type of 3Ps (such as 3PL and 4PL providers), IT requirement of appropriate IT and operational requirement of equipment can *facilitate SCM* and *SCI,* emphasising the importance of selecting 3Ps based on RL capabilities and resources.

Moreover, strategic decisions on the types of 3Ps (such as 3PRL providers) can *improve SC collaboration,* demonstrating the importance of RL outsourcing practices for effective SCI practices. Finally, organisations can *improve SC visibility, transparency and efficiency* through the strategic decisions on the types of 3Ps, like 3PRL, 3PL and 4PL providers, and the IT requirement of appropriate IT for RL, which demonstrate important links between RL outsourcing, SCI and IT practices.

Although RL outsourcing associates with all the outcomes, including economic, operational, organisational, environmental, market-related and SC outcomes, organisations can still adopt RL insourcing and achieve similar outcomes through the implementation of other RL practices, like IT, integration, disposition, PM, facility/location, RC, FM, RPA, SPP and management and staff practices. Essentially, RL in/outsourcing practices can be important for the effective management of consumer returns.

In the next section, RL in/outsourcing practices will be concluded with a description, conceptual framework and summary of the findings for RL in/outsourcing to manage consumer returns.

6.5.3 Description, conceptual framework and summary of findings for RL in/outsourcing practices to manage consumer returns

Since RL in/outsourcing practices were combined as one practice category, a single description, conceptual framework and summary of findings will be provided in this section. Based on the findings presented in section 6.5, RL in/outsourcing practices can be important for the management of consumer returns, and will be described as follows:

> RL in/outsourcing practices for the management of consumer returns involve (1) strategic considerations and analyses for RL in/outsourcing decisions, including economic, operational, organisational and external considerations, organisational/internal analysis, cost-benefit analysis, core competency assessments and market analysis, (2) strategic decisions and strategies for RL outsourcing, including a strategic approach, prioritising RL outsourcing strategies, developing an outsourcing strategy, decisions on the degree of outsourcing, type of RL process/services and type of 3Ps, selection of 3P partners, development of terms and PM for 3Ps, (3) RL in/outsourcing requirements, including economic requirements (investment and costs), IT requirements (appropriate and customised IT), operational and infrastructure requirements (facilities, equipment and infrastructure), organisational requirements (RL implementation, internal communication, management involvement, skilled manage/staff and staff training), and SC requirements (SC relationships and SCI practices).
>
> The RL in/outsourcing strategies and requirements can result in several outcomes, including (1) economic outcomes (reduce investment, capital and asset requirements and risks, economies of scale, cost efficiency and effectiveness, cost savings/reductions, profitability, and cost and asset recovery), (2) operational outcomes (address operational barriers and risks, address IT and infrastructure barriers, reduce product return uncertainty, improve product return visibility, improve RL process flexibility, RL process speed and efficiency, facilitate and simplify RL processes, facilitate operational planning, improve operational efficiency, and facilitate RL/FL integration), (3) organisational outcomes (facilitate RL implementation, improve RL expertise, experience and capabilities, focus on core competencies, strategic control, enhance and facilitate RLM, facilitate information management, improve RC, and facilitate facility/location practices), (4) environmental outcomes (environmental protection and compliance with environmental laws), (5) social and market-related outcomes (improve corporate image, competitive advantage and competitiveness, market expansion and growth, increase consumer satisfaction, improve consumer service and responsiveness, enhance consumer loyalty and retention, and improve consumer relationships), and (6) SC outcomes (improve SC relationships and communication, facilitate SCM and SCI, improve SC collaboration, and improve SC visibility, transparency and efficiency).

Figure 6.17 provides a conceptual framework of RL in/outsourcing practices to manage consumer returns.

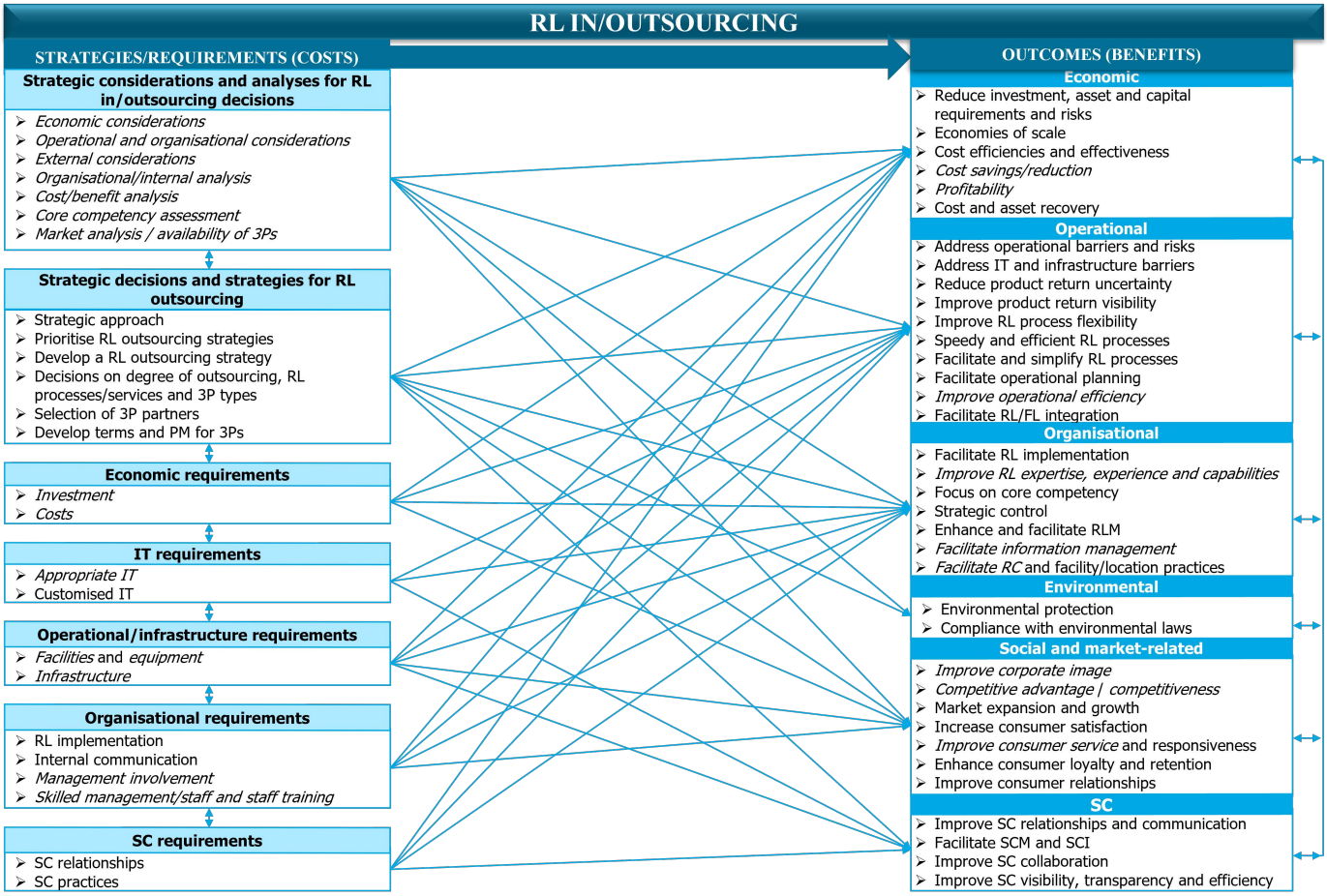


Figure 6.17 Conceptual framework of RL in/outsourcing practices to manage consumer returns
Source: Compiled by researcher

Figure 6.17 demonstrates the links between the RL in/outsourcing strategies, requirements and outcomes as well as the strategies, requirements and outcomes associated with both RL insourcing and RL outsourcing practices (emphasised through *italics*). The links between the RL in/outsourcing strategies and requirements can be demonstrated by strategic operational (e.g. networks, IT, infrastructure) and organisational considerations (e.g. resources), which links with the strategic decisions and selection of appropriate 3Ps (based on resources) (RL outsourcing strategies), economic requirements (e.g. investment and cost), IT requirements, operational/infrastructure requirements (facilities, equipment and infrastructure) and organisational requirements (e.g. skilled management/staff and staff training). Additionally, the RL outsourcing strategies of selecting appropriate 3Ps (based on reputation and reliability) and development of terms link with the SC requirements of SC relationships and SCI practices.

Regarding the links between RL in/outsourcing strategies, requirements and outcomes, the framework demonstrates that the strategic decisions and strategies for RL outsourcing can be the most significant practice category, linking with all the outcomes, including economic, operational, organisational, environmental, market-related and SC outcomes. Consequently, organisations must pay attention to RL

outsourcing-specific strategies to achieve optimum results to manage consumer returns. Nevertheless, all practice categories can contribute to various outcomes, demonstrating the importance of a holistic approach to the implementation of RL in/outsourcing practices.

Regarding the outcomes of RL in/outsourcing practices, operational and organisational outcomes can be the most significant (associated with most of the practice categories), which means that RL in/outsourcing practices can be the most beneficial for organisations that experience operational and organisational challenges in RL. However, organisations with economic and market-related barriers can also benefit from RL in/outsourcing practices. In contrast, the environmental outcomes can be the least significant category, meaning that RL in/outsourcing practices may be less important for organisations that seek environmental benefits through RL practices.

Finally, the framework shows that the RL in/outsourcing outcome categories can be linked, for example, the market-related outcome of corporate image can link with profitability (economic) and environmental compliance outcomes, and the operational outcome of addressing IT barriers can link with information management (organisational) and SCI (SC) outcomes.

Based on Figure 6.17 and the discussions given in section 6.5, Table 6.18 provides a summary of the findings and managerial implications for RL in/outsourcing to manage consumer returns.

Table 6.18 Summary of findings and managerial implications for RL in/outsourcing to manage consumer returns

CATEGORY	KEY FINDINGS	MANAGERIAL IMPLICATIONS
Strategies and requirements	•RL insourcing and outsourcing involves strategic considerations, including economic, operational, organisational and external considerations, organisational/internal analysis, cost-benefit analysis, core competency assessments and market analysis. •RL outsourcing uniquely involves a strategic approach, prioritisation of outsourcing strategies, developing an outsourcing strategy, strategic decisions on the degree of outsourcing, types of RL processes/service and types of 3Ps, strategic selection of 3P partners, development of terms and PM for 3Ps •RL insourcing and outsourcing involves the economic requirements of investments and costs, IT requirement of appropriate IT, operational requirements of facilities, equipment and infrastructure, and organisational requirements of management involvement, skilled management/staff and staff training •RL insourcing uniquely involves the organisational requirements of RL implementation and internal communication •RL outsourcing uniquely involves the SC requirements of SC relationships and SCI practices	•Before choosing between RL in/outsourcing, organisations must consider economic, operational, organisational and external factors, and perform internal and external feasibility assessments •For successful RL outsourcing, organisations must adopt a strategic approach, prioritise outsourcing strategies, make strategic decisions on the degree of outsourcing, type of RL process/services and type of 3Ps, select appropriate 3P partners, develop terms and PM for 3Ps •For effective RL in/outsourcing, organisations must incur costs, utilise appropriate IT, facilities and equipment, involve management, produce skilled management/staff and/or train staff •For effective RL insourcing, organisations must focus on RL implementation and internal communication •For effective RL outsourcing, organisations must focus on SC relationships and SCI practices
Outcomes	•RL in/outsourcing practices involve benefits to manage consumer returns •RL outsourcing practices include all outcome categories, including economic, operational, organisational, environmental, market-related and SC	•Organisations that experience various economic, operational, organisational, environmental, market-related and SC challenges in RL can consider implementing RL outsourcing practices •Organisations that experience high RL costs and profitability issues can consider RL in/outsourcing practices

	• RL in/outsourcing practices involve the economic outcomes of cost savings/reduction and profitability, but uniquely, RL outsourcing can reduce investment, capital and asset requirements and risks, enable economies of scale, and cost and asset recovery • RL in/outsourcing practices involve the operational outcome of operational efficiency, but uniquely, RL outsourcing can address operational barriers and risk, IT barriers and infrastructure barriers, reduce product return uncertainty, improve product visibility and RL process flexibility, speed and efficiency, facilitate and simplify RL processes and facilitate operational planning, and RL insourcing facilitate RL/FL integration • RL in/outsourcing practices involve the organisational outcomes of RL expertise, experience and capabilities, information management and RC, but uniquely, RL outsourcing can facilitate RL implementation, enable focus on core competencies and strategic control, enhance/facilitate RLM and facilitate facility/location practices • Only RL outsourcing practices can result in the environmental outcomes of environmental protection and compliance with environmental laws • RL in/outsourcing practices involve the social and market-related outcomes of corporate image, competitive advantage/competitiveness and consumer service, but uniquely, RL insourcing can increase customer satisfaction and enhance consumer loyalty and retention, and RL outsourcing can expand/grow markets and improve consumer responsiveness and relationships • Only RL outsourcing practices involve the SC outcomes of SC relationships, communication, SCM, SCI, collaboration, visibility and transparency	• Organisations that seek to reduce investment, capital and asset requirements and risk can consider implementing RL outsourcing practices • For economies of scale and cost/asset recovery organisations can consider RL outsourcing practices • Organisations that experience operational inefficiencies operations can consider implementing RL in/outsourcing practices • Organisations that experience operational barriers and risks, including IT barriers, infrastructure barriers, product return uncertainties and visibility problems, in RL can consider implementing RL outsourcing practices • Organisations that seek to improve RL process flexibility, speed and efficiency, facilitate and simplify RL processes and improve operational planning can consider implementing RL outsourcing practices • Organisations can consider RL insourcing practices to facilitate RL/FL integration • Organisations can implement RL in/outsourcing practices to improve RL expertise, experience and capabilities, and facilitate information management and RC • Organisations that experience RL implementation, core competency, strategic control and RLM challenges can consider implementing RL outsourcing practices • Organisations can implement RL outsourcing practices to facilitate facility/location practices • For environmental protection and legislative compliance, organisations can implement RL outsourcing practices • Organisations that seek to improve corporate image, competitive advantage/competitiveness and consumer service can consider implementing RL in/outsourcing practices • For greater consumer satisfaction, loyalty and retention, organisations can implement RL insourcing practices • Organisations can implement RL outsourcing practices to expand/grow markets and improve consumer responsiveness and relationships • Organisations can implement RL outsourcing practices to facilitate SCI practices • Organisations with specific RL problems and inefficiencies in consumer returns can implement the relevant RL in/outsourcing practices to address the specific RL problems and inefficiencies

Source: Compiled by the researcher

Table 6.18 provides an in-depth understanding into the value of RL in/outsourcing practices to manage consumer returns. Essentially, the findings show that RL insourcing and outsourcing can be important for the management of consumer returns, but before implementing RL in/outsourcing practices a cost-benefit analysis must be performed. RL outsourcing/insourcing practices will further be explored in the interviews with industry experts (chapter 8).

In the next section, disposition practices in RL will be presented, discussed and analysed.

6.6 RL DISPOSITION PRACTICES TO MANAGE CONSUMER RETURNS

A key factor of any RLM strategy involves the identification of various options for the disposition of product returns and to select the options that can result in the ultimate benefits for the organisation (Stock & Mulki, 2009:49). Additionally, Hazen *et al.* (2012:264) mentioned that RL disposition decision-making can be strategic in nature, making factors that impact disposition decisions important to manage consumer returns. Consequently, RL disposition practices include all the disposition strategies, requirements and disposition decisions factors needed to choose the most appropriate

disposition options for beneficial outcomes. Although the disposition process as part of the RL process was extensively discussed in section 5.6, more emphasis will be placed on the strategic aspects of disposition and disposition decision making as part of RL practices.

Figure 6.3 showed that disposition is the third highest RL practice discussed in the QCA of RL literature (see Appendix C5 – for the quantitative results), implying that disposition practices can be important for the management of consumer returns. Based on the findings (identified from the QCA of RL literature) disposition as a RL practice involve (1) the strategies and requirements of RL disposition, (2) RL disposition decision factors and (3) the outcomes of RL disposition practices, which will be presented and discussed in subsequent sections. This section concludes with a description, conceptual framework and summary of findings for RL disposition practices to manage consumer returns.

6.6.1 Strategies and requirements of RL disposition practices

RL disposition practices consist of (1) general disposition strategies and strategic understanding and analysis for disposition decisions[19], and (2) RL disposition requirements, including economic, operational, organisational and economic requirements, which can result in several outcomes for the effective management of consumer returns. Additionally, the disposition practices can be important for the RL disposition decision factors (see section 6.6.2), which can help organisations make optimal disposition decisions.

Table 6.19 provides an overview of the findings related to the *strategies and requirements of RL disposition practices* to manage consumer returns, including the categories, subcategories, supporting sources for the subcategories and key quotations that support both the subcategories and the discussion of the findings.

Table 6.19 Findings related to strategies and requirements of disposition practices to manage consumer returns

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
General disposition strategies	***Strategic attainment of organisation-wide commitment***	None	• *"[…] organisation-wide commitment to product recovery activities."* (Khor *et al.* 2016:98)
	Strategic preparation for disposition strategy implementation	None	• *"[…] reverse logistics managers should first be guided by overall corporate or organizational goals. Is the organization's primary objective financial? Is the organization more service/operational focused? […] The answers to these questions can provide direction to the implementation process."* (Skinner *et al.* 2008:533-534)
	Define disposition process	None	• *"[…] clearly defined process for assigning the correct disposition routes for products was essential."* (Bernon *et al.* 2011:492)

[19] Disposition strategies must be developed and implemented interchangeably and not chronologically as presented and discussed in section 6.6.1.

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
	Strategic approach for disposition decisions	None	• *"A reactive approach entails simply abiding by regulations as they are implemented whereas a proactive approach entails anticipating and staying ahead of regulation. A value-seeking approach entails initiating environmentally-friendly activities (such as recycling) […] Determining which of the above approaches to follow can affect a firm's decision as to when, how, and why it will implement a given RL disposition activity."* (Hazen *et al.* 2012:262) • *"Product recovery is an environmentally conscious approach […] aims at recovering the residual value of used products to minimize [sic] the amount of waste sent to landfills."* (Sasikumar *et al.* 2010:1224)
	Strategic considerations	Agrawal *et al.* (2016b:93) Agrawal *et al.* (2016d:944)	• *"Careful considerations are required when selecting product disposition options […]."* (Khor & Udin, 2012:4) • *"Because this decision should be made in accordance with a firm's current policies, market position and objectives, we propose that the RL disposition decision requires great consideration."* (Hazen *et al.* 2012:245)
	Benefit-driven disposition options and decisions	Agarwal *et al.* (2016:3) Gobbi (2011:772) Janse *et al.* (2010:502) Kumar and Putnam (2008:312) Lambert *et al.* (2011:563) Sasikumar *et al.* (2010:1224) Stock and Mulki (2009:49) Ye *et al.* (2013:134)	• *"Regardless of the disposition option chosen, firms must be able to derive benefits from product disposition activities."* (Khor *et al.* 2016:97) • *"[…] it is strategically sound for an enterprise to focus on the components that have substantial economic value at the time of their recovery."* (Xanthopoulos & Iakovou, 2009:1705) • *"Recaptured value is the major source of direct revenue generation from RL implementation. Higher recapturing value motivates the management for RL implementation […]."* (Agrawal *et al.* 2016d:24) • *"The disposition decision seeks to maximize [sic] the benefit generated by a given set of returned products."* (Ferguson *et al.* 2011:776)
	Strategic development of an appropriate disposition system	Abraham (2011:219)	• *"Being aware of […] environmental safety and product take back policy, every organization [sic] develops its own disposal system […] This area cannot be ignored if implementation of an RL system is to be successful."* (Lambert *et al.* 2011:563) • *"[…] a recovery system is required for controlling the returned products […]."* (Eskandarpour *et al.* 2014:1394)
	Strategic establishment of disposition rules and policies	Niknejad and Petrovic (2014:152)	• *"A detailed set of disposition rules can improve an organization's [sic] asset recovery […]."* (Partida, 2011:63) • *"[…] setting RL disposition policy, […] of an RL disposition decision […]."* (Hazen *et al.* 2012:259)
	Develop reuse strategies and practices	None	• *"Implementing policies […] could serve as a further incentive in the reuse […]."* (Matar *et al.* 2014:329) • *"[…] reuse practices […] design for RL […] improve operations performance and financial performance substantially, but also enhance social performance."* (Lai *et al.* 2013:113)
	Develop product recovery strategies and practices	Baenas *et al.* (2011:169) Hahler and Fleischmann, (2013:2) Khor and Udin (2012:13) Mahapatra *et al.* (2013:52)	• *"Product recovery management is a subset of reverse logistics, where all used and discarded products, components and materials are managed efficiently."* (Sasikumar & Kannan, 2008a:155) • *"[…] reverse logistics product disposition […] represents product recovery strategies which are industry and product-specific […]."* (Khor & Udin, 2013:73) • *"[…] adopts a refurbishing strategy might have more stringent requirements for the condition of the product upon customer return."* (Skinner *et al.* 2008:521) • *"A well thought through refurbishment process that enabled significant cash recovery after taking into account the costs of the reverse logistics process."* (Bernon & Cullen, 2007:50) • *"[…] a retailer might prefer repair […] strategy, in order to minimize [sic] potential revenue losses."* (Ni *et al.* 2014:313) • *"Repair only policies are cost effective […]."* (Niknejad & Petrovic, 2014:152)
	Develop secondary market strategies and practices	Hazen *et al.* (2012:259)	• *"A company needs to have a well thought-out plan, complete with a network of secondary market partners […]."* (Rogers *et al.* 2013:46) • *"[…] secondary market strategy is a complicated problem. It includes a myriad of variables and potential dispositions options. Additionally, it includes factors such as loss of control over the product, brand value erosion, product life cycle, and market cannibalization, to name just a few issues."* (Rogers *et al.* 2012:114) • *"[…] needs to find an appropriate secondary market that will speed up the time in which some value can be gained from the inventory […]."* (Rogers *et al.* 2013:43) • *"[…] product remarketing allows firms to generate new revenues […] during asset recovery and promote growth."* (Khor *et al.* 2016:97)
	Develop other recovery strategies and practices	None	• *"The objective of asset recovery is to recover as much of the economic and ecological value as reasonably possible, […]."* (Agrawal & Choudhary, 2014:19) • *Reverse logistics product disposition consists of […] asset recovery activities […]."* (Khor & Udin, 2012:4) • *"[…] energy recovery […] of used products has very good economic benefits […]."* (Yu & Solvang, 2016:12)
	Strategic development and linking of disposition strategies	Skinner *et al.* (2008:522)	• *"The best-practice organizations [sic] have also established formal disposition strategies closely tied to broader reverse logistics strategies."* (Partida, 2011:63) • *"The disposition strategy that the organization [sic] adopts is going to be*

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
	and RL strategies/policies		*correlated with its returns policy."* (Skinner *et al.* 2008:521)
	Strategic establishment and implementation of a formal disposition strategy	Rogers *et al.* (2013:46)	• *"The best-practice organizations [sic] have also established formal disposition strategies […]."* (Partida, 2011:63) • *"[…] disposition activities is [sic] promising when they are accompanied by well-planned strategies […]."* (Khor *et al.* 2016:97) • *"[…] having a disposition strategy that is an integral part of the overall reverse logistics strategy […]."* (Partida, 2011:62) • *"[…] firms may succeed by implementing disposition strategies […]."* (Skinner *et al.* 2008:534)
Strategic understanding and analyses for disposition decisions	***Strategic understanding of economic factors***	Skinner *et al.* (2008:523) (Jayaraman *et al.* (2006:984)	• *"[…] decision-makers […] must also be able to recognize potential financial gains […] on opportunities to reuse operational products, recondition damaged or used products, or recover valuable materials […]."* (Hazen *et al.* 2012:248) • *"Firms should take the time to thoroughly consider each alternative's ability to generate profits."* (Hazen *et al.* 2012:259) • *"[…] refurbishment process that enabled significant cash recovery after taking into account the costs of the reverse logistics process."* (Bernon & Cullen, 2007:50) • *"[…] key costs that must be evaluated when determining which RL disposition to pursue […] a wide variety of costs associated with RL must be considered […]."* (Hazen *et al.* 2012:258)
	Strategic understanding of disposition option factors	Mukhopadhyay and Setaputra (2011:5317) Ponce-cueto *et al.* (2011:111) Rogers *et al.* (2012:108) Zhou *et al.* (2007:66)	• *"[…] decision-maker(s) should then gain an understanding of the RL disposition alternatives of reuse, product upgrade, material recovery, and waste management."* (Hazen *et al.* 2012:265) • *"The recovery option determines the phases of the recovery process […]."* (Gobbi, 2011:788) • *"[…] there are several options available, each of which can impact costs, inventory levels, and returns processing time."* (Hall *et al.* 2013:775) • *"Low recovery value and high investments require higher processing volume to make it economically viable."* (Agrawal *et al.* 2015:84) • *"Repair only policies are cost effective for very high quantities of returns."* (Niknejad & Petrovic, 2014:152) • *"Knowing numbers of returned products available for disposition at a particular point of time is very important for disposition decision-making."* (Agrawal *et al.* 2016b:99)
	Strategic understanding of organisational factors	Lambert *et al.* (2011:563) Skinner *et al.* (2008:533-534)	• *"Those in the firm who are charged with making disposition decisions must be aware of the firm's policy […] to ensure that their decisions are congruent with existing policies and programs."* (Hazen *et al.* 2012:262) • *"[…] it may be of upmost importance to control costs. In this case, costs would be the most heavily weighted component in the disposition decision. Alternatively, organizations [sic] may be looking to expand their operations or delve into new businesses. In these cases, lack of existing supply chain capabilities may not be a highly important consideration."* (Hazen *et al.* 2012:263) • *"The disposition decision-maker must be aware of his or her firm's existing […] capabilities as well as the resources required to properly conduct a given disposition alternative."* (Hazen *et al.* 2012:261) • *"[…] the decision-maker must understand what is required to fill those gaps and whether or not the firm is prepared for and/or willing to commit the additional required resources. Otherwise, other disposition alternatives may provide a better option for the firm."* (Hazen *et al.* 2012:261)
	Strategic understanding of market-related factors	None	• *"[…] identifying […] and enhancing understanding of known customer behaviors [sic] such as these may bolster practitioners' understanding of how the RL disposition decision affects customers […] Firms should understand who their customers are, what they value, and what they are willing to pay for in the marketplace."* (Hazen *et al.* 2012:259) • *"[…] market conditions are generally concerned with the competitive forces in the marketplace […] variables such as market size and number of competing firms are considerations […]."* (Hazen *et al.* 2012:259) • *"It is considered from the competitive perspective. It is important to notice that what and how competitors are handling the returned products."* (Agrawal *et al.* 2016b:99) • *"[…] secondary markets can be nonstandard channels, they need to be understood before risking brand cannibalization [sic] and other risks."* (Rogers *et al.* 2012:116)
	Strategic understanding of external factors	Agrawal *et al.* (2016b:99) Lambert *et al.* (2011:563) Rogers *et al.* (2012:115)	• *"[…] the environmental impact of each disposition alternative must be understood and considered when making the disposition decision."* (Hazen *et al.* 2012:262) • *"Firms must continuously be aware of existing and pending regulation that may affect […] the disposition decision-making process […]."* (Hazen *et al.* 2012:262) • *"[…] decision-makers need to understand the laws and regulations that govern proper material handling and disposal […]."* (Hazen *et al.* 2012:248) • *"The recovery option determines the phases of the recovery process, the chain configuration, the type of actors involved, and their relationships."* (Gobbi, 2011:788)
	Cost-benefit analysis	Skinner *et al.* (2008:534)	• *"[…] feasible disposition options based on the cost–benefits analysis."* (Prahinski

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
			& Kocabasoglu, 2006:425) • *"[…] to save cost and improve customer satisfaction as long as the investment for improving the repair time is less than the cost savings."* (Li *et al.* 2016:234) • *"[…] investment costs […] requirement for recycling. Low recovery value and high investments require higher processing volume to make it economically viable."* (Agrawal *et al.* 2015:84)
	Strategic assessment and ranking of disposition options	Bazan *et al.* (2015:315) Jayaraman *et al.* (2008:412)	• *"[…] there is a hierarchy of preferred dispositioning routes for organisations to follow in order to minimise the impact of product returns."* (Bernon & Cullen, 2007:52) • *"Once the most ideal option is no longer feasible, the firm should move down the hierarchy to the next most value-producing and least resource-demanding option."* (Hazen *et al.* 2011:382) • *"In hierarchical order in regard to the potential residual value that can be recovered by a firm, the four alternatives are: (1) reuse; (2) product upgrade; (3) material recovery; and (4) waste management […]."* (Hazen *et al.* 2012:248) • *"[…] a common approach in practice is to rank dispositions by unit margin and […] the highest-ranked option that is technically feasible."* (Ferguson *et al.* 2011:788) • *"In order from most desirable to least desirable, these RL activities are: reuse; product upgrade; materials recovery; and waste management."* (Hazen *et al.* 2011:382) • *"[…] the activities of reuse, […] may be ranked ordinally from most to least green; when fewer resources are required by a process to return a product to market, the less impact the process has on the environment."* (Hazen *et al.* 2011:382)
	Market analysis	None	• *"[…] evaluation of the market-based ramifications of the RL decision must be part of the RL disposition analysis […] Firms should understand that pursuit of a new RL disposition alternative will likely involve entrance into a new market environment. […] Firms are advised to use the same market analysis approaches that it would for entrance into any new business."* (Hazen *et al.* 2012:259) • *"[…] when a firm decides to recover […] as part of their RL program […], the firm will then enter a completely different market […] Accordingly, SWOT analysis, gap analysis, and other market measures must be considered […]."* (Hazen *et al.* 2012:259) • *"[…] evaluations are not done prior to setting RL disposition policy, the organization [sic] may subsequently find itself in unfamiliar territory and faced with building a new business model to handle the consequences of an RL disposition decision […]."* (Hazen *et al.* 2012:259)
	Other external analysis	None	• *"Firms must continuously be aware of existing and pending regulation that may affect their businesses. This situational awareness should also transcend into the disposition decision-making process so that the implications of a desired alternative are fully understood […]."* (Hazen *et al.* 2012:262) • *"Multiple industry and country analysis should be employed to develop a better […] grounding of reverse logistics disposition choice."* (Skinner *et al.* 2008:534)
Economic requirements	***Investment and expenditures***	Agrawal *et al.* (2015:84) Agrawal *et al.* (2016a:934) Li *et al.* (2016:234) Zhou *et al.* (2007:66)	• *"[…] investment in resources that enable reverse logistics disposition activities […]."* (Khor *et al.* 2016:97) • *"[…] the capital expenditure […] for cost-efficient recovery."* (Khor *et al.* 2016:103)
	Costs	None	• *"A well thought through refurbishment process that enabled significant cash recovery after taking into account the costs of the reverse logistics process."* (Bernon & Cullen, 2007:50) • *"RL disposition […] a wide variety of costs associated with RL […]."* (Hazen *et al.* 2012:258) • *"[…] unit repair costs, unit production cost, setup costs and disposal cost have impacts on the optimal recovery policy."* (Niknejad & Petrovic, 2014:152)
Operational requirement	***RL process requirements***	None	• *"In order to perform product recovery […] it is essential to address issues such as collection of returned items, inspection, or separation of reusable products and disassembly […]."* (Sasikumar *et al.* 2010:1223) • *"[…] an effective and efficient collection system is required for the recovery of returned products."* (Jindal & Sangwan, 2015:394)
	Efficient and speedy disposition processes	Subhashini (2016:10)	• *"The more quickly an item gets dispositioned and moved through the system, the more value it is likely can be recaptured."* (Rogers *et al.* 2013:43) • *"The expedited yet correct disposition of the product is essential."* (Dowlatshahi, 2010a:1374)
Organisational requirements	***Management involvement***	None	• *"[…] with cost/service trade-offs […] reverse logistics managers should first be guided by overall corporate or organizational [sic] goals […] can provide direction to the implementation process."* (Skinner *et al.* 2008:534) • *"The decision choices become more complex and potentially much more beneficial if […] managers can get the resource support they need for reverse logistics handling."* (Skinner *et al.* 2008:533) • *"[…] managers may expect superior performance by choosing destroying, recycling, refurbishing, […] of product."* (Skinner *et al.* 2008:533)
	RL in/outsourcing	Dowlatshahi	• *"Firms must first determine if reuse activities are profitable in-house, or if*

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
	practices	(2010a:1376) Khor *et al.* (2016:103)	*partnerships should be made with third-party logistics providers […].”* (Jayaraman, 2006:983) • *“Selecting disposition may involve a decision to outsource (in addition to returns routing) […] using designated third-party logistics providers specializing [sic] in customized [sic] disposition alternatives.”* (Genchev *et al.* 2011:254)
	RC practices	Khor and Udin (2013:77) Khor *et al.* (2016:97)	• *“[…] the resources required to properly conduct a given disposition alternative.”* (Hazen *et al.* 2012:261) • *“[…] disposition options […] all require significant resources in order to reclaim value from returns.”* (Skinner *et al.* 2008:533)
Environmental requirements	***Environmental regulation***	Huscroft *et al.* (2013b:319)	• *“[…] a firm’s environmental performance can be enhanced via adopting repair and recondition activities, yet both of these options elicit no environmental performance in the absence regulatory directives.”* (Khor *et al.* 2016:103)

Source: Compiled by the researcher

Table 6.19 shows that RL disposition practices include several strategies and requirements, which will be discussed in subsequent.

6.6.1.1 General RL disposition strategies

The general RL disposition strategies practices involve (1) strategic attainment of organisation-wide commitment to RL disposition practices, (2) strategic preparation for disposition strategy implementation, (3) defining the disposition process, (4) strategic approach and considerations, (5) benefit-driven disposition decisions, (6) strategic development of an appropriate disposition system, (7) strategic establishment of disposition rules and policies, (8) developing reuse, product recovery, secondary market and other strategies and practices, (9) strategic development and linking of disposition strategies and RL strategies/policies, and (10) strategic establishment and implementation of a formal disposition strategy.

The effective implementation of disposition strategies can start with the *strategic attainment* of *organisation-wide commitment* to RL disposition practices. Consequently, RL disposition practices must be supported by all parties in the organisation, implying that cross-functional integration (CFI) and management and staff practices (see sections 6.4.3 and 6.9.5) can play an important role in effectively managing the disposition process. Moreover, *strategic preparation* for *disposition strategy implementation* can be critical for successful disposition practices. Particularly, managers must be guided by organisational goals (such as financial or service-orientated goals) and strategies to implement effective disposition strategies.

Furthermore, organisations must *define* the *disposition process* adopt a *strategic approach* for *disposition decisions*, which can set the stage for effective disposition decisions. Strategic approaches that organisations can adopt for disposition decisions can include reactive, proactive, value-adding and environmentally conscience approaches, which can influence the appropriate disposition decision factors (such as costs, environment and regulations) (see section 6.6.2).

Similarly, organisations must *strategically consider* factors that can influence disposition decisions, linking with the disposition strategies related to strategic understanding and analysis of economic, disposition option and operational, organisational, market-related and external factors. Nevertheless, organisations need to focus on *benefit-driven disposition options* and *decisions*, implying that the RL disposition outcomes (see section 6.6.3) must be considered for the development of effective disposition strategies. For instance, the organisation must ensure that the disposition decisions and option result in maximum recovery value to obtain economic benefits (such as cost savings and revenue).

Additionally, organisations must strategically *develop* an *appropriate disposition system* based on the strategic understanding of environmental impact/laws (strategy related to disposition decisions), which can be important for implementing a successful disposition strategy. Furthermore, organisations can *strategically establish disposition rules* and *policies*, which can contribute to improved disposition decision-making and effective disposition practices.

Before a disposition strategy can be formally implemented, organisations must develop disposition option strategies and practices, including reuse, product recovery, secondary markets and/or other recovery strategies and practices. *Developing reuse strategies* and *practices* can encourage decision-makers (e.g. managers) to choose the direct reuse option (see section 5.6.2), leading to several benefits (such as economic, operational and social benefits) (see section 6.6.3). Similarly, *developing product recovery strategies* and *practices*, can lead to effective product recovery management (PRM) initiatives to successfully manage used/damaged/defective consumer product returns. A product recovery strategy must be based on RL disposition requirements (section 6.6.1.3) and disposition decision factors (such as costs, product or industry) (section 6.6.2), demonstrating the importance of a holistic approach to the implementation of effective disposition strategies. A product recovery strategy can contain specific strategies for product recovery options. For example, the organisation can create a refurbishment strategy or a repair strategy, which, like reuse strategies, can lead to economic and other benefits.

Developing secondary market strategies and *practices* must involve well-developed plans based on the strategic understanding of market-related factors (see section 6.6.1.2) and other potential risks (e.g. loss of control, brand value and market cannibalisation). Additionally, organisations must identify appropriate secondary markets (e.g. distant overseas markets, online marketplaces or factory shops) (see section 5.6.5.1) and potential secondary market partners (e.g. jobbers and brokers) (see section 5.6.5.3), which can be critical for effective remarketing of used/recovered products.

Other recovery strategies or practices can include asset recovery strategies (e.g. used equipment) and energy recovery strategies (e.g. incineration) that may lead to economic benefits. Essentially, any type of disposition option requires a strategy, ensuring that organisations plan for RL disposition and implement a comprehensive disposition strategy for optimal disposition decision-making.

Before implementing a formal disposition strategy, the organisation must strategically *develop* and *link disposition strategies* and *RL strategies/policies*. Accordingly, the disposition strategy must be developed to form part of the broader RL strategy and be in line with the return policy because the type of product returns can influence the disposition decisions (see section 6.6.2). For example, if the return policy stipulates that all warranty returns must be returned to the manufacturer, the disposition decision will be "ship to the vendor" (see section 5.6.5.2).

Finally, the organisation can *establish* and *implement* a *formal disposition strategy*, ensuring that organisations can obtain value from consumer product returns to counteract high RL costs, investments and resources (see sections 6.6.1.3 and 6.9) needed for the effective management of consumer returns.

6.6.1.2 Strategic understanding and analyses for RL disposition decisions

Strategic understanding and analysis for disposition decisions can be critical for effective implementation of RL disposition strategies (section 6.6.1.1), which must be implemented to identify appropriate RL disposition decision factors (section 6.6.2) for effective disposition decision-making. Consequently, organisations must understand several factors, including economic, disposition option, organisational, market-related and external factors, and perform analyses, including cost-benefit analyses, assessment and ranking of disposition options, market analyses and other external analyses.

Strategic understanding of economic factors involves understanding costs and profits prior to considering the RL disposition decision cost factors (section 6.6.2). Particularly, the disposition decision-maker and planner (such as the RL manager) must consider and evaluate RL costs and the profit potential associated with each disposition option for an informed disposition decision. Additionally, understanding of economic factors can facilitate with cost-benefit analyses and strategic assessment and ranking of disposition options.

Relating to the understanding of costs and profits, *strategic understanding of disposition option factors* can be important for accurate disposition decisions. Particularly, the decision-maker must understand the (1) categories and phases of disposition options (e.g. reuse, product recovery, material recovery and waste management), (2) the impact of each disposition option on costs, inventory levels and disposition processing time, and (3) return volume appropriate for disposition options (e.g. repair requires high

return volumes). Apart from being important for accurate disposition decisions, strategic understanding of disposition option factors can be important for other disposition strategies, including strategic considerations, development of appropriate disposition option strategies (e.g. reuse or product recovery strategies) (see section 6.6.1.1), cost-benefit analysis and ranking of disposition options.

Strategic understanding of organisational factors involves organisational strategies, policies, capabilities and resources. Particularly, decision-makers must understand organisational strategies/policies, ensuring that disposition decisions correspond with and complement organisational strategies. For example, a financial or cost-containment objective might be better suited for more cost-effective disposition options (e.g. sell to third party buyers), while a customer service-orientated objective might be better suited for more service-orientated disposition options (e.g. repair and refurbishment), emphasising the importance of understanding economic and disposition option factors.

Furthermore, understanding the capabilities and resources of the organisation can be important since certain disposition options require specific capabilities and resources that the organisation may lack (also see section 6.6.1.3). Consequently, if the organisation lacks the necessary capabilities and/or resources, the decision-maker must know the willingness of the organisation to obtain the necessary capabilities or resources.

Strategic understanding of market-related factors involves consumers, market conditions and competition, and secondary markets. Specifically, decision-makers must understand consumer behaviour (e.g. knowing consumers and consumer demand) and consider the potential impact of disposition decisions on consumers. Additionally, the decision-maker must understand market conditions and size, which involves identifying the number of competitors in the market and the type of disposition activities and strategies performed by competitors. Understanding competitors may expose market saturation for specific recovered products, which may impact the profitability of the organisation. Similarly, the decision-maker must understand secondary markets to avoid potential brand cannibalisation, which emphasise the importance of developing and implementing secondary market strategies (section 6.6.1.1).

Equally important for effective disposition decisions can be *strategic understanding of external factors*, which involve the environment, regulation and SC. Particularly, decision-makers must understand the environmental impact of disposition alternatives, existing/pending laws and regulations (e.g. Consumer protection Act (CPA) of South Africa) and the impact of disposition decisions on regulation. Moreover, the disposition decision-maker must understand the SC for recovered products, which includes

understanding of the SC structure, the different SC parties involved in the SC and the relationships between the parties.

Regarding the strategic analysis for effective disposition decisions, performing a *cost-benefit analysis* can be important to determine the feasibility of each option. For example, a cost-benefit analysis can be performed for a specific disposition option, like repair, comparing the investment and cost requirements of repair with potential repair option outcomes (such as cost savings and customer satisfaction). Evidently, if the costs/requirements out-weigh the outcomes, the disposition option might be too costly for effective RL disposition practices, emphasising benefit-driven disposition decisions and options (see section 6.6.1.1). Alternatively, organisations may need to explore other alternatives, like RL outsourcing practices to perform disposition options cost-effectively (see section 6.6.1.3). Essentially, performing a cost-benefit analysis demonstrates the importance of understanding the economic, disposition option and organisational factors (e.g. cost containment goal) for effective disposition decision making.

Based on the strategic understanding of economic, disposition and organisational factors and the outcomes of the cost-benefit analyses, organisations can *strategically assess* and *rank* the *disposition options* for effective disposition decisions-making. In practice a standard disposition option hierarchy associate with the most value-producing and least resource-demanding options, which follow reuse, product recovery (e.g. repair and refurbishment), material recovery (e.g. recycling) and waste management (e.g. dispose in a landfill). However, disposition option assessment and ranking must correspond with organisational goals and strategies, which can not only form a foundation for developing different disposition option strategies (see section 6.6.1.1) but also facilitate disposition decision-makers with appropriate disposition decisions.

Associating with the understanding of market-related factors, performing a *market analysis* involves evaluating and measuring market-based implications of disposition decisions. Organisations can use SWOT or gap analyses to identify the feasibility of entering in new markets or using existing markets to sell recovered products. Additionally, market analysis can be important for other disposition strategies, including the development of disposition policies and secondary market strategies (section 6.6.1.1).

Finally, *other external analyses* can be performed, including a (1) situational analysis to identify the implications of disposition decisions on the environment (e.g. laws/regulations) and (2) industry analysis and/or country analysis (for multi-national organisations) to identify the appropriateness of the disposition decision for the industry and country.

6.6.1.3 Requirements of RL disposition practices

Since the RL disposition practices mostly consist of disposition strategies and disposition decision factors, limited economic, operational, organisational and environmental requirements associate with RL disposition practices.

The *economic requirements* of RL disposition practices involve *investments, expenditure* and *costs* that associate with product recovery activities and RL processes. Consequently, investment, expenditures and costs requirements can be important for developing appropriate disposition option strategies (section 6.6.1.1), strategic understanding of economic and disposition option factors, cost-benefit analyses and strategic assessment and ranking of disposition options (see section 6.6.1.2).

The *operational requirements* of RL disposition practices involve RL process requirements and efficient disposition processes. Particularly, effective disposition practices must be supported by effective and efficient *RL processes,* including collection, inspection and sorting. For example, inspection involves product condition identification and pre-disposition decisions, and sorting involves classification of products according to product condition and potential disposition options (see section 5.5), which can be critical for effective disposition decisions. Similarly, *efficient* and *speedy disposition processes* can support the effective implementation of disposition strategies for maximum value recovery, emphasising the importance of implementing benefit-driven disposition strategies (see section 6.6.1.1).

The *organisational requirements* of RL disposition practices include (1) management involvement, (2) RL in/outsourcing practices and (3) RC practices. Like other RL practices (e.g. IT, integration and RL in/outsourcing), *management involvement* can be important for the development and implementation of strategies. For instance, in RL disposition practices managers must be involved in the (1) strategic preparation and implementation of disposition strategies (section 6.6.1.1), (2) strategic understanding of economic, disposition option, organisational, market-related and external factors, (3) performing cost-benefit analyses (or any other analyses) (see section 6.6.1.2), and (4) identifying disposition decisions factors for effective disposition decisions (see section 6.6.2).

RL in/outsourcing practices can play a role in disposition option strategies, for example, some disposition options strategies may be viable but too complex or costly to perform inhouse, requiring the adoption of RL outsourcing practices. Evidently, the potential for outsourcing RL disposition, demonstrates the importance of understanding economic, disposition option, market and SC (external) factors for effective disposition decisions (also see section 6.6.1.2).

Likewise, effective RL disposition requires appropriate *RC (resource commitment)* in RL, which not only emphasise the economic requirement of investment but also the importance of understanding organisational factors (such as resources) for effective disposition decisions (see section 6.6.1.2). Consequently, several RL practices can be important for RL disposition practices, which reemphasise the importance of a holistic approach to the RLM of consumer returns.

Finally, unique to RL disposition practices can be the *environmental requirement* of *environmental regulation,* which must be present to enhances the organisation's environmental performance through RL disposition options. Consequently, in absence of environmental regulations, organisations may only demonstrate a commitment to the environment without environmental compliance and performance benefits, making environmental factors and benefits less important for RL disposition.

In the next section, RL *disposition decision factors* that associate with the disposition strategies and requirements, will be explored.

6.6.2 RL disposition decisions factors

RL disposition decision factors include economic, operational, organisational, product-related, environmental and social, market-related, SC and other external factors. The disposition decision factors can be important for making accurate disposition decisions for the effective management of consumer returns but requires strategic understanding and analyses of economic, disposition, organisational, market-related and other external factors (discussed in section 6.6.1.3).

Table 6.20 provides an overview of the findings related to the *RL disposition decision factors*, including the categories, subcategories, supporting sources for the subcategories and key quotations that support both the subcategories and the discussion of the findings.

Table 6.20 Findings related to the RL disposition decision considerations and factors to manage consumer returns

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
Economic factors	***Economic benefits***	Selvi and Kayar (2016:26)	• *"[…] major criteria identified for selection of disposition alternatives are economic benefits […]."* (Agrawal *et al.* 2016a:936)
	Recovery value	Mazahir *et al.* (2011:100) Shaharudin *et al.* (2015:222)	• *"Recapturing value from used product may be the primary economic objective of most of reverse logistics system and greatly affects the disposition decisions in reverse logistics."* (Agrawal *et al.* 2016b:99) • *"Reuse allows for the most value to be recovered while waste management allows for the least amount of value recovery."* (Hazen *et al.* 2012:248)
	Recovered product price	Shaik and Abdul-Kader (2014:97) Skinner *et al.* (2008:523) Xiao *et al.* (2010:171)	• *"[…] price of recovered products should be considered as an important driver to operate the recovery process. If the price of the recovered product is not enough to support the validity of recovering the used products, then the recovery process itself cannot show the feasibility of recovery logistics."* (Kim & Goyal, 2011:2536) • *"Disposition decisions depend upon […] selling price […]."* (Agrawal *et al.* 2016a:935)
	Costs	Abraham (2011:212) Lai *et al.* (2013:113) Li *et al.* (2016:234)	• *"[…] it may be of upmost importance to control costs. In this case, costs would be the most heavily weighted component in the disposition decision."* (Hazen *et al.* 2012:263)

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
		Ruiz-Benitez and Muriel, (2014:573) Shaik and Abdul-Kader, (2014:97) Skinner *et al.* (2008:523) Srivastava and Srivastava, (2006:540) Xiao *et al.* (2010:171)	• *"If the returned product has a higher reuse processing cost than the revenue expected to be generated, then it would not be economical to reuse the product and it should be transported to a disposal facility."* (Dowlatshahi, 2010a:1376) • *"Products should be destroyed when it's too costly to return the product […]."* (Skinner *et al.* 2008:534) • *"[…] unit repair costs, unit production cost, setup costs and disposal cost have impacts on the optimal recovery policy."* (Niknejad & Petrovic, 2014:152) • *"A change in unit repair costs could make the alternative recovery option […] more or less attractive for recovery […]."* (Niknejad & Petrovic, 2014:150) • *"Disposition decisions depend upon […] logistics cost."* (Agrawal *et al.* 2016a:935) • *"If the primary thrust is cost containment, […] then destroying or recycling represent potentially viable disposition strategies."* (Skinner *et al.* 2008:534)
	Profitability	Rogers *et al.* (2012:115) Ruiz-Benitez and Muriel (2014:573) Srivastava (2008:540) Xiao *et al.* (2010:171)	• *"The disposition decisions are guided by profit motive […]."* (Srivastava & Srivastava, 2006:530) • *"[…] potential profitability is a component that must be weighed whenever deciding which RL disposition option to employ."* (Hazen *et al.* 2012:258) • *"Upon a thorough review of the profit potential of each disposition alternative, all else being equal, firms will most likely choose the alternative that will generate the most profit."* (Hazen *et al.* 2012:259) • *"If the primary thrust is cost containment and/or revenue/profit enhancement, then destroying or recycling represent potentially viable disposition strategies."* (Skinner *et al.* 2008:534)
Operational factors	***Disposition complexity***	None	• *"This option is typically chosen on the condition that other disposition options are seen as too complex […]."* (Khor *et al.* 2016:97)
	Disposition speed	None	• *"[…] the speed at which returned products can […] be returned to A grade for resale […] the most appropriate disposition route […]."* (Bernon *et al.* 2016:595)
	Return quantity/ volume	Agrawal *et al.* (2016b:99) Niknejad and Petrovic, (2014:152)	• *"[…] variables such as product returns […] quantity […] The disposition decisions are impacted […] by the above […]."* (Srivastava & Srivastava, 2006:540) • *"Products are destroyed […] because of […] too low of volume to warrant additional handling […]."* (Skinner *et al.* 2008:523)
Organisational factors	***Organisational objectives/policies***	None	• *"[…] decision should be made in accordance with a firm's current policies, and objectives […]."* (Hazen *et al.* 2012:245)
	Capabilities	Dowlatshahi (2010a:1376)	• *"If gaps exist between existing and required capabilities, […] other disposition alternatives may provide a better option for the firm."* (Hazen *et al.* 2012:261) • *"[…] it will likely choose a different method of disposition for which is does possess the capability."* (Hazen *et al.* 2012:261)
	Resources	None	• *"[…] major criteria identified for selection of disposition alternatives are […] reverse logistics resources."* (Agrawal *et al.* 2016a:936) • *"Disposition decisions depend on the availability of resources in an organization [sic]."* (Agrawal *et al.* 2016a:937) • *"[…] if a firm does not readily possess the resources necessary […] it will likely choose a different method of disposition for which is does possess the capability."* (Hazen *et al.* 2012:261) • *"Employing limited resources seems to only work for firms choosing to destroy returned product."* (Skinner *et al.* 2008:533) • *"[…] whether or not the firm is prepared for and/or willing to commit the additional required resources. Otherwise, other disposition alternatives may provide a better option for the firm."* (Hazen *et al.* 2012:261)
Product-related factors	***Type of product and product characteristics***	Bazan *et al.* (2015:315) Pochampally and Gupta (2012:1355) Ruiz-Benitez and Muriel (2014:573) Shaik and Abdul-Kader, (2014:97) Skinner *et al.* (2008:523)	• *"[…] reverse logistics product disposition […] that represents product recovery strategies which are industry and product-specific […]."* (Khor & Udin, 2013:73) • *"[…] disposition options […] depend upon the characteristics of the product […]."* (Shaik & Abdul-Kader, 2014:97) • *"Recycling is also chosen when materials in the original product can be used for another product or subassembly."* (Skinner *et al.* 2008:523) • *"Products should be destroyed when […] the product is […] "perishable,"* (Skinner *et al.* 2008:534) • *"Disassemblability of products influences […] recovery (e.g. repair, […]) and cost-efficient recovery […]."* (Khor & Udin, 2013:76) • *"This deterioration characteristic strongly affects the recovery option […]."* (Xie & Breen, 2014:458)
	Product return quality and condition	Ghezavati and Beigi (2016:3) Srivastava and Srivastava (2006:540) Xiao *et al.* (2010:171)	• *"[…] when products have no problems, […] back to online retailers to be sold again on the market […]."* (Yan *et al.* 2012:260) • *"[…] capitalizing [sic] on opportunities to reuse operational products, recondition damaged or used products […]."* (Hazen *et al.* 2012:248) • *"Quality of returned products is also important factor for disposition decisionmaking."* (Agrawal *et al.*, 2016b:99) • *"Based on the quality of return products, series of minor (repair, refurbish, disassembly, and service) or major processes (remanufacturing and recycling) are the available alternatives."* (Soleimani & Govindan, 2014:487) • *"Higher quality returns result in simple repackaging or repair while lower quality returns result in scrap."* (Tan & Kumar, 2006:336) • *"[…] rank dispositions by unit margin and to allocate returns depending on their quality condition to the highest-ranked option that is technically feasible."* (Ferguson

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
			et al. 2011:788)
	Product value	Sasikumar and Kannan, (2008a:157)	• *"[…] reverse logistics product disposition […] that represents product recovery strategies […] where decision-making highly depends on conservable value in used products."* (Khor & Udin, 2013:73) • *"If the product is low cost, then a lengthy decision process around its disposition is counterproductive […]."* (Rogers *et al.* 2013:43) • *"Products should be destroyed when […] the product is very low value […]."* (Skinner *et al.* 2008:534) • *"[…] some products with lower residual value are more likely to undergo material recycling, energy recycling, or proper disposal."* (Khor *et al.* 2016:96)
	Type of product returns	None	• *"Service or warranty return usually calls for repair […]."* (Khor & Udin, 2012:7) • *"[…] variables such as product returns […] The disposition decisions are impacted […]."* (Srivastava & Srivastava, 2006:540)
	Product lifecycle or maturity	Rogers *et al.* (2012:114)	• *"Disposition of a mature product that is nearing the end of its lifecycle will likely differ from that of successful new product introduction."* (Rogers *et al.* 2013:43)
	Product control	None	• *"[…] secondary market strategy […] includes a myriad of variables […] it includes factors such as loss of control over the product […]."* (Rogers *et al.* 2012:114)
Environmental and social factors	***Environmental impact and benefits***	Selvi and Kayar (2016:26)	• *"[…] the environmental impact of each disposition alternative must be understood and considered when making the disposition decision."* (Hazen *et al.* 2012:262) • *"[…] major criteria identified for selection of disposition alternatives are […] environmental benefits […]."* (Agrawal *et al.* 2016a:936)
	Environmental policy	None	• *"Disposition decisions are greatly affected by the environmental policy of an organization [sic]."* (Agrawal *et al.* 2016a:936)
	Environmental restrictions	None	• *"Increasing restrictions on what can be placed in a landfill and the cost of landfilling have made disposal a less attractive option."* (Lai *et al.* 2013:113)
	Environmental regulation	Selvi and Kayar (2016:26)	• *"[…] taking product back for re-work […] is often mandated by regulation."* (Skinner *et al.* 2008:523) • *"[…] recycling is mandated by environmental law or strongly encouraged by environmental policy groups."* (Skinner *et al.* 2008:534)
	Corporate social responsibility (CSR)	Selvi and Kayar (2016:26)	• *"[…] major criteria identified for selection of disposition alternatives are […] corporate social responsibility […]."* (Agrawal *et al.* 2016a:936)
Market-related factors	***Market value and proposition***	None	• *"[…] feasible disposition options based on the […] fair-market value of the product."* (Prahinski & Kocabasoglu, 2006:425) • *"Disposition decisions depend upon proposition of the product sold to the customer such as quality […]."* (Agrawal *et al.* 2016a:935)
	Market position, size and measure	None	• *"[…] overall market size, market position […] may be important when making […] the RL disposition decision.* (Hazen *et al.* 2012:259) • *"[…] decision should be made in accordance with a firm's […] market position […]."* (Hazen *et al.* 2012:245) • *"[…] market measures must be considered when making the RL disposition decision […]."* (Hazen *et al.* 2012:259)
	Market conditions and competition	None	• *"Market conditions represent an important component because commencing with an RL disposition practice may often entail entrance into a new market."* (Hazen *et al.* 2012:259) • *"[…] market conditions are generally concerned with the competitive forces in the marketplace […] variables such as market size and number of competing firms are considerations […]."* (Hazen *et al.* 2012:259) • *"Competitive forces in the marketplace may significantly hinder a firm's ability to implement certain RL disposition alternatives. Alternatively, a lack of competition may facilitate a smooth entry into a new marketplace, thereby encouraging the selection of a given disposition alternative."* (Hazen *et al.* 2012:259)
	Market cannibalisation	Rogers *et al.* (2012:114)	• *"[…] market cannibalization [sic] is a major concern. In such cases, the final product disposition would have to be routed to a distant secondary market offshore […]."* (Rogers *et al.* 2013:43)
	Customer service objectives	None	• *"[…] if operational service or responsiveness is top priority, firms may succeed by implementing disposition strategies of […] refurbishing, […]."* (Skinner *et al.* 2008:534)
	Consumer behaviours and demand	Agrawal *et al.* (2016b:99) Agrawal *et al.* (2016a:935) Sasikumar and Kannan, (2008a:157) Shaharudin *et al.* (2015:222) Skinner *et al.* (2008:523) Srivastava and Srivastava (2006:540)	• *"[…] customer behaviors [sic] also affect the RL disposition […]."* (Hazen *et al.* 2012:259) • *"[…] disposition options […] depend upon […] market demand patterns."* (Shaik & Abdul-Kader, 2014:97) • *"[…] customer demand for reused, recycled, or remanufactured products and the willingness to return used or unused products to the supply chain constitute important customer behaviors [sic] […] that affect a firm's RL functions."* (Hazen *et al.* 2012:260)
	Availability of buyers/ saleability	None	• *"Products should be destroyed when […] there's no alternative market/buyer readily available, etc."* (Skinner *et al.* 2008:534) • *"Products are destroyed when they cannot be sold/used at the current location […]."* (Skinner *et al.* 2008:523) • *"This option is typically chosen on the condition that other disposition options […] cannot be made beneficial due to, perhaps, a lack of market options."* (Khor *et al.*

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
			2016:97)
	Supply of recoverable products	None	• *"Selection of various reverse logistics product disposition options relies on […] the accessibility of reusable content for re-entry in forward supply chain."* (Khor & Udin, 2013:71)
SC factors	***Supplier agreements***	None	• *"Depending on the agreement with the supplier, the firm may be able to return the item to the vendor (RTV) and recover the purchase cost […]."* (Rogers *et al.* 2012:112)
	Manufacturer preferences	None	• *"Even when returns processing could be performed at the retail level, OEMs may require that all returns be sent back to them for the purposes of brand management."* (Ruiz-Benítez *et al.* 2014:55)
	Relationship and power	None	• *"A determinant factor is which player has more power along the supply chain. Large retailers normally transfer part or even all of the costs associated with the returned item to the manufacturer/vendor."* (Ruiz-Benitez & Muriel, 2014:573) • *"[…] depending on the […] relationship between retailers and manufacturers. If the item is not apparently damaged, it will go back to the shelf."* (Xiao *et al.* 2010:171)
	Product ownership	None	• *"[…] product ownership and future demand for products. The disposition decisions are impacted […]."* (Srivastava & Srivastava, 2006:540)
Other external factors	***Government regulation***	Selvi and Kayar (2016:26) Shaharudin *et al.* (2015:222)	• *"Product recovery is carried out mainly for […] governmental regulations […]."* (Sasikumar & Kannan, 2008a:157) • *"Government rules and regulations, […] affect the disposition of returned products and may impose restrictions on some of the disposition decisions […]."* (Agrawal *et al.* 2016b:99)
	Stakeholder needs	None	• *"Stakeholders may also influence the disposition decisions […] because of their growing awareness and concerns. Disposition decisions must be taken by keeping in mind the stakeholder's need."* (Agrawal *et al.* 2016a:936)
	Type of industry	Shaik and Abdul-Kader (2014:97) Sharma *et al.* (2016:409) Skinner *et al.* (2008:523)	• *"[…] reverse logistics product disposition […] that represents product recovery strategies which are industry […] specific […]."* (Khor & Udin, 2013:73)
	Development of country	None	• *"[…] incineration is a costly venture and thus not suited for developing countries."* (Kinobe *et al.* 2015:82)
	International factors	None	• *"[…] a specific disposition method choice. […] for international markets and for supply chains that cross national borders and experience the impacts of culture, tariffs, quotas, etc."* (Skinner *et al.* 2008:534)

Source: Compiled by the researcher

Table 6.20 shows the RL disposition decision factors, including economic, operational, organisational, product related, environmental and social, market-related, SC and other external factors, which will be discussed in subsequent sections.

6.6.2.1 Economic factors in RL disposition decisions

The economic factors in RL disposition decisions involve (1) economic benefits, (2) recovery value, (3) recovered product price, (4) costs, and (5) profitability.

Associating with the strategy of benefit-driven disposition decisions and options (see section 6.6.1.1), the organisation (or disposition decision-maker) can focus on the economic benefits to choose between disposition options. Likewise, the *recovery value* of each disposition option and product can influence disposition decisions, which associate with disposition decision strategies of cost-benefit analyses and strategic assessment and ranking of disposition options (see section 6.6.1.2). For example, if the organisation seeks the highest recovery value, then the reuse option can be considered as the highest ranked disposition option in terms of recovery value.

Similarly, the *recovered product price* can be an important disposition decision factor since the selling price of the recovered product can demonstrate the feasibility of the disposition option. Consequently, the recovered product price must be sufficient to cover the expenses, investment and resources associated with each option (see section 6.6.1.3), emphasising the importance of understanding the costs and profitability of each disposition option (economic factors) for effective disposition decisions (see section 6.6.1.2).

Costs can be an important disposition decision factor that associate with the strategic understanding of economic factors (such as costs) and organisational factors (such as goals and strategies) and the economic requirements of cost (section 6.6.1.3). For example, different costs of disposition options can be an important factor for organisations aiming to control and minimise costs, which means that disposition decision makers must choose the most economically viable option.

Similarly, *profitability* as a disposition factor associates with the strategic understanding of profitability of each disposition option (as an economic factor) and assessment/ranking of disposition options (section 6.6.1.2). For instance, the organisation must determine the potential profitability of each disposition option and then based on the assessment choose the disposition option with the highest profit potential, leading to a benefit-driven disposition option strategies (see section 6.6.1.1).

Essentially, the economic factors that influence RL disposition decisions demonstrate the importance of understanding economic and organisational factors before making disposition decisions and highlight the economic outcomes associated with effective disposition decisions (see section 6.6.3).

6.6.2.2 Operational factors in RL disposition decisions

The operational factors in RL disposition decisions involve disposition complexity, disposition speed and return quantity/volume. In some cases, organisations may consider the *complexity* of *disposition* options as a factor that can influence disposition decisions. For instance, the organisation may find the refurbishment option as too complex and may consider repair or selling to a third party.

Additionally, *disposition speed* can be important because of the operational requirement of a speedy and efficient disposition process (see section 6.6.1.3). Therefore, if the repair option can be performed quicker and more efficiently than the refurbishment option, then the organisation may choose the repair option. The *return quantity* or *volume* as a disposition decision factor relates to the understanding of disposition options (e.g. volume requirements). For instance, the repair disposition requires high return volumes to be economically feasible, which means that organisations with lower return volumes need to choose an alternative disposition option (e.g. refurbishment or sell on secondary markets).

Essentially, the operational disposition decision factors demonstrate the importance of developing appropriate disposition option strategies (see section 6.6.1.1) and understanding different disposition options for effective disposition decisions (section 6.6.1.2).

6.6.2.3 Organisational factors in RL disposition decisions

The organisational factors in RL disposition decisions, including organisational objectives, policies, capabilities and resources relate to the disposition strategies (section 6.6.1.1), strategic understanding of organisational factors (section 6.6.1.2) and the organisational requirements of RL disposition practices (section 6.6.1.3). For instance, disposition decisions must be made in accordance with *organisational objectives* and *policies,* which demonstrates the importance of understanding the organisational objectives and policies (organisational factors) and linking of the disposition strategy with other RL strategies and policies for accurate disposition decisions.

Similarly, disposition decisions depend on the organisation's *capabilities,* which requires an understanding of organisational capabilities (organisational factors) before informed disposition decision-making. Evidently, if the organisation lacks capabilities in repair and refurbishment operations, other options might be more feasible, demonstrating the strategic importance of understanding/knowing the different disposition options (section 6.6.1.2).

Finally, *resources* can influence disposition decisions since certain disposition options (such as repair) require certain resources (e.g. repair specialists and testing equipment), which demonstrate the importance of understanding organisational factors, like resource availability and willingness of the organisation to commit resources, emphasising organisational requirement of RC (section 6.6.1.3), Essentially, if an organisation is unwilling to commit resources and/or lacks resources for repair or refurbishment, other options, like destroy or sell to third parties, may be more appropriate.

6.6.2.4 Product-related factors in RL disposition decisions

RL disposition decisions involve several product-related factors, including (1) type of product and product characteristics, (2) product return quality and condition, (3) product value, (4) type of product returns, (5) product life cycle or maturity and (6) product control.

The *type of product* and *product characteristics* means that the nature of the product may exclude one or more disposition option. For example, a perishable product may only be suitable for the destroy option or products that contain recyclable materials may be suitable for recycling. Similarly, products

that can be disassembled may be suitable for repair and refurbishment options, which may involve parts replacement (see section 5.6).

The *product condition* and *quality* relate to the condition and quality of the product at the time of return. For instance, a product return in a new/unused condition can be appropriate for the reuse option or in a damaged/defective condition can be appropriate repair and refurbishment. Similarly, the quality of the returned product can point to the appropriate disposition option, for example, a high quality returned product may be suitable for repair and refurbishment, while low quality returned products may be suitable for recycling.

Nevertheless, product characteristics and condition (factors) can be more important than quality, for example, a lower quality product in a new/unused condition can still be reused and resold instead of recycled. The product condition and quality factors can be considered in the ranking of disposition options (section 6.6.1.2) and implementation of appropriate disposition strategies (section 6.6.1.1).

Linking with the recovery value (economic factor) (section 6.6.2.1) and product-related factor of product quality, *product value* of used products can influence disposition decisions. For example, low value used products may be more appropriate for destroy than for repair and refurbishment. Product value as a disposition decision factor can associate with developing a recovery strategy, which means that products with lower value might be excluded from the disposition strategy because less effort must be applied to lower value products.

Associating with product condition factor and strategic linking of disposition strategies and return policies (see section 6.6.1.1), *type of returns* can influence disposition decisions. For example, a service or warranty returns require repair or return to the manufacturer (vendor) and new/unused returns (due to buyers' remorse or a change in mind) require direct reuse and resale (also see sections 4.3 and 5.6).

Product life cycle or *maturity* can influence disposition decisions and can relate to the abovementioned product-related factors of product condition, product characteristics and type of returns. For example, a product at the end of its lifecycle, might be in a used condition, classified as obsolete and associate with end-of-use (EoU) consumer returns (see section 4.3), which means that it may be uneconomical to repair/refurbish the product for resale on the secondary markets. Finally, *product control* can influence disposition and must be considered in developing a secondary market strategy (see section 6.6.1.1), demonstrating the importance of the disposition decision strategies of understanding market-related factors and performing market analyses (section 6.6.1.2).

6.6.2.5 Environmental and social factors in RL disposition decisions

Like economic, operational and organisational factors, the environmental factors, including environmental impact, benefits, policy, restrictions and regulations, requires strategic understanding of several factors for effective disposition decisions (section 6.6.1.2).

For instance, strategic understanding of external factors like the environment can be important for informed disposition decision-making related to *environmental impact* and *benefits*. Similarly, the *environmental policy* of the organisation can influence disposition decisions, which relate to understanding of organisational factors (like organisational policies) for accurate disposition decision-making. For example, the organisation's environmental policy may stipulate that all used product returns must be repaired or resold on secondary markets to avoid negative impact on the environment, emphasising the importance of linking disposition strategies with organisational policies (see section 6.6.1.1).

Environmental restrictions can motivate organisations to choose environmentally friendly options (such as reuse) and avoid high environmental penalty cost for certain disposition options (such as higher landfill costs), emphasising the importance of understanding economic and disposition option for effective disposition decision-making (section 6.6.1.2). Similarly, *environmental regulations* can influence disposition decisions, which, like the environmental policy of the organisation, may stipulate that all used product returns must be repaired or recycled. The influence of environmental regulations demonstrates the importance of understanding external factors (like regulations) for disposition decisions since a failure in understanding laws may lead to choosing a disposition option that falls outside regulations (such as landfill disposal).

Finally, the *social factor* of CSR can influence disposition decisions, which relates to the consumer pressures and corporate citizenship drivers of RLM (see section 2.3.4.1). Consequently, organisations may choose disposition options that demonstrates a commitment to the society, for example, donating product returns to charity, demonstrating the social outcomes of RL disposition practices (section 6.6.3.4).

6.6.2.6 Market-related factors in RL disposition decisions

The market-related factors in RL disposition decisions involve (1) market value and proposition, (2) market position, size and measures, (3) market conditions and competition, (4) market cannibalisation, (5) customer service objectives, (6) consumer behaviour and demand, (7) availability of buyers / saleability, and (8) supply of recoverable products.

Market value and *proposition* factors associate with other disposition decision factors, like recovery value, recovered product price, product condition and quality, and product value (see sections 6.6.2.1 and 6.6.2.2). For instance, the market proposition of the organisation can be to resell higher value used products on secondary markets, which means that the organisation must choose disposition options (such as repair and refurbishment) that result in higher value and higher quality recovered products.

The *market position, size* and *measures* of the organisation can influence disposition decisions, which demonstrates the importance of understanding market-related factors and performing market analyses (e.g. SWOT and gap analyses) for effective disposition decisions (section 6.6.1.2). Likewise, *market conditions* and *competition* can be important disposition decision factors that associate with strategic understanding and market analysis of market-related factors (like competition). For example, if the market involves competitive forces for selling repaired cell phones the organisation must choose options like refurbishment or selling to third party buyers, or if the market lacks competition, smooth market entry can allow the organisation to choose repair cell phones for profit.

Market cannibalisation associates with developing a secondary market strategy (see section 6.6.1.1) and strategic understanding secondary markets (market-related factor) for effective disposition decisions (section 6.6.1.2). For example, if the risk of market cannibalisation is high in local secondary markets, the organisation can choose distant (offshore) secondary markets as the best disposition alternative.

Associating with the strategic understanding organisational factors (e.g. objectives) (section 6.6.1.2), the *customer service objectives* of organisations can influence disposition decisions. For example, if the customer service objective of the organisation entails responsiveness, disposition options associated with responsiveness (such as refurbishment) can be chosen. Nevertheless, *consumer behaviour* and *demand* can be equally important disposition decision factors, associating with strategic understanding of market-related factors (such as consumers). For instance, consumers may be environmentally conscious, which can create a demand for refurbished or repaired products. Accordingly, the organisation will choose to repair or refurbish returned products to satisfy consumer demands.

Availability of *buyers* or *saleability* of recovered products can influence disposition decisions, which emphasise the importance of performing a market analysis for effective disposition decision-making (section 6.6.1.2). For example, if the organisation determines that the market lacks third-party buyers (such as jobbers and salvage dealers) or second consumers (see section 5.6.5), certain disposition options, like reuse, repair and refurbishment, may be impractical, which means that the organisation must choose other disposition alternatives (such as destroy or recycling).

Finally, *supply of recoverable products* as a disposition decision factor associates with the strategic understanding of return volume for disposition options (see section 6.6.1.2). For instance, organisations that lack sufficient supply of recoverable or reusable products must avoid selecting disposition options with high volume requirements (such as repair) and instead select disposition options (e.g. sell as scrap or destroy) with lower volume requirements.

Essentially, market-related factors can be critical for effective disposition decision-making, which demonstrates the importance of careful consideration of disposition decisions and alternatives while developing a disposition strategy (section 6.6.1.1).

6.6.2.7 SC and external factors in RL disposition decisions

The *SC factors* that influence disposition decisions include (1) supplier agreements, (2) manufacturer preferences, (3) relationships and power and (4) product ownership. A *supplier agreement* involves an agreement between a retailer and a supplier/manufacturer that can influence disposition of product returns. For example, the supplier agreement stipulates that all defective consumer product returns can be returned by the retailer, which means that the retailer can choose to "return to the vendor" disposition option, instead of choosing repair or refurbishment.

Similarly, *manufacturer preferences* can influence disposition decisions of retailers, for example, an OEM concerned with brand management may require that all defective/damaged consumer product returns must be returned by the retailer, emphasising the influence of product return type (product-related factor) on disposition decisions (see section 6.6.2.4). Additionally, SC *relationships* and *power* can influence disposition decisions, for instance, large and powerful retailers may be in the position to return all consumer returns to less-powerful smaller manufacturers/suppliers (return to the vendor option). Lastly, *product ownership* may also play are role in disposition decisions since the product owner (e.g. third-party seller) may choose the disposition decision, influencing the disposition decision-making of the seller (like the retailer). Essentially, the SC disposition decision factors demonstrate the strategic importance of understanding the SC (external factor) for effective disposition decision making (see section 6.6.1.2).

Several *external factors* can influence disposition decisions, including (1) governmental regulation, (2) stakeholder needs, (3) type of industry, (4) development of a country and (5) international factors. Like environmental laws, *governmental regulation* can be import in disposition decision-making since governments may impose certain laws or restrictions on some disposition options (such as disposal), motivating organisations to develop product recovery strategies (see section 6.6.1.1). Subsequently, the

governmental regulation disposition factor demonstrates the importance of understanding governmental regulations and laws as external factors for effective disposition decisions (see section 6.6.1.2).

Like the consumer demand disposition decision factor (section 6.6.2.6), *stakeholder needs* can influence disposition decisions. For example, society may expect that organisations donate products to charity or recycle products instead of disposal, or investors may expect that organisations choose disposition options with the highest profitability. Consequently, organisations may need to identify the most important stakeholders and their needs for effective disposition decisions.

Like the type of product (product-related factor) (section 6.6.2.4), the *type of industry* can influence disposition decisions. For instance, in the fashion industry product disposition options can be limited to donate to charity and resell on the secondary markets or in the pharmaceutical industry disposition can be limited to destroy or incineration. Evidently, the impact of industry on disposition decisions demonstrates the importance of conducting an industry analysis (see section 6.6.1.2) before disposition decision-making.

Similarly, *development of a country* can influence disposition decisions since some countries may lack the skills and resources to perform expensive disposition options. For example, incineration of products may be too costly in developing countries, emphasising the strategic importance of conducting a country analysis (section 6.6.1.2). Finally, *international factors*, like culture, labour, tariffs and taxes, can influence disposition decisions of multi-national organisations and can form part of other RL disposition factors, like market conditions, competition, consumer behaviour, demand, and other external factors (like legislation and country development).

Essentially, all the factors that can influence disposition decisions demonstrate the importance of RL disposition practices and the strategies and requirements needed for effective disposition decision-making. In the next section, the outcomes (benefits) of RL disposition practices, will be explored.

6.6.3 Outcomes of RL disposition practices

The outcomes of RL disposition practices relate to the specific benefits associated with the RL disposition practice strategies and requirements, and optimum disposition decisions based on the RL disposition decision factors. The outcomes of RL disposition practices include (1) economic, (2) operational, (3) organisational (4) environmental and social, and (5) market-related and SC outcomes. Table 6.21 provides an overview of the findings related to the *outcomes of RL disposition practices*, including the categories, subcategories, supporting sources for the subcategories and key quotations that support both the subcategories and the discussion of the findings.

Table 6.21 Findings related to outcomes of RL disposition practices to manage consumer returns

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
Economic outcomes	***Economic benefits and performance***	None	• *"[…] energy recovery […] of used products has very good economic benefits […]."* (Yu & Solvang, 2016:12) • *"[…] reuse practices and design for RL not only improve […] financial performance substantially […]."* (Lai *et al.* 2013:113)
	Cost efficiencies and effectiveness	Lee and Lam (2012:589) Ponce-cueto *et al.* (2011:111)	• *"[…] product repair activities gain cost-effectiveness with higher commitment of resources."* (Khor & Udin, 2013:77) • *"[…] the capital expenditure […] for cost-efficient recovery."* (Khor *et al.* 2016:103) • *"As such, reuse is a more cost effective […] practice […]."* (Lai *et al.* 2013:114) • *"Repair only policies are cost effective for very high quantities of returns."* (Niknejad & Petrovic, 2014:152)
	Cost savings/ reduction	None	• *"[…] established formal disposition strategies closely tied to broader reverse logistics strategies. A detailed set of disposition rules can […] reduce its inventory, which in turn reduces inventory-carrying costs and labor [sic] costs associated with product storage."* (Partida, 2011:63) • *"[…] reuse initiatives will help […] reducing the level and cost of waste disposal."* (Sarkis *et al.* 2010:345) • *"[…] when products have no problems, […] to be sold again on the market as transport cost as well as other costs like inventory, handling or time can be saved in this situation."* (Yan *et al.* 2012:260) • *"Company should reclaim maximum value from returns as it will lead to significant cost savings […]."* (Agarwal *et al.* 2016:3) • *"[…] to save cost and improve customer satisfaction as long as the investment for improving the repair time is less than the cost savings."* (Li *et al.* 2016:234)
	Revenue and profitability	Chan *et al.* (2012:1320) Khor *et al.* (2016:104) Mukhopadhyay and Setaputra (2011:5318) Sarkis *et al.* (2010:345) Jayaraman (2006:997) Khor and Udin (2012:4, 13) Konstantaras *et al.* (2010:461) Rogers *et al.* (2012:112)	• *"[…] revenue recovery are associated with the different disposition strategies."* (Skinner *et al.* 2008:523) • *"[…] a retailer might prefer repair […] strategy, in order to minimize [sic] potential revenue losses."* (Ni *et al.* 2014:313) • *"Recaptured value is the major source of direct revenue generation from RL implementation."* (Agrawal *et al.* 2016d:24) • *"The success of product remarketing allows firms to generate new revenues that in turn finance expenditures incurred during asset recovery and promote growth."* (Khor *et al.* 2016:97) • *"The business of product recovery is not the production of new goods; instead, profits are generated by acquiring used goods and reselling them in some form."* (Hahler & Fleischmann, 2013:2) • *"[…] profitability of product disposition activities is promising when they are accompanied by well-planned strategies […]."* (Khor *et al.* 2016:97) • *"Firms should take the time to thoroughly consider each alternative's ability to generate profits."* (Hazen *et al.* 2012:259 • *"[…] each RL disposition alternative may also present a unique opportunity to realize [sic] more obscure sources of profit, such as tax breaks for environmentally-friendly activities […]."* (Hazen *et al.* 2012:258) • *"[…] secondary market can be more profitable than any of their other channels. However, because the secondary markets can be nonstandard channels, they need to be understood […]."* (Rogers *et al.* 2012:113) • *"[…] cost containment and/or revenue/profit enhancement, then destroying or recycling represent potentially viable disposition strategies."* (Skinner *et al.* 2008:534)
	Cost and value recovery	Subhashini, (2016:10) Xanthopoulos and Iakovou (2009:1705) Ye *et al.* (2013:134)	• *"[…] established formal disposition strategies closely tied to broader reverse logistics strategies. A detailed set of disposition rules can improve an organization's asset recovery […]."* (Partida, 2011:63) • *"[…] the recovery rates for items that go back into stock for resale are much higher than most other disposition options, which accounts for the higher than expected recovery rates […]."* (Stock & Mulki, 2009:51) • *"A company needs to have a well thought-out plan, complete with a network of secondary market partners, that will […] recover as much value as possible […]."* (Rogers *et al.* 2013:46) • *"A well thought through refurbishment process that enabled significant cash recovery after taking into account the costs of the reverse logistics process."* (Bernon & Cullen, 2007:50) • *"Reclaiming value from returned products. Part of cost of goods sold can be reclaimed by collection of returns and asset recovery from them."* (Janse *et al.* 2010:502) • *"The more quickly an item gets dispositioned and moved through the system, the more value it is likely can be recaptured."* (Rogers *et al.* 2013:43) • *"[…] disposition options […] all require significant resources in order to reclaim value from returns."* (Skinner *et al.* 2008:533)
Operational outcomes	***Improve operational performance***	None	• *"[…] reuse practices and design for RL […] improve operations performance […]."* (Lai *et al.* 2013:113)
	Improve RL process speed, efficiency and effectiveness	Rogers *et al.* (2012:113)	• *"The largest gains from using the full strategy […] the retailer capitalizes [sic] on the effective disposition of the returns […]."* (Reimann, 2016:51)

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
			• *"[…] by implementing disposition strategies […] With sufficient resources, processes can be put in place to provide immediate returns authorization, credit processing, and charge-back handling."* (Skinner *et al.* 2008:534) • *"A company needs to have a well thought-out plan, complete with a network of secondary market partners, that will accomplish all of the following: (1) dispose of product in a timely manner […]."* (Rogers *et al.* 2013:46) • *"[…] by implementing disposition strategies […] Sufficient resources can ensure that happens – and that everything is handled in a timely manner."* (Skinner *et al.* 2008:534)
	Reduce inventory levels	None	• *"The best-practice organizations [sic] have also established formal disposition strategies closely tied to broader reverse logistics strategies. A detailed set of disposition rules can […] reduce its inventory […]."* (Partida, 2011:63)
	Improve product return control	None	• *"[…] a recovery system is required for controlling the returned products […]."* (Eskandarpour *et al.* 2014:1394)
Organisational outcomes	***Facilitate RL implementation***	None	• *"Being aware of government regulations about environmental safety and product take back policy, every organization develops its own disposal system with the intent of maximizing [sic] profit while assuring the convenience of doing so. This area cannot be ignored if implementation of an RL system is to be successful.* (Lambert *et al.* 2011:563) • *"Higher recapturing value motivates the management for RL implementation […]."* (Agrawal *et al.* 2016d:24)
	Improve RL capabilities	None	• *"[…] investment in resources that enable reverse logistics disposition activities should develop capabilities […]."* (Khor *et al.* 2016:97)
	Improve RL performance	Agrawal *et al.* (2016b:93) Agrawal *et al.* (2016a:944)	• *"[…] investment in resources that enable reverse logistics disposition activities […] that lead to improved measures of performance."* (Khor *et al.* 2016:97) • *"[…] active resource commitment […] managers may expect superior performance by choosing destroying, recycling, refurbishing, and/or remanufacturing of product."* (Skinner *et al.* 2008:533)
	Reduce resource requirements	None	• *"[…] firm should move down the hierarchy to the next most value-producing and least resource-demanding option."* (Hazen *et al.* 2011:382)
Environmental social outcomes	***Improve environmental performance***	Mafakheri and Nasiri (2013:193)	• *"[…] a firm's environmental performance can be enhanced via adopting repair and recondition activities, yet both of these options elicit no environmental performance in the absence regulatory directives."* (Khor *et al.* 2016:103)
	Environmental protection	Hazen *et al.* (2012:258) Khor and Udin (2012:4) Mahapatra *et al.* (2013:52) Sarkis *et al.* (2010:345) Zhou *et al.* (2007:66)	• *"[…] the activities of reuse, [...] may be ranked ordinally from most to least green; when fewer resources are required by a process to return a product to market, the less impact the process has on the environment."* (Hazen *et al.* 2011:382) • *"As such, reuse is a more […] ecologically friendly practice by extending products' normal life cycles."* (Lai *et al.* 2013:114)
	Reduce waste	Sasikumar and Kannan (2008a:155) Mishra *et al.* (2012:2398)	• *"The objective of asset recovery is to recover as much of the economic and ecological value as reasonably possible, thereby reducing the ultimate quantities of waste."* (Agrawal & Choudhary, 2014:19) • *"Product recovery is an environmentally conscious approach […] aims at recovering the residual value of used products to minimize [sic] the amount of waste sent to landfills."* (Sasikumar *et al.* 2010:1224) • *"[…] energy recovery […] of used products […] significantly reduces the volume of waste […]."* (Yu & Solvang, 2016:12)
	Improve corporate image	None	• *"[…] reuse […] practice can be easily identified by the customers and link with corporate image since it keeps the original form of the product."* (Lai *et al.* 2013:114)
	Improve social performance	None	• *"[…] reuse practices and design for RL not only improve operations performance and financial performance substantially, but also enhance social performance*." (Lai *et al.* 2013:113)
	Promote job creation	None	• *"[…] recycling is manual and labor [sic] intensive, low-skilled, less developed areas of the world may benefit from job creation."* (Sarkis *et al.* 2010:345)
Market-related and SC outcomes	***Brand protection and avoid market cannibalisation***	None	• *"A company needs to have a well thought-out plan, complete with a network of secondary market partners, that will […] protect brand equity."* (Rogers *et al.* 2013:46) • *"[…] market cannibalization [sic] is a major concern. In such cases, the final product disposition would have to be routed to a distant secondary market offshore, thereby alleviating that concern."* (Rogers *et al.* 2013:43)
	Market growth and sales increase	Konstantaras *et al.* (2010:461)	• *"[…] repair […] significantly contribute to sales growth."* (Khor *et al.* 2016:104) • *"The success of product remarketing allows firms to generate new revenues that in turn finance expenditures incurred during asset recovery and promote growth."* (Khor *et al.* 2016:97)
	Improve consumer satisfaction and relationships	None	• *"[…] to […] improve customer satisfaction as long as the investment for improving the repair time is less than the cost savings."* (Li *et al.* 2016:234) • *"[…] by implementing disposition strategies […] With sufficient resources, […] Customer satisfaction is protected […] to preserve long-term relations."* (Skinner *et al.* 2008:534)
	Improve consumer service and responsiveness	None	• *"[…] if operational service or responsiveness is top priority, firms may succeed by implementing disposition strategies […]."* (Skinner *et al.* 2008:534) • *If products can be refurbished […] and sufficient resources are committed […]*

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
			positive operational responsiveness can result." (Skinner *et al.* 2008:534)
	Increase bargaining power	None	• *"When taking into account the option to refurbish and resell consumer returns, the retailer will strengthen its bargaining position with its supplier […]."* (Reimann, 2016:52)

Source: Compiled by the researcher

Table 6.21 shows that RL disposition practices associate with economic, operational, organisational, environmental, social, market-related and SC outcomes, which will be discussed in subsequent sections.

6.6.3.1 Economic outcomes of RL disposition practices

The economic outcomes of RL disposition practices involve (1) economic benefits and performance, (2) cost efficiency and effectiveness, (3) cost savings/reductions, (4) revenue and profitability, and (5) cost/value recovery.

Economic benefits and *performance* associate with developing disposition option strategies, including reuse strategies and other recovery strategies, like energy recovery, which shows the importance of implementing different strategies for each disposition option (section 6.6.1.1). Moreover, *cost efficiency* and *effectiveness* can be expected through disposition option strategies, like reuse and repair (part of recovery strategies), strategic understanding of different disposition options (e.g. volume requirements), capital expenditure (economic requirement) and committing resources (organisational requirement), demonstrating the importance of cost-benefit analysis for disposition practices (section 6.6.1.2).

Similarly, *cost savings / reductions* (such as inventory, storage, labour, transport, handling and disposal costs) can be achieved through disposition practices that involve (1) benefit-driven disposition practices (e.g. focus on reclaiming maximum value), (2) developing reuse strategies, (3) establishing disposition rules, (4) implementing a formal disposition strategy, (5) performing a cost-benefit analysis and (6) investment (economic) requirements, showing the strategic importance of effective RL disposition practices.

Revenue and *profitability* can be classified as significant economic outcomes of RL disposition practices, which like the cost efficiency and effectiveness outcome, associate with disposition strategies and economic requirements. Particularly, organisations can increase revenue and profitability through the (1) general disposition strategies of benefit-driven disposition options and decisions and developing a well-planned disposition strategy that includes product recovery (e.g. repair strategy), secondary market and asset recovery strategies, (2) strategic understanding of economic factors (e.g. profits),

disposition options, organisational factors (e.g. cost containment objective) and market-related factors (e.g. secondary markets), and (3) economic requirement of capital expenditure. Evidently, the implementation of various RL disposition practices can enhance profitability, indicating that organisations must prioritise disposition practices to improve their bottom-line.

Finally, like the above-mentioned economic outcomes, *cost/value recovery* can be realised through various RL disposition practices, including (1) general disposition strategies related to benefit-driven disposition options, establishing disposition rules, developing secondary market and product recovery strategies and establishing a formal disposition strategy, (2) strategic understanding and analysis for disposition decisions related to economic factors and assessment and ranking of disposition options, and (3) disposition requirements related to costs (economic requirement), RL process requirements (e.g. collection), efficient/speedy disposition processes (operational requirements) and RC (organisational requirement).

Essentially, several economic benefits can associate with RL disposition practices, but organisations must implement various disposition strategies and requirements, reaffirming the importance of RL disposition practices for the effective management of consumer returns.

6.6.3.2 Operational outcomes of RL disposition practices

The operational outcomes of RL disposition practices include (1) improving operational performance, (2) improving RL process speed, efficiency and effectiveness, (3) reducing inventory levels, and (4) improving product return control. Organisations can *improve operational performance* through the development of reuse strategies, which demonstrates the importance of developing distinct strategies for the different disposition options.

Additionally, through secondary market strategies, a formal disposition strategy (general strategies) and RC (organisational requirement), organisations can improve the *speed*, *efficiency* and *effectiveness* of *RL processes.* For example, implementing secondary market strategies (e.g. identifying market partners) can ensure efficient disposition, and a formal disposition strategy and resources can provide speedy feedback on return authorisation (gatekeeping) and enable speedy processing (e.g. fast refund). Evidently, despite the operational requirements of RL processes and efficient/speedy processes, specific disposition practices can improve the overall efficiency and effectiveness of RL processes, demonstrating the value of performing a cost-benefit analysis for effective disposition practices.

Associating with cost savings (such as inventory carrying costs) (see section 6.6.3.1), organisations can *reduce inventory levels* through the strategic establishment of disposition rules, strategic development

and linking of disposition strategies with RL strategies and strategic implementation of a formal disposition, demonstrating the importance of general disposition strategies (section 6.6.1.1). Finally, developing an appropriate disposition system (general disposition strategy) can improve *product return control*, which can be important for managing consumer product returns.

6.6.3.3 Organisational outcomes of RL disposition practices

The organisational outcomes of RL disposition practices include (1) facilitating RL implementation, (2) improving RL capabilities, (3) improving RL performance, and (5) reducing resource requirements.

Several RL disposition practices can *facilitate RL implementation*, including the (1) benefit-driven disposition options/decisions (e.g. focus on profits and maximum value recovery), (2) establishment of a disposition system (general disposition strategies), (3) strategic understanding of external factors (such as the environment and government regulations), (4) strategic assessment and ranking of disposition options (according to recovery value), and (5) management involvement (organisational requirement). Consequently, RL disposition practices can address RL implementation barriers, like economic barriers and risks (see section 2.3.1) and organisational barriers (such as lack of awareness of RL benefits) (see section 2.3.3), which can enhance the RLM of consumer returns.

Organisations can *improve RL capabilities* through the RC (organisational) requirement for effective RL disposition strategies. Likewise, organisations can *improve RL performance* through the investment in resources (economic requirement) and RC (organisational requirement), demonstrating the importance of RC practices in the RLM of consumer returns (see section 6.9.1).

Nevertheless, the disposition strategy of assessing and ranking disposition options (e.g. high ranking for the least resource-demanding option) can *reduce resource requirements*, emphasising the economic advantages of effective disposition strategies (see section 6.6.3.1). Essentially, RL disposition practices can help organisations to improve RLM of consumer returns through several organisational advantages.

6.6.3.4 Environmental and social outcomes of RL disposition practices

The *environmental outcomes* of RL disposition practices include (1) improving environmental performance, (2) environmental protection and (3) reducing waste. In the presence of environmental regulations (environmental requirement), organisations can *improve environmental performance* by establishing disposition option strategies (such as reuse or recovery strategies).

Additionally, organisations can *protect* the *environment* through the strategic assessment and ranking of disposition options (e.g. lower ranking for the least green option) and development of reuse strategies and practices, which emphasise the importance of reuse as the highest priority disposition option (see sections 5.6.2 and 6.6.1.2). Moreover, organisations can *reduce waste* through the general disposition strategies of adopting a strategic approach (environmentally conscious approach), benefit-driven disposition options, and developing recovery strategies, including product recovery, asset recovery and energy recovery strategies, emphasising the positive impact of effective RL disposition strategies on the environment.

In terms of *social outcomes*, RL disposition practices can improve corporate image, social performance and promote job creation. Particularly, *corporate image* and *social performance* can be *improved* through the general disposition strategy of developing reuse strategies and practices, emphasising the importance of ranking reuse as the most beneficial disposition option (see section 6.6.1.2). Additionally, disposition practices that entail recycling initiatives can facilitate *job creation,* demonstrating the importance conducting a country analysis and considering the development of a country as part of the disposition decisions strategies (see section 6.6.1.3). Essentially, RL disposition practices can provide benefits beyond the organisation, and can be regarded as sustainable practices that contribute to the environment and society.

6.6.3.5 Market-related and SC outcomes of RL disposition practices

The *market-related outcomes* of RL disposition include (1) brand protection and avoiding market cannibalisation, (2) market growth and sales increase, (3) improving consumer satisfaction and relationships, and (4) improving consumer service and responsiveness.

Particularly, organisations can ensure *brand protection* and *avoid market cannibalisation* by developing secondary marketing strategies (e.g. identify appropriate secondary markets and partners), emphasising the importance of understanding market-related factors and performing a market analysis before disposition decision-making (see section 6.6.1.2).

Associating with the economic outcomes of profitability (section 6.6.3.1), organisations can expect *market growth* and *sales increase* by developing several disposition option strategies, including a repair (recovery) strategy, secondary market strategy (e.g. remarketing practices) and asset recovery strategy (general disposition strategies), as well as financial investment in recovery (economic requirement). Evidently, the market growth and sales increase outcomes demonstrate the value of performing cost-benefit analysis for effective disposition practices (see section 6.6.1.2)

Moreover, organisations can *improve customer satisfaction* and *relationships* by implementing disposition strategies, performing cost-benefit analyses for effective disposition decisions, investing in recovery activities (such as repair) (economic requirement) and committing resources (organisational requirement), emphasising the strategic importance of understanding the economic and disposition option factors (such costs of disposition options) for effective RL disposition (see section 6.6.1.2). Similarly, organisations can *improve consumer service* and *responsiveness* by strategically preparing for disposition strategy implementation (e.g. guide by the goals of the organisations) (see section 6.6.1.1) and committing resources (organisational requirement), emphasising the important link between disposition and RC practices for the effective management of consumer returns.

Finally, the *SC outcome* relates to effective negotiations (part of SCI strategies) (see section 6.4.1), which involve bargaining power. Particularly, organisations (such as retailers) can *increase* their *bargaining power* with suppliers by developing reuse and product recovery strategies (general disposition strategies), emphasising the impact of supplier agreements on disposition decisions (see section 6.6.2.7). Consequently, RL disposition practices may facilitate SCI practices, which emphasise the importance of implementing various practices to manage consumer returns.

Essentially, RL disposition practices can result in various benefits, with the most significant involving sustainability in terms of profits and sales, RL performance, the environment and society. In the next section, RL disposition practices will be concluded with a description, conceptual framework and summary of findings for RL disposition practices to manage consumer returns.

6.6.4 Description, conceptual framework and summary of findings for RL disposition practices to manage consumer returns

Like RL in/outsourcing, RL disposition practices contain a single description, conceptual framework and summary of findings. Based on the findings presented in section 6.6, RL disposition practices can be important for the management of consumer returns, and will be described as follows:

> RL disposition practices for the management of consumer returns involve (1) general disposition strategies, including organisation-wide commitment, preparation for disposition strategy implementation, defining the disposition process, strategic approach and considerations, benefit-driven disposition strategies, developing an appropriate disposition system, establishing disposition rules and policies, developing reuse, product recovery, secondary market and other strategies and practices, developing and linking of disposition strategies and RL strategies/policies, and establishing and implementing a formal disposition strategy, (2) strategic understanding and analyses for RL disposition decisions, including the understanding of economic, disposition option, organisational, market-related and external factors, and performing cost-benefit analyses, assessment and ranking of disposition options, market analyses and other external situation, country and industry analyses, (3) RL disposition requirements, including economic requirements (investment, expenditure and costs), operational requirements (RL process requirements and a speedy/efficient disposition process), organisational requirements (management involvement, RL in/outsourcing and RC practices), and an environmental requirement (environmental regulation).

Based on the RL disposition practices, disposition decision factors for effective RL disposition decisions must be considered, including (1) economic factors (economic benefits, recovery value, recovered product price, costs and profitability), (2) operational factors (disposition complexity, disposition speed and return volume/quantity), (3) organisational factors (organisational policies and objectives, capabilities and resources), (4) product-related factors (type of product, product characteristics, product return condition and quality, product value, type of product returns, product lifecycle and product control), (5) environmental and social factors (environmental impact, benefits, policy, restrictions, regulation and CSR), (6) market-related factors (market position, size, value, proposition, conditions, competition and cannibalisation, and customer service objectives, consumer behaviour and demand, availability of buyers / saleability and supply of recoverable products), (7) SC factors (supplier agreements, manufacturer preferences, SC relationship and power, and product ownership), and (8) other external factors (government regulations, stakeholder needs, type of industry, development of a country and international factors).

The RL disposition strategies, practices and factors for effective disposition decisions, can result in several outcomes, including (1) economic outcomes (economic benefits and performance, cost efficiency and effectiveness, cost savings/reductions, revenue and profitability, and cost/value recovery), (2) operational outcomes (improve operational performance, RL process speed, efficiency and effectiveness, reduce inventory and improve product return control), (3) organisational outcomes (facilitate RL implementation, improve RL capabilities and performance, and reduce resource requirements), (4) environmental and social outcomes (improve environmental performance, environmental protection, reduce waste, improve corporate image and social performance and promote job creation), (5) market-related outcomes (brand protection, avoid market cannibalisation, market growth and sales increase, improve consumer satisfaction and relationships and increase consumer service and responsiveness), and (6) a SC outcome (increase bargaining power).

Figure 6.18 provides a conceptual framework of RL disposition practices to manage consumer returns, including the links between RL disposition decision factors, strategies, requirements and outcomes, which can result in an optimum RL disposition strategy for the effective management of consumer returns. The RL disposition practices (strategies and requirements) associated with the most disposition decision factors are emphasised with a blue dot•, and the practices that associate with the most disposition outcomes (benefits) are emphasised with a red dot•. The most significant disposition decision factors and outcomes (associated with the most RL disposition practices) are emphasised with *italics*, which will be elaborated upon in Table 6.22.The links between the RL disposition decision factors and RL disposition practices (strategies and requirements) can be demonstrated by the organisational disposition decision factor of resources, which links with the development of appropriate disposition option strategies (general strategy), strategic understanding of organisational factors (such as resources and capabilities) and RC (organisational requirement). Similarly, the disposition strategy related to the strategic understanding of disposition option factors can link with the economic, operational, organisational, product-related, environmental and market-related disposition option factors.

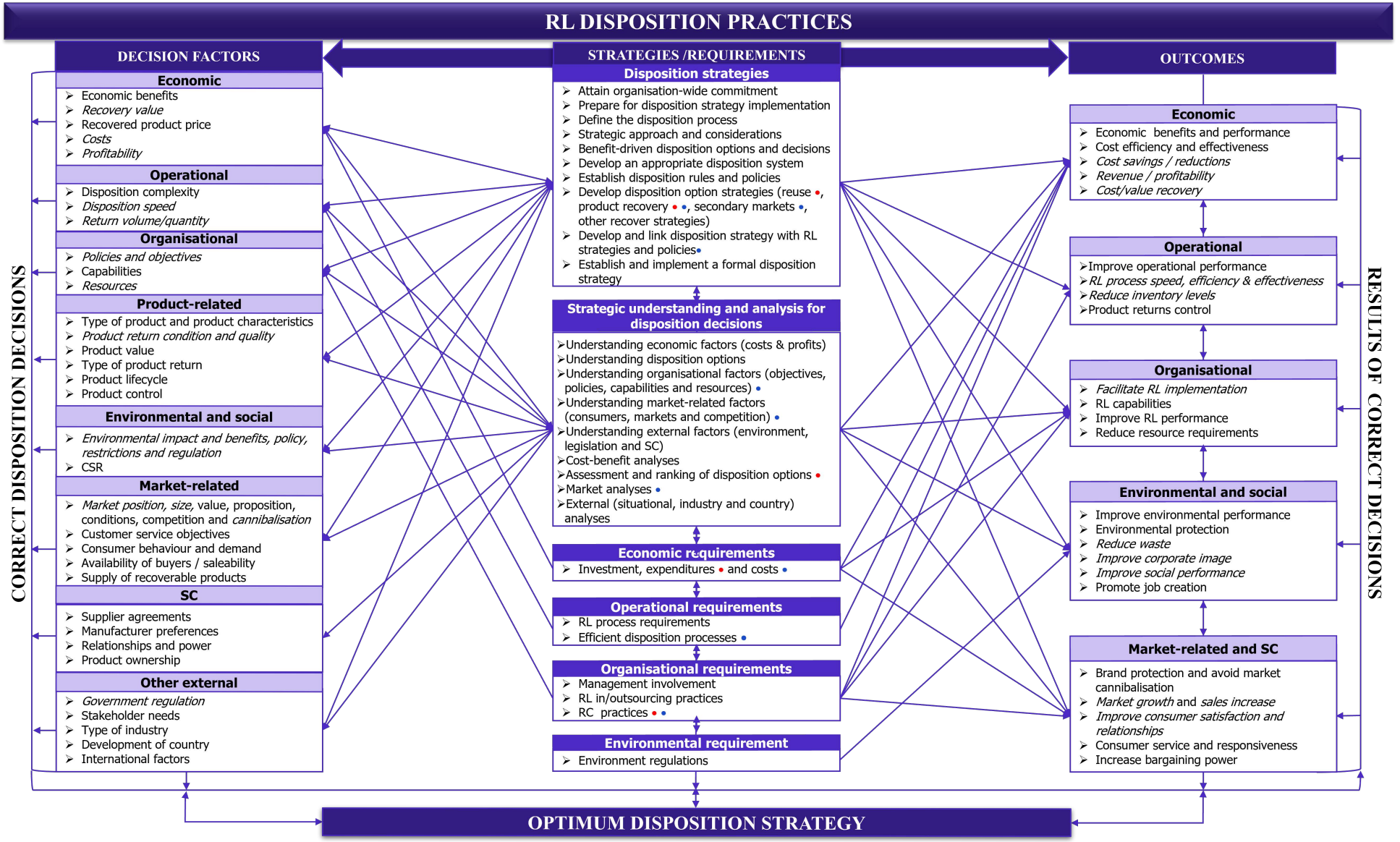


Figure 6.18 Conceptual framework of RL disposition practices to manage consumer returns
Source: Compiled by researcher

The links between the RL disposition strategies and requirements can be demonstrated by the general disposition strategies related to developing disposition options strategies, which can link with the strategic understanding of disposition options, strategic assessment and ranking of disposition options, economic requirements (e.g. investment and cost), operational requirements (e.g. RL process requirements), organisational requirements (e.g. RL in/outsourcing and RC practices), and environmental requirement of environmental regulation. The framework also shows that the RL disposition outcome categories can be linked, for example, the operational outcome of improving RL process speed and efficiency can link with cost recovery (economic), RL performance (organisational), environmental performance, and consumer service and responsiveness (market-related) outcomes. Finally, the framework shows that disposition decision factors, general disposition strategies, strategic understanding and analysis for disposition decisions and various RL disposition requirements can contribute to the implementation of an optimum disposition strategy, which can result in various benefits for the effective management of consumer returns.

Since RL disposition practices represent one concept, the summary of findings will be presented differently from the practice categories (e.g. integrations) that consist of sub-categories (e.g. SCI, CI and CFI). Evidently, the summary of findings and managerial implications will focus on the most significant strategies, requirements, disposition factors and outcomes.

Based on Figure 6.18 and the discussions given in section 6.6, Table 6.22 provides a summary of the findings and managerial implications for RL disposition practices to manage consumer returns.

Table 6.22 Summary of findings and managerial implications for RL disposition practices to manage consumer returns

CATEGORY	KEY FINDINGS	MANAGERIAL IMPLICATIONS
Strategies	•RL disposition involves general disposition strategies and strategies for disposition decision-making •General RL disposition strategies involve organisation-wide commitment, preparation for disposition strategy implementation, defining the disposition process, strategic approach and considerations, benefit-driven disposition strategies, developing an appropriate disposition system, establishing disposition rules and policies, developing reuse, product recovery, secondary market and other strategies and practices, developing and linking of disposition strategies and RL strategies/policies, and establishing and implementing a formal disposition strategy •Strategic understanding and analysis for disposition decision strategies involve understanding of the economic, disposition option, organisational, market-related and external factors, and performing cost-benefit analyses, assessment and ranking of disposition options, market analyses and other external situation, country and industry analyses •The disposition decision strategies related to the strategic understanding and analysis associate with all the disposition decision factors •General disposition decision strategies associate with all the outcomes, including economic, operational, organisational, environmental, social, market-related and SC outcomes •From the general disposition strategies, developing product recovery and secondary market strategies, and linking disposition strategies with RL strategies/policies associate with the most	•For general disposition strategies managers must attain organisation wide commitment, prepare for strategy implementation, define the disposition process, adopt a strategic approach, strategically consider disposition options and decisions, establish benefit-driven strategies, develop and establish disposition system, rules and policies, develop various disposition option strategies, link disposition strategies with RL strategies and policies and formally implement a disposition strategy •For effective disposition decisions, the decision-maker/manager must strategically understand economic, disposition option, organisational, market-related and external factors and perform various analysis, including cost-benefit analyses, assessment and ranking of disposition options, market analyses and analyses of other external situations, countries and industries •Organisations must especially focus on developing product recovery and secondary market strategies and link disposition strategies with RL strategies/policies for effective disposition decisions •Managers/decision-makers must especially focus on understanding market-related and organisational-related factors for effective disposition decisions •Managers must perform a market analysis for effective disposition decisions •Organisations that seek various economic, operational, organisational, environmental, social, market-related and SC benefits must implement general disposition strategies •Organisations must especially focus on developing reuse and product recovery strategies for effective and beneficial RL disposition

	disposition decision factors •From the disposition decision strategies related to strategic understanding, understanding market-related factors and organisational factors associate with the most disposition decision factors •From the disposition decision strategies related to strategic analysis, market analysis associates with the most disposition decision factors •From the general disposition strategies, developing reuse and product recovery strategies associate with the most disposition outcomes •From the disposition decision strategies related to strategic analysis, assessment and ranking of disposition options associate with the most disposition outcomes •The least significant disposition strategies, with no impact on decision factors and outcomes, include attain organisation-wide implementation and define disposition process	•Organisations must especially focus on assessing and ranking of disposition options for effective and beneficial RL disposition
Requirements	•RL disposition practices involve economic, operational, organisational and environmental requirements •Only the economic requirement of costs, operational requirement of an efficient/speed disposition process, and organisational requirement of resources associate with disposition decision factors •From requirements, the organisational requirement of RC and economic requirements of investment and expenditures associate with the most disposition outcomes •From the requirements, only the environmental requirement of environmental regulation associates with the environmental outcomes •The least significant requirement, with no impact on disposition decisions include the organisational requirement of RL in/outsourcing practices	•For effective disposition decisions, the manager/decision-maker must focus on cost, the disposition process and resource requirements •Organisations must focus on investment and expenditures, and resource commitment as RL disposition requirements to achieve optimum benefits •Organisations require environmental regulations for environmental benefits
Decision factors	•RL disposition involves several factors, including economic, operational, organisational, product-related, environmental and social, market-related, SC and external factors, which can influence disposition decisions •The economic, operational and organisational factors associate with the most RL disposition practice categories •The most significant RL disposition decision factors (associating with the most strategies and requirements) for effective disposition decisions include the economic factors of recovery value, costs and profitability •From the operational factors, disposition speed and return volume associate with the most RL disposition practices •From the organisational factors, organisational policies/objectives and resources associate with the most RL disposition practices •From the product-related factors, product return quality and condition associate with the most RL disposition practices •From the market-related factors, market position, size, measure and cannibalisation associate with the most RL disposition practices •From the external factors, government regulation associates the most with RL disposition practices •The environmental and SC factors equally associate with RL disposition practices •The social factor of CSR associates with no RL disposition practices •The least significant disposition decision factors, with no association to RL disposition practices, include disposition complexity, product life cycle, CSR, market value and proposition, availability of buyers, stakeholder needs and international factors	•Organisations can consider economic, operational, organisational, product-related, environmental and social, market-related, SC and external factors for disposition decision-making •Organisations must especially focus on economic, operational and organisational factors for effective disposition decisions •Organisations must especially focus on recovery value, costs and profitability factors for effective disposition decisions •For effective operational-related disposition decisions, organisations can focus on disposition speed and return volume as disposition decision factors •For effective organisational-related disposition decisions, organisations can focus on organisational policies, objectives and resources as disposition decision factors •For effective product-related disposition decisions, organisations can focus on product return quality and condition as disposition decision factors •For effective market-related disposition decisions, organisations can focus on market position, size, measure and cannibalisation as disposition decision factors •For effective external-related disposition decisions, organisations can focus on government regulation as a disposition decision factor •For effective environmental-related disposition decisions, organisations can focus on environmental impact, benefits, policies, restrictions and regulation as disposition decision factors •For effective SC-related disposition decisions, organisations can focus on supplier agreements, manufacturer preference, SC relationships, power and product ownership
Outcomes	•RL disposition practices involve economic, operational, organisational, environmental and social, market-related and SC benefits •The most significant outcomes of RL disposition practices involve economic outcomes, including cost savings, profitability and cost/value recovery, followed by organisational and market-related outcomes •The most significant economic outcome of RL disposition practices involves cost/value recovery •The most significant operational outcomes of RL disposition practices involve speedy, efficient and effective RL processes and lower inventory levels •The most significant organisational outcome of RL disposition practices involves RL implementation	•Organisations that seek economic, operational, organisational, environmental, social, market-related and SC benefits in RL can implement RL disposition practices •Organisations that experience economic, organisational and market-related challenges in RL, can consider RL disposition practices •Organisations that seek cost-savings and higher profitability in RL can consider RL disposition practices •Organisations that seek cost/value recovery in RL can implement RL disposition practices •Organisations that experience operational challenges related to inefficient/slow RL processes and high inventory levels can consider RL disposition practices •Organisations that experience RL implementation challenges can consider RL disposition practices

	• The most significant environmental outcome of RL disposition practices involves waste reduction • The most significant social outcome of RL disposition practices involves corporate image and social performance • The most significant market-related outcomes of RL disposition practices involve market growth and sales increase and consumer satisfaction and relationships • The SC outcome of bargaining power associate with a couple of RL disposition practices	• Organisations that seek to reduce waste can implement RL disposition practices • Organisations that seek to improve corporate image and social performance can consider RL disposition practices • Organisations that seek market growth and sales increase can consider RL disposition practices • Organisations that seek to improve consumer satisfaction and relationships can consider RL disposition practices • Organisations that seek to increase bargaining power in SC relationships can consider RL disposition practices • For the effective management of consumer returns, organisations can identify/implement/consider RL disposition strategies, requirements, disposition decision factors and outcomes to develop an optimum disposition strategy.

Source: Compiled by the researcher

Table 6.22 provides an in-depth understanding into the value of RL disposition practices as part of the RL practices for consumer returns. Organisations can identify specific RL disposition strategies, requirements, decision factors and outcomes to implement an optimum disposition strategy, which can contribute to the effective management of consumer returns. RL disposition practices will further be explored in the interviews with industry experts (chapter 8).

In the next section, PM practices to manage consumer returns will be explored, analysed and discussed.

6.7 PERFORMANCE MEASUREMENT (PM) PRACTICES TO MANAGE CONSUMER RETURNS

Organisational performance involves a boundary-spanning measure to analyse the outcomes of organisational strategy, which can be critical to the success of the organisation. Nevertheless, every organisational function (e.g. marketing, finance, logistics and operations) needs distinct performance measures due to different aims and interests, which, likewise, applies to RL (Khor & Udin, 2012:7). Performance measurement (PM) in RL can be defined as a process of quantifying RL efficiency and effectiveness (Dhib *et al.* 2016:372), which can enable organisations to improve overall RL performance.

Like all business functions, PM in RL can be an important practice for the successful management of consumer returns (Shaik & Abdul-Kader, 2014:102). In fact, a lack of PM in RL was identified as one of the organisational barriers to effective RLM (see section 2.3.3), which further emphasises the importance of PM as a RL practice. Despite this importance, limited literature focuses on PM strategies and systems needed to manage and improve RL performance (Bernon *et al.* 2011:499; Shaik & Abdul-Kader, 2012:23). In the QCA of RL literature, PM in RL was discussed to a moderate extent (sixth highest practice) (see Figure 6.3), confirming that more research could be conducted on measuring RL performance.

Based on the findings (identified from the QCA of RL literature) PM practices in RL involve the (1) strategies and requirements of PM, (2) measures and metrics for RL and (3) outcomes of PM practices in RL, which will be presented and discussed in subsequent sections, and concluded with a description, conceptual framework and summary of findings to manage consumer returns.

6.7.1 Strategies and requirements of PM practices in RL

The strategies and requirements of PM practices in RL involve the strategic practices, methods, and requirements, including strategies of PM, economic, IT and organisational requirements, which can contribute to effective PM in RL important to manage consumer returns. Additionally, these strategies and requirements closely relate to the PM elements for RL, which can help organisations to identify perspectives, objectives and measures needed to implement an appropriate PM framework for RL (see section 6.7.2).

Table 6.27 provides an overview of the findings related to the *strategies and requirements of PM practices in RL*, including the categories, subcategories, supporting sources for the subcategories and key quotations that support both the subcategories and the discussion of the findings.

Table 6.23 Findings related to strategies and requirements of PM practices to manage consumer returns

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
PM strategies	***Strategic approaches to PM***	Shaik and Abdul-Kader (2014:89)	• *"[…] the need to take an integrated approach to performance management for reverse logistics."* (Bernon *et al.* 2011:499) • *"[…] to achieve successful results for the implementation of product returns, companies should consider a holistic approach to performance measurement in product returns […]."* (Shaharudin *et al.* 2015:12) • *"RL also requires an appropriate PM approach. RL differs from SCM in many aspects, such as the criteria used for PM and the various uncertainties involved, […]."* (Shaik & Abdul-Kader, 2012:24)
	Strategic understanding of RL performance	None	• *"[…] to meet the RL goals […] it is necessary to understand the overall performance of the RL."* (Shaik & Abdul-Kader, 2014:89)
	Strategic considerations for PM	None	• *"There also needs to be a recognition that the nature of the performance measures used will have a significant impact on the behaviour of people involved in the management of returns."* (Bernon & Cullen, 2007:52) • *"[…] the measure customer satisfaction […] the key player that really transforms the objectives through the strategic considerations."* (Shaik & Abdul-Kader, 2012:31) • *"RL performance is most likely to be affected by other driving factors such as industry and market, customer, and product and technology."* (Shaik & Abdul-Kader, 2012:25) • *"RL performance, the strategies, processes, and capabilities, have a major impact on performance perspectives and performance measures."* (Shaik & Abdul-Kader, 2014:96) • *"[…] performance of reverse logistics depends on […] when we have complete information about the business environment which is necessary to take decisions at every level."* (Tiwari, 2013:240) • *"If managers can understand what each customer is willing to accept in terms of timeliness, then they can better plan for optimized [sic] processing times […] cycle time metrics, satisfaction/loyalty/churn metrics […]."* (Hall *et al.* 2013:776)
	Performing a cost-benefit analysis	Skinner *et al.* (2008:524)	• *"Reverse logistics managers need to strike a balance between Reverse Logistics performance and cost of providing it."* (Tiwari, 2013:240)
	Strategic establishment of teams for PM	None	• *"Performance metrics should be developed in an inclusive, team-based manner."* (Agrawal & Choudhary, 2014:17)
	Strategic use of existing and	Bernon *et al.* (2011:499)	• *"[…] performance model […] concentrated on managing supply chain practices, improving the performance of each system such as Supply Chain Operation Reference*

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
	standard PM frameworks/models and measures	Hazen *et al.* (2015:160)	*(SCOR), Quality Management Excellence Model (EFQM), BSC (Balanced Scored Card) and GSCF (Global supply chain framework).”* (Dhib *et al.* 2016:373) • *“BSC is the most used PM framework for the PM of RL. The BSC […] is the elaboration and implementation of a vision and strategy for an organization [sic] into fixed targets and a logical set of financial and non-financial performance indicators.”* (Shaik & Abdul-Kader, 2014:92) • *“The balance scorecard has been recognized [sic] as a leading tool for performance measurement in both research and industry.”* (Agrawal & Choudhary, 2014:17) • *“[…] because RL is still an emerging field within the area of supply chain management, ad hoc or forward logistics metrics […] there will be metrics applicable to both channels, such as cycle times, delivery times, and efficiency measures.”* (Hall *et al.* 2013:770)
	Strategic benchmarking	Ravi and Shankar (2006:93)	• *“[…] benchmarking of reverse logistics operations […] should be devised.”* (Ravi, 2014:300)
	Develop a strategic PM framework for RL	Efendigil *et al.* (2008:273) Li and Olorunniwo, 2008:385) Ravi and Shankar (2015:888)	• *“RL being so different from other industries warrants a different framework for PM.”* (Shaik & Abdul-Kader, 2012:26) • *“RL differs from SCM in many aspects, such as the criteria used for PM and the various uncertainties involved, therefore not allowing the usage of identical PM frameworks used for SCM.”* (Shaik & Abdul-Kader, 2012:24) • *“The development of PM framework and incorporation of performance measures represents an important step […].”* (Shaik & Abdul-Kader, 2012:23) • *“A PMS determines the overall objectives and then provides a series of performance measures in order to achieve its objectives.”* (Shaik & Abdul-Kader, 2014:88) • *“Control is expressed through having an appropriate performance measurement system.”* (Bernon *et al.* 2011:498) • *“[…] companies with developed performance measurement systems put more stress on RL […].”* (Škapa & Klapalová, 2012:686)
	Strategic identification of performance perspectives	None	• *“The enterprise’s vision, strategies, and its ability to create stakeholder value is decomposed and described in terms of a number of performance perspectives.”* (Shaik & Abdul-Kader, 2014:94) • *“RL PM […] framework made of the following six perspectives: financial, processes (internal and external), stakeholder, innovation and growth, environmental and social. Hence, the goals and objectives of the enterprise can be clustered as follows: […] Financial […] Processes (internal and external) […] Innovation and growth […] Environmental […] Social […].”* (Shaik & Abdul-Kader, 2012:26) • *“The BSC focuses on four strategic perspectives: (1) financial; (2) customer; (3) internal processes; and (4) learning and growth. All of these need to be balanced.”* (Shaik & Abdul-Kader, 2014:92)
	Strategic development of performance objectives	Chileshe *et al.* (2015:194) Genchev (2009:147) Khor *et al.* (2016:98) Prahinski and Kocabasoglu (2006:424)	• *“[…] determines the overall objectives and then provides a series of performance measures in order to achieve its objectives.”* (Shaik & Abdul-Kader, 2014:88) • *“[…] the perspectives must be fragmented into some macro-level factors called the objectives […] Performance objectives are concise statements that describe the specific things to be performed well in order to successfully implement a strategy.”* (Shaik & Abdul-Kader, 2014:94)
	Strategic identification and establishment of appropriate KPIs and metrics	Chileshe *et al.* (2015:194) Hall *et al.* (2013:769) Li and Olorunniwo, (2008:385) Nikolaou *et al.* (2013:177) Prakash and Barua (2015:600) Ravi (2014:300) Ravi and Shankar (2006:93) Rogers *et al.* (2013:46) Shaharudin *et al.* (2015:10, 12) Shaik and Abdul-Kader (2014:88)	• *“[…] the perspectives must be fragmented into some […] micro-level measures called the performance measures. […] Performance measures are the standards used to evaluate and communicate performance against expected results.”* • *“[…] two best practices regarding measurement, results, and continuous improvement: establishing targeted and visible key performance indicators (KPIs), and aiming for continuous, sustainable improvement.”* (Partida, 2011:64) • *“[…] pre-established performance indicators allows for continuous process and program improvement.”* (Genchev *et al.* 2011:256) • *Firms adopt both recommended and internally developed reverse logistics metrics […].”* (Hazen *et al.* 2015:160) • *“[…] employing […] appropriate performance metrics to be used in the measurement process.”* (Efendigil *et al.* 2008:273) • *“[…] developing and utilizing [sic] proper metrics is essential.”* (Huscroft *et al.* 2013b:315) • *“[…] successful management of reverse logistics/product returns requires the use of […] performance metrics.”* (Stock & Mulki, 2009:44) • *“[…] a large number of performance measures may be required from different RL operation perspectives.”* (Shaik & Abdul-Kader, 2012:25)
	Strategic establishment of standardised PM	None	• *“[…] performance metrics in a RL process must be standardized [sic] across the firm […].”* (Huscroft *et al.* 2013b:318)
	Strategic linking in PM	None	• *“Both the performance objectives and performance measures should always be linked to the strategic intent of the enterprise.”* (Shaik & Abdul-Kader, 2014:94) • *“To ensure the success of their reverse logistics initiatives, the best-practice organizations [sic] tie KPIs to enterprise goals.”* (Partida, 2011:64) • *“[…] performance metrics in a RL process must […] directly correspond with the firm’s RL goals.* (Huscroft *et al.* 2013b:318) • *“The key task in developing performance metrics is to ensure that what they measure*

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
			directly relates to desired outcomes." (Hall *et al.* 2013:769)
	Strategic implementation of PM	None	• *"An important issue in evaluating performance seeks […] implementation of measure performance."* (Dhib *et al.* 2016:373)
	Performance monitoring and reviews	Bernon and Cullen (2007:52, 54) Dhib *et al.* (2016:373) Skinner *et al.* (2008:524)	• *"[…] performance monitoring of these operations is required."* (Sharif *et al.* 2012:2517) • *"A review of the performance measures should be done regularly in order to adjust the objectives to the current market conditions or replace them by better ones."* (Lambert *et al.* 2011:567) • *"Unless the market has new requirements or the company has changed its strategic objectives, the program review will be more focused at the operational level."* (Lambert *et al.* 2011:567)
	Create feedback mechanisms and use performance data	Genchev *et al.* (2011:256)	• *"[…] reverse logistics solutions can be manifested in the form of employee and customer feedback or surveys, which may either be an ongoing activity or conducted on a quarterly/yearly basis. Results analysis […] is essentially a continuous feedback mechanism for the ever-changing reverse logistics situation."* (Lee & Lam, 2012:593-594) • *"Employee performance data is used to determine employee feedback […]."* (Partida, 2011:64)
	Strategic development of a reward system	None	• *"Measuring and rewarding […] initiatives can increase the predictability and manageability of products being returned."* (Janse *et al.* 2010:508) • *"Employee performance data is used to determine employee […] compensation, and incentives."* (Partida, 2011:64)
	Strategic evaluation and analyses of performance results	None	• *"The best-practice organizations [sic] use […] assessments of actual process performance […]."* (Partida, 2011:63) • *"The metrics identified above are precursors to the analysis of results. Company performance, […] is benchmarked against the quantitative yardsticks with the aid of graphs. The graphs can be plotted for savings/revenues over time […] Results analysis is an important process in a reverse logistics reform […]."* (Lee & Lam, 2012:593) • *"[…] organizations [sic] need to be able to measure and quantify how they are performing and meeting their various customer's needs."* (Huscroft *et al.* 2013b:315) • *"[…] evaluation needs to incorporate both financial and non-financial measures of performance."* (Bernon & Cullen, 2007:52)
Economic requirement	***Measure financial impact of RL***	None	• *"[…] a company needs metrics that measure the financial impact of returns on the firm and on other members of the supply chain."* (Rogers *et al.* 2013:46)
IT requirement	***Utilise RFID IT for RL***	None	• *"RFID […] also measure returns over time to ensure continual improvements […]."* (Kumar *et al.* 2009:197)
Organisational requirements	***Focus on continuous improvement in RL***	None	• *"[…] must engage in continuous improvement of their strategies, processes, and capabilities in order to meet the RL goals […]."* (Shaik & Abdul-Kader, 2014:89) • *"[…] through continuous improvement of the infrastructure via innovation and learning for the achievement of the objectives."* (Shaik & Abdul-Kader, 2012:26)
	RL goals in strategic plans	None	• *"[…] companies with sophisticated performance measurement systems include RL goals in strategic plans […] What is important is that RL goals are not only included at the corporate level, but also at the departmental level."* (Škapa & Klapalová, 2012:686)
	Commitment to RL	Škapa and Klapalová, (2012:686)	• *"[…] companies need to make more commitment to RL […] in measuring system performance […]."* (Li & Olorunniwo, 2008:385)
	Management involvement	Hall *et al.* (2013:776) Li and Olorunniwo (2008:385)	• *"Reverse logistics managers need to strike a balance between Reverse Logistics performance and cost of providing it."* (Tiwari, 2013:240) • *"Logistics and supply chain managers work to achieve the best balance between level of service provided and the […]."* (Skinner *et al.* 2008:524) • *"[…] managers can actively use information about product returns as a metric […]."* (Petersen & Kumar, 2009:49)

Source: Compiled by the researcher

Table 6.27 indicates the strategies and requirements of PM practices needed to manage consumer returns, which will be discussed in subsequent sections.

6.7.1.1 Strategies of PM practices in RL

PM practices in RL involve several strategies, including (1) strategic approaches to PM, (2) strategic understanding of PM, (3) strategic considerations for PM, (4) performing a cost-benefit analysis, (5) strategic establishment of teams for PM, (6) strategic use of existing and standard PM frameworks/models and measures, (7) strategic benchmarking, (8) developing a strategic PM

framework and system for RL that involves the strategic identification, development and establishment of performance perspectives, objectives, and appropriate key performance indicators (KPIs) and metrics, (9) strategic establishment of standardised PM, (10) strategic linking in PM, (11) strategic implementation of PM, (12) performance monitoring and reviews, (13) creating feedback mechanisms and use performance data, (14) strategic development of a reward system, and (15) strategic evaluation and analyses performance results, which organisations can use to effectively measure and manage RL performance.

The *strategic approaches* to PM in RL include integrated, holistic and RL-specific approaches, meaning that organisations must develop an integrated PM framework from a holistic perspective (covering various elements that span across functions) that specifically applies to RL. These approaches can help organisations to develop a comprehensive and appropriate PM framework to manage consumer returns. Additionally, organisations must *strategically understand* overall *RL performance* for the effective development, linking and implementation of PM in RL.

Furthermore, before developing a PM framework for RL, organisations need to *strategically consider* the potential impact of PM on parties involved in RL processes and the factors that can influence PM in RL. Consequently, organisations must consider the potential impact of the PM framework on internal staff/departments and external parties, like consumers and SC partners involved in the RL process. Additionally, organisations must consider the factors that can influence the development of a PM framework in RL, which includes (1) type of products, (2) technology, (3) characteristics of consumers and markets, (4) type of industry, and (5) organisational strategies, processes and capabilities. For example, understanding and focussing on customers can be important for developing service-related performance measures. Evidently, organisations need complete information of the business environment before an effective PM framework in RL can be developed.

Similarly, like other RL practices (such as outsourcing/insourcing and disposition practices), organisations need to *perform a cost-benefit analysis,* determining the benefits versus the cost of implementing a PM framework for RL. Such a cost-benefit analyses can be possible by identifying the strategies, requirements, elements and outcomes of PM in RL, which will be discussed in subsequent sections. Furthermore, organisations must *strategically establish teams* for *PM* before developing a PM framework for RL. Consequently, PM in RL requires *team involvement,* meaning that several departments and/or staff members must provide input into the development of performance measures for RL, emphasising the importance of a holistic approach to PM in RL.

In terms of developing a PM framework or system for RL, organisations can start with the *strategic use of existing and standard PM frameworks/models and measures.* Some key PM frameworks that can be used as a starting point for measuring RL performance, include Supply Chain Operation Reference (SCOR), Balanced Score Card (BSC), Quality Management Excellence Model (EFQM), and Global Supply Chain Framework (GSCF). Additionally, organisations can consider applying standard measures/metrics used for measuring FL and SC performance, for example, cycle time, productivity and efficiency measures, as a basis for PM in RL.

Nevertheless, due to the difference between RL and traditional FL and SC processes and practices, organisations need to identify performance measures specifically for RL. Organisations can start with *strategic benchmarking* of RL, which can help organisations to develop performance measures that match industry or business standards. For instance, identifying the standard RL performance measures used by other online retailers, can help with the strategic development of appropriate PM framework for RL. *Developing a strategic PM framework* and *system for RL* means that organisations must consider various elements of PM framework for RL, including perspectives (key strategic areas for RL PM), objectives, and measures (KPIs and metrics) needed to achieve PM outcomes.

Consequently, in developing the PM framework and system for RL, organisations need to *strategically identify performance perspectives,* relating to the visions, missions and strategies of the organisation. However, organisations can identify the perspectives by using standard PM frameworks (like BSC) as guidelines. Examples of performance perspectives can include finance, operations, innovation, stakeholders, environment and social perspectives. Establishing the PM perspectives can guide organisations in the *strategic development of performance objectives,* which can be placed in the same categories as the perspectives. For example, financial, operational, organisational, environment and social objectives. PM objectives can be regarded as strategic statements of the outcomes (e.g. to reduce RL costs and maximise operational efficiency) that organisations aim to achieve through the implementation of a PM framework in RL.

Both the PM perspectives and objectives can guide organisations in the *strategic identification* and *establishment of appropriate KPIs and metrics* for PM in RL. Although KPIs (factors to determine/monitor success) and metrics (measurement tools) can be different, this study combines KPIs and metrics as performance measures that organisations can use to measure and improve RL performance. As mentioned earlier, organisations can use established FL (forward logistics) measures as a starting point but needs to develop appropriate measures for RL, which can be important for successful RLM. Additionally, organisations need numerous measures that focus on all areas of RL (such as economics, operations, organisational, environmental, market-related, social and SC).

Moreover, organisations must *strategically establish standardised PM,* which means that the performance measures created for RL must be used as a standard across the organisation. For example, an online retailer with several warehouses across South Africa must use the same PM for RL processes and activities. The PM perspectives, objectives and measures (PM elements) as part of the PM framework for RL, will be discussed in section 6.7.2.

Another important aspect that organisations must keep in mind while developing a PM framework for RL involves *strategic linking in PM.* Organisations need to ensure that the measures (KPIs and metrics) link with the overall strategy and goals of the organisation as well as link with the desired outcomes of PM in RL. Essentially, all the PM elements of the PM framework for RL must be linked and integrated with organisational vision, mission, strategy and aims, which emphasise the importance of an integrated approach to PM in RL. Once organisations developed an appropriate PM framework for RL, the PM framework must be *strategically implemented* to evaluate RL performance.

Consequently, *performance monitoring* and *reviews* must be conducted regularly, which can be operational-level reviews or organisational- or strategic-level reviews. Operational-level reviews can focus on RL process performance that can be conducted on a short-term basis (e.g. quarterly) and strategic-level reviews can be conducted if any changes in organisational strategies or the business environment takes place. Performance monitoring and reviews can be important for adjustments to the PM framework ensuring that the PM elements (objectives and measures) remain appropriate in an ever-changing business environment.

A PM strategy must also involve the *creation of feedback mechanisms,* like employee and consumer surveys (conducted quarterly or yearly), and *use of performance data* (e.g. staff performance data), which can be important for continuous improvement of RL processes and practices. Additionally, organisations can *strategically develop a reward system* based on staff performance data, providing incentives and compensation for excellent RL performance.

Finally, organisations need to *strategically evaluate* and *analyse performance results* to determine actual RL performance, which can be done through quantitative methods of analysis (e.g. line chart showing trends over time) by means of feedback, staff performance, financial and non-financial data.

Essentially, the PM strategies can be regarded as methods and best practices for PM in RL, needed for the successful RLM of consumer returns.

6.7.1.2 Requirements of PM practices in RL

Since PM practices mainly focus on PM strategies and PM elements (sections 6.7.1.1 and 6.7.2) the requirements of PM practices are limited to economic, IT and organisational requirements.

The *economic requirement* of PM practices in RL relates to the financial impact of RL. Since RL involves economic barriers that impacts the financial performance of the organisation (see section 2.3.1), establishing measures to identify the *financial impact of RL* can be critical. Consequently, organisations must identify and incorporate various economic performance measures (discussed in section 6.7.2) to measure RL performance from a financial viewpoint.

The *IT requirement* of PM practices in RL relates to RFID as part of the IT practices in RL. Particularly, organisations can *use RFID IT* for PM in RL since RFID IT can facilitate with long-term product return measurements (also see section 6.3.4). The link between PM and RFID practices demonstrates the importance of a holistic approach to the management of consumer returns.

The *organisational requirements* of PM practices in RL, includes (1) focussing on continuous improvements, (2) RL goals in strategic plans, (3) RL commitment and (4) management involvement. Organisations must *focus on continuous improvement* in RL, including improvement in RL strategies, processes, infrastructure and capabilities, to meet the objectives set during the development of the PM framework and system for RL (see section 6.7.1.1). However, for an effective PM framework for RL, organisations must be *committed to RL* and include *RL goals/objectives* in the *strategic plans* of the organisation, emphasising the significance of the organisational barriers of a lack of RL commitment and strategic planning in RL (see section 6.7.1.1). Finally, *management involvement* can be critical for effective PM strategies in RL. Particularly, RL managers (or logistics and SC managers) must be involved in the strategic considerations for PM, the cost-benefit analysis for PM practices and the development of appropriate performance measures for RL.

In the next section, the PM elements as part of the PM framework to manage consumer returns will be analysed and discussed.

6.7.2 PM elements for RL to manage consumer returns

The PM elements for RL relates to the PM strategy of developing a PM framework that involves identifying and developing PM perspectives, objectives/goals, KPIs and metrics for RL that can be used for measuring overall RL performance (see section 6.7.1). The PM elements identified from the QCA of RL literature were categorised as follows: economic elements, operational and product return

elements, organisational and resource-related elements, environmental elements, social elements, market-related elements and SC elements. Table 6.24 provides an overview of the findings related to the *PM elements for RL* to manage consumer returns, including the categories, subcategories, supporting sources for the subcategories and key quotations that support both the subcategories and the discussion of the findings.

Table 6.24 Findings related to the PM elements for RL to manage consumer returns

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
Economic elements	***Financial perspectives and objectives***	Shaik and Abdul-Kader (2014:92, 95)	• *"The finance perspective recognizes [sic] that ultimately companies must succeed financially in nature."* (Agrawal & Choudhary, 2014:18) • *"[…] the goals and objectives of the enterprise can be clustered as […] Financial perspective concentrates on achieving financial success […]."* (Shaik & Abdul-Kader, 2012:26) • *"[…] goal is to maximize [sic] […] the economic performance."* (Tiwari, 2013:240) • *"[…] cost reduction goals were general to RL processes […]."* (Hall *et al.* 2013:775) • *"Performance objectives under consideration were […] recovery of assets, cost containment, improved profitability and reduced inventory investment."* (Prahinski & Kocabasoglu, 2006:424)
	Economic performance	Tiwari (2013:240)	• *"[…] economic performance is an important indicator of a firm's reverse logistics performance."* (Skinner *et al.* 2008:524)
	RL costs measures	Agrawal and Choudhary (2014:18) Hall *et al.* (2013:778) Nikolaou *et al.* (2013:177-178) Prakash and Barua (2015:603) Shaik and Abdul-Kader (2014:95)	• *"Performance measure […] The total cost of RL factors that are realized in the RL process by a product return."* (Shaik & Abdul-Kader, 2012:30) • *"Analyze [sic] returns and measure performance: […] Dollar value of the returns."* (Genchev *et al.* 2011:256) • *"[…] metrics are appropriate for measuring cost […] focused on the inventory value of the returned product […]."* (Hall *et al.* 2013:776) • *"Performance measures […] Costs of authorizing [sic] a product return […] Disposal costs […] Warranty costs […] Managing and planning costs […] Reception and warehousing costs of returned products […] Costs of returned products […] Verification costs of returned products […]."* (Lambert *et al.* 2011:567) • *"[…] important for measuring performance. The overall cost of the returns operations, including, transport, storage, repair, re-packaging, etc […]."* (Bernon *et al.* 2011:499)
	Network and infrastructure cost measures	Rogers *et al.* (2013:47)	• *"Total cost of the network including cost of transportation, facilities, purchasing, activities, and stock: This is the most used reverse logistics performance indicator […]."* (Daaboul *et al.* 2014:5) • *"Additional economic indicators may be […] total spent on non-core business infrastructure development associated with reverse logistics systems […]."* (Nikolaou *et al.* 2013:178) • *"Measures […] Cost of additional equipment […]."* (Agrawal & Choudhary, 2014:18)
	Operational costs measures	Stock and Mulki, (2009:45)	• *"They are cost, […] which are also the well-known performance measures of any operations."* (Chan *et al.* 2010:6297) • *"Unit operation cost (UOP) is the cost spent for one unit operation."* (Efendigil *et al.* 2008:280) • *"Per item handling cost: A cost-per-touch type of metric can be readily computed by dividing total facility costs per month by the number of items processed."* (Rogers *et al.* 2013:47) • *"[…] fulfillment cost, […] inventory and overhead cost, cash-to-cash cycle time), […] metrics are appropriate for measuring cost […]."* (Hall *et al.* 2013:776)
	Labour costs and expense measures	Agrawal and Choudhary (2014:18)	• *"[…] reverse logistics financial performance can be measured with the following direct economic indicators […] total payroll and benefits for staff in reverse logistics procedures […]."* (Nikolaou *et al.* 2013:177-178) • *"Cost per unit returned for: labor (returns processing labor, contracted labor, other) [sic], supplies, packaging, administrative […]."* (Stock & Mulki, 2009:45)
	Miscellaneous costs and expense measures	None	• *"Total cost of ownership: What is the total cost of ownership related to originally acquiring the product, reselling it, bringing it back as a return, and moving it through a secondary market or placing it in a landfill?"* (Rogers *et al.* 2013:47) • *"Research and development ratio (RD) is the ratio between the R& D expenses and total cost."* (Efendigil *et al.* 2008:280) • *"[…] reverse logistics financial performance can be measured with the following direct economic indicators […] percentage of contracts that were paid in accordance with agreed terms […]."* (Nikolaou *et al.* 2013:177-178) • *"[…] reverse logistics financial performance can be measured with the following direct economic indicators […] taxes paid […] with reverse logistics procedures […]."* (Nikolaou *et al.* 2013:177-178) • *"Environmental expenditures […] the cost of environmental activities."* (Efendigil *et al.* 2008:280) • *"[…] the most appropriate environmental core indicators for reverse logistics may be*

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
			[…] incidents of and fines for non-compliance […].” (Nikolaou *et al.* 2013:178)
	Capital, investment, budget and loans-related measures	Nikolaou *et al.* (2013:177-178) Shaik and Abdul-Kader (2014:95)	• *“Performance measure […] Total capital input […] The depreciation associated with investments aimed at improving RL efficiency.”* (Shaik & Abdul-Kader, 2012:30) • *“Performance measures […] Financial investment in RL […] Rate of return on investment […] Variations with respect to the budget […].”* (Lambert *et al.* 2011:567) • *“[…] ROI (e.g. return on working capital, return on supply chain fixed assets) metrics are appropriate for measuring cost […].”* (Hall *et al.* 2013:776) • *“The financial metrics could include those commonly used in capital budgeting decisions such as net present value (NPV).”* (Presley *et al.* 2007:4609) • *“[…] reverse logistics financial performance can be measured with the following direct economic indicators […] distributions to providers of capital broken down by interest on debt and borrowings […].”* (Nikolaou *et al.* 2013:177-178)
	Value recovery measures	Agrawal & Choudhary, (2014:18) Genchev *et al.* (2011:256) Lee and Lam (2012:593) Prakash and Barua (2015:603) Presley *et al.* (2007:4609) Shaik and Abdul-Kader (2014:95)	• *“[…] important for measuring performance […] the asset recovery levels obtained from returned products.”* (Bernon *et al.* 2011:499) • *“Performance measure […] Revenue recovered […] The monetary value recovered from the product returns operations is measured over time.”* (Shaik & Abdul-Kader, 2012:30) • *Percentage of cost recovered: Is the firm maximizing [sic] the profitability of product […].”* (Rogers *et al.* 2013:47) • *“Performance measure […] Annual sales of returned products […] Annual amount of products sold that are returned.”* (Shaik & Abdul-Kader, 2012:30) • *“[…] reverse logistics performance, consider tracking these metrics: […] Amount of product reclaimed and resold: What percentage of product that moves to the reverse logistics system is reclaimed and resold? How much value is recaptured?”* (Rogers *et al.* 2013:47) • *“[…] reverse logistics financial performance can be measured with the following direct economic indicators […] net sales of reuse, resalable, and recyclable […].”* (Nikolaou *et al.* 2013:177-178) • *“Performance Metrics […] Salvage percentage for each product class/category […] Salvage value per unit/piece […].”* (Stock & Mulki, 2009:45)
	Profit, income and cost saving measures	None	• *“Performance measures […] Net profit vs. productivity ratio […].”* (Lambert *et al.* 2011:567) • *“[…] reverse logistics financial performance can be measured with the following direct economic indicators […] increase/decrease in retained earnings at end of period […].”* (Nikolaou *et al.* 2013:177-178) • *“Quantitatively, performance can be measured […] namely: […] Cost savings in the returns process […].”* (Lee & Lam, 2012:593)
Operational and product return elements	***Operational perspectives and objectives***	Bernon *et al.* (2016:596) Shaik and Abdul-Kader (2014:92, 95)	• *“[…] Internal business perspective asks what the reverse logistics operations must achieve internally to meet and exceed the customer’s needs […] Objective […] To reduce the product recovery time and to decrease the no of items entering the RSC.”* (Agrawal & Choudhary, 2014:17) • *“[…] the goals and objectives of the enterprise can be clustered as […] Processes (internal […] perspective concentrates on […] achieving productivity and efficiency in the work flows […].”* (Shaik & Abdul-Kader, 2012:26) • *“[…] metrics specific to process efficiency, […] follows the goal of timely processing of returns.”* (Hall *et al.* 2013:776) • *“Goals for disposition were mentioned […].”* (Hall *et al.* 2013:775) • *“Efficient product return is one goal.”* (Hall *et al.* 2013:777)
	Operational efficiency measures	Efendigil *et al.* (2008:280) Sharif *et al.* (2012:2517) Tiwari (2013:240)	• *“[…] types of operational performance […] measured […] Operational responsiveness deals with promptness in the returns handling process - ease of obtaining return authorization [sic], length of time for credit processing, and handling of reconciliation of charge-back.”* (Skinner *et al.* 2008:524) • *“Operational responsiveness is concerned with the effectiveness of the processes and procedures that are required during the returns process […].”* (Skinner *et al.* 2008:527) • *“[…] speed, […] which are also the well-known performance measures of any operations.”* (Chan *et al.* 2010:6297) • *“[…] key performance indicators used to assess the effectiveness and efficiency of RL activities […] on-time ship.”* (Li & Olorunniwo, 2008:385) • *“[…] tracking the velocity of assets through the reverse chain is very important. The quicker a firm can process a return, the better the outcome for both the organization [sic] and the customer.”* (Hall *et al.* 2013:776) • *“[…] metrics specific to process efficiency, such as […] inventory turns […] follows the goal of timely processing of returns.”* (Hall *et al.* 2013:776) • *“[…] key performance indicators […] the managers cited use of […] dock-to-stock speed […].”* (Li & Olorunniwo, 2008:385) • *“[…] quality, which are also the well-known performance measures of any operations.”* (Chan *et al.* 2010:6297) • *“[…] types of operational performance […] measured […] Operational service quality measures condition and timeliness of re-work or repairs related to returns.”* (Skinner *et al.* 2008:524) • *“Performance measures […] Quality of delivery documentation […] Quality of delivered products […].”* (Lambert *et al.* 2011:567)

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
			• *"Factors identified […] the quality and completeness of the products being returned […]."* (Bernon *et al.* 2011:499-500) • *"[…] key performance indicators used to assess the effectiveness and efficiency of RL activities […] outbound shipping quality […]."* (Li & Olorunniwo, 2008:385)
	Operational accuracy and error measures	Bernon *et al.* (2016:596) Hall *et al.* (2013:775, 776)	• *"Performance measures […] Accuracy of forecasting techniques […]."* (Lambert *et al.* 2011:567) • *"[…] key performance indicators […] the managers cited use of […] inventory accuracy […]."* (Li & Olorunniwo, 2008:385) • *"Performance Metrics • Sortation accuracy (total unit errors inventories that are inaccurately sorted as compared to total locations checked) • Over/short accuracy (total items inventoried as compared to total items shipped) […] Accuracy level for each employee in terms of number of items handled, number of errors, and percentage correct decisions, Damage amounts (in units, percent of the total) by type of damage […]."* (Stock & Mulki, 2009:45) • *"Error rates for items scanned […] Error rates for incorrect […]."* (Stock & Mulki, 2009:44) • *"Performance measures […] Delivery performance […] Defect-free deliveries […]."* (Lambert *et al.* 2011:567) • *"[…] key performance indicators used to assess the effectiveness and efficiency of RL activities […] errors and customer complaints […]."* (Li & Olorunniwo, 2008:385)
	Product return and flexibility measures	Chan *et al.* (2010:6297) Petersen and Kumar (2009:49) Stock and Mulki (2009:44)	• *"[…] use information about product returns as a metric for managing customer value […]."* (Petersen & Kumar, 2009:49) • *"The following metrics were identified by the participants of the research as most important: volume of returns, type of returned product […]."* (Genchev *et al.* 2011:256) • *"Another important factor that impacts on the cost of managing returns was the concept of "no fault founds". This expression describes a returned product that, after being tested, is found to have no fault associated with it. […] Measuring the level of "no fault founds" was therefore considered important […]."* (Bernon *et al.* 2011:500) • *"Qualitative metrics can be observed, […] they are listed as follows: (1) Reduction in uncertainty, leading to better inventory management […]."* (Lee & Lam, 2012:593) • *"[…] flexibility than can take care of the variation in the type of return and hence is an important performance indicator."* (Bokade & Raut, 2013:42)
	RL cycle time and productivity measures	Genchev (2009:147) Genchev *et al.* (2011:256) Li and Olorunniwo (2008:385) Shaik and Abdul-Kader (2014:95) Sharif *et al.* (2012:2517)	• *"Performance measure […] RL cycle time […] Average cycle time a product is being returned from the customer to the time the product is put back into the market or disposed."* (Shaik & Abdul-Kader, 2012:30) • *"Total order cycle time (TOCT) is the time that elapses from the beginning to the end of the reverse process."* (Efendigil *et al.* 2008:280) • *"[…] performance can be measured […] namely: […] reverse logistics cycle such as returns lead time."* (Lee & Lam, 2012:593) • *"Performance Metrics […] Hours required to complete each stage of the returns process and hours overall (broken down by employee, product category/class, time period) […]."* (Stock & Mulki, 2009:45) • *"Performance measures […] Delivery lead time […] Time to collect a return […]."* (Lambert *et al.* 2011:567) • *"Time from receipt to crediting of customer account […] Total returns processing time […] Time from receipt to initial returns processing […]."* (Stock & Mulki, 2009:44) • *"Disposition cycle time: Cycle times can be an important measure of reverse logistics."* (Rogers *et al.* 2013:47) • *"[…] metrics as a measure of their disposition goals, but cycle time […] The most frequently cited metric, scrap rate […]."* (Hall *et al.* 2013:775) • *"Productivity Metrics […] Units processed per hour, day, month and/or week (overall, receipt, initial sort, refurbishing, return to vendor, charity/donation, destroy) […] • Units/pieces received divided by units/pieces salvaged on a daily, weekly, or year-to-date (YTD) basis • Number of pallets received versus number of pallets processed • Total number of product scans at initial processing per hour, day, week or YTD • Number of returned pieces/items still not processed after 48 hours (time will vary by company and individual standards) • Total units/pieces received versus RA units/pieces authorized [sic] • Percentage of items authorized [sic] for return but not received • Percentage of items received and authorized [sic] […]."* (Stock & Mulki, 2009:45) • *"Number of pieces/items returned to stock per day […]."* (Stock & Mulki, 2009:44) • *"To reduce the product recovery time and to decrease the no of items entering the RSC […] Measures […] Idle time of returned products […]."* (Agrawal & Choudhary, 2014:17-18)
	Disposition/recovery efficiency measures	Shaik and Abdul-Kader (2014:95)	• *"Performance measure […] Recovery efficiency […] measures the ability of an enterprise to simultaneously meet cost, quality, and environmental impacts, and conserve valuable resource."* (Shaik & Abdul-Kader, 2012:30)
	Network and facility capacity and utilisation measures	Agrawal and Choudhary (2014:18) Lambert *et al.* (2011:567) Shaik and Abdul-Kader (2014:95)	• *"Performance measure […] Network capacity […] Appropriate infrastructure […] for a cost effective and efficient RL network."* (Shaik & Abdul-Kader, 2012:30) • *"Capacity usage ratio (CUR) is the percentage of used capacity in the overall facility."* (Efendigil *et al.* 2008:280) • *"Utilization [sic] Metrics • Amount of temporary storage space utilized at end of day, week or month […] • Number of totes/containers used versus number of*

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
			totes/containers available • Receiving and/or shipping doors used versus doors available […] Units/pieces received for each inbound transportation carrier (overall, daily, weekly, monthly, YTD) […].” (Stock & Mulki, 2009:45)
	Inventory measures	None	• *“Performance measures […] Total inventory […] Number of days of inventory […].”* (Lambert *et al.* 2011:567) • *“[…] metrics […] inventory control processes, particularly to separate new, refurbished, or previously used products, are suggested.”* (Hall *et al.* 2013:775)
	Transport measures	Shaik and Abdul-Kader (2014:95)	• *“Performance measure […] Transport capacity […] Transport planning and load management of vehicles […].”* (Shaik & Abdul-Kader, 2012:30)
Organisational and resource-related PM elements	***Organisational perspectives and objectives***	Shaik and Abdul-Kader (2014:92)	• *“Strategic performance perspective […] for performance measurement […].”* (Agrawal & Choudhary, 2014:17) • *“The innovation and learning perspective asks how the reverse logistics operations can continuously perform and improve to create more value for the customers […] Objective […] To develop new RL operations and be competitive in the market.”* (Agrawal & Choudhary, 2014:18) • *“Innovation and growth perspective concentrates on bringing efficiency in the operating domain of the business of the enterprise. It is obtained through continuous improvement of the infrastructure via innovation and learning for the achievement of the objectives.”* (Shaik & Abdul-Kader, 2012:26) • *“The BSC focuses on four strategic perspectives: […] (4) learning and growth […] for a wide variety of goals, including […] return rate minimization [sic] […].”* (Hall *et al.* 2013:776)
	Organisational capability	None	• *“Enterprise capability is a measurement of the enterprise’s current and future ability to satisfy stakeholder demand […] The capabilities can include human resources, systems construction […].”* (Shaik & Abdul-Kader, 2012:28)
	IT and information flow measures	Shaik and Abdul-Kader (2014:95)	• *“Performance measure […] Information Technology capability […] The information and communication technology to meet the needs of the RL […] technology innovation capability […].”* (Shaik & Abdul-Kader, 2012:30) • *“To develop new RL operations and be competitive in the market […] Measures […] Implementation of leading technologies […].”* (Agrawal & Choudhary, 2014:17) • *“To develop new RL operations and be competitive in the market […] Measures […] Information flow […].”* (Agrawal & Choudhary, 2014:18)
	Human resources and staff-related measures	Lambert *et al.* (2011:567) Presley *et al.* (2007:4609) Shaik and Abdul-Kader (2014:95)	• *“The following metrics were identified by the participants of the research as most important: […] resource utilization [sic], including human resources, dedicated to returns.”* (Genchev *et al.* 2011:256) • *“Utilization [sic] Metrics […] Employees (regular full time, regular part time, flexible) used in returns […] versus employees available […].”* (Stock & Mulki, 2009:45) • *“[…] labour indicators regarding reverse logistics including: breakdown of workforce, […] net employment creation […]-average hours of training, […] […] composition of senior management, […] employee benefits […] programs for skills management or for lifelong learning.”* (Nikolaou *et al.* 2013:178-179) • *“Performance measure […] Management initiatives and Employee competency […] The management support and employee training and skills provided […].”* (Shaik & Abdul-Kader, 2012:30) • *“Performance measure […] Employee satisfaction […] The satisfaction level of employees.”* (Shaik & Abdul-Kader, 2012:30) • *“BSC is […] combining nonfinancial indicators such as […] employee morale […].”* (Dhib *et al.* 2016:373)
	Product life cycle and return minimisation measures	Bernon *et al.* (2016:596) Janse *et al.* (2010:508)	• *“To develop new RL operations and for continuous improvement competitive in the market […] Performance measure […] Product life cycle reviews […].”* (Shaik & Abdul-Kader, 2014:95) • *“Performance measure […] Product life cycle reviews […] To perform product life cycle review of products, assessing impacts and seeking potential savings to the RL enterprise and society.”* (Shaik & Abdul-Kader, 2012:30) • *“Minimizing [sic] returns is also a concern. The return rate is the metric by which the goal is measured. The most common goal in this theme is that of cost reduction/control.”* (Hall *et al.* 2013:777)
	Risk and safety measures	None	• *“[…] performance monitoring of these operations […] can be achieved in terms of measures that relate to […] risk management, […].”* (Sharif *et al.* 2012:2517) • *“Performance measure […] Safety […] related to operating safety of the employees, products and equipment.”* (Shaik & Abdul-Kader, 2012:30)
Environmental elements	***Environmental perspective and objectives***	Shaik and Abdul-Kader (2014:95)	• *“[…] the goals and objectives of the enterprise can be clustered as […] Environmental perspective is based upon a heightened environmental consciousness, public policy and the law. It concentrates on achieving an environmentally benign RL meeting the regulations while maintaining the efficiency […].”* (Shaik & Abdul-Kader, 2012:26) • *“[…] the environmental performance of the reverse logistics network is the main goal […].”* (Daaboul *et al.* 2014:5) • *“Performance objectives […] were environmental regulatory compliance […].”* (Prahinski & Kocabasoglu, 2006:424)
	Compliance of environmental regulation measures	Lambert *et al.* (2011:567) Shaik and Abdul-Kader (2014:95)	• *“Performance measure […] Overall environmental compliance […] The level of continuous monitoring and regulatory compliance of environment-related issues.”* (Shaik & Abdul-Kader, 2012:30) • *“[…] the most appropriate environmental core indicators for reverse logistics may be*

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
			[…] incidents of […] non-compliance […].” (Nikolaou *et al.* 2013:178)
	Environmental impact and energy consumption measures	Shaik and Abdul-Kader (2014:95)	• *“[…] the most appropriate environmental core indicators for reverse logistics may be […] direct energy use, […] indirect energy use, […] total water use, […] use of renewable energy sources, […] energy consumption footprint, […] other indirect energy use […] and reuse of water […] […] major impacts on biodiversity, [...] significant environmental impacts of products and services, […] water sources and related ecosystems impacts […] impacts of activities and operations on protected and sensitive areas, […] the significant environmental impacts of transportation used for logistical purposes.* (Nikolaou *et al.* 2013:178) • *“Some environmental performance indicators that are used in reverse logistics […] energy use per item, annual fuel consumption, tonne km by mode, overall vehicle effectiveness, amount of payload used, tonne km per sales, and road vehicle km per sales.”* (Nikolaou *et al.* 2013:178) • *“To improve customer view of RL operations […] Measures […] No of eco friendly products […].”* (Agrawal & Choudhary, 2014:17) • *“Performance measure […] Energy utilization [sic] […] The control of energy consumption for the product recovery […].”* (Shaik & Abdul-Kader, 2012:30) • *“Energy used in handling returns: This metric is used in sustainability programs. It measure how much energy (diesel fuel, electricity, etc.) is used in the reverse logistics process.”* (Rogers *et al.* 2013:47) • *“Considering the environmental performance of the reverse logistics network is the main goal […] The most used life cycle assessment (LCA) indicators are […] carbon footprint of product), energy-related indicators, chemicals used, PFC/GHG emissions, fresh water consumption, and use of renewable/nonrenewable energy.”* (Daaboul *et al.* 2014:5)
	Pollution and waste measures	None	• *“Some environmental performance indicators that are used in reverse logistics mainly focus on reducing CO2 […].”* (Nikolaou *et al.* 2013:178) • *“[…] the most appropriate environmental core indicators for reverse logistics may be […] greenhouse gas emissions, […] emissions of ozone-depleting substances, […] air emissions, […] significant discharges to water, […] significant spills of chemicals, […] indirect greenhouse gas emissions […] percentage of waste materials, […] total amount of waste, […] production and transport of any hazardous wastes […].”* (Nikolaou *et al.* 2013:178).” • *“[…] tracking these metrics: […] Waste: How much product and other materials are moved to landfills, incinerated, or disposed of as waste?”* (Rogers *et al.* 2013:47) • *“Performance measure […] Disposing capability […] ensuring safety and protecting environment to the non-reuse part of recovered product.”* (Shaik & Abdul-Kader, 2012:30) • *“Performance perspective […] Environmental […] Performance measure […] […] Disposing capacity (DPCP).”* (Shaik & Abdul-Kader, 2014:95)
	Environmental certificates and awards measures	None	• *“To develop new RL operations and be competitive in the market […] Measures […] Number of ISO 9000 and EPA certification […].”* (Agrawal & Choudhary, 2014:18) • *“[…] indicators are […] awards received relevant to […] environmental performance […].”* (Nikolaou *et al.* 2013:179)
Social PM elements	***Social perspectives and objectives***	Shaik and Abdul-Kader (2014:95)	• *“[…] the goals and objectives of the enterprise can be clustered as […] Social perspective is based on the ability to lead as a corporate citizen and to promote ethical conduct. It focuses on building good image by meeting the obligations and expectations of communities and society […].”* (Shaik & Abdul-Kader, 2012:26)
	Social performance and corporate image measures	None	• *“[…] to measure the social responsibility performance of a reverse logistics system […] social responsibility indicators will be developed […].”* (Nikolaou *et al.* 2013:177) • *“[…] reverse logistics […] can be measured with the […] donations to community, civil society, and other groups associated with reverse logistics.”* (Nikolaou *et al.* 2013:177-178) • *“Performance measure […] Corporate image […] Market reputation of the enterprise and general image among society.”* (Shaik & Abdul-Kader, 2012:30) • *“[…] indicators are […] policies to manage impacts on communities in areas affected by activities, […] awards received relevant to social, ethical, […] performance and […].”* (Nikolaou *et al.* 2013:179)
	Social policies measures	None	• *“[…] indicators are […] policies to manage impacts on communities in areas affected by activities […].”* (Nikolaou *et al.* 2013:179) • *“[…] indicators […] adjusted to reverse logistics systems are […] policies to deal with all aspects of human rights, […] policies to evaluate human rights performance within the supply chain, […] policy preventing all forms of discrimination in operations […] freedom of association policy, […] policy excluding child labor [sic], […] policy to prevent forced and compulsory labor [sic] […] employee training on practices concerning human rights, […] practical human rights issues, […] policies to address the needs of indigenous people […].”* (Nikolaou *et al.* 2013:179)
Market-related PM elements	***Market-related perspectives objectives***	Shaik and Abdul-Kader, (2014:92)	• *“The customer perspective asks what customers must believe about the company’s reverse logistics operations in order for it to be successful. […] Objective […] To improve customer view of RL operations and services and to increase customer satisfaction.”* (Agrawal & Choudhary, 2014:17) • *“Performance objectives […] were […] improved customer relations […].”* (Prahinski & Kocabasoglu, 2006:424)

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
			• *"[…] the customer theme, and customer service was the most frequently cited goal […] For instance, "making the process clear for the customer" and "reducing customer wait time" were cited as being key RL goals."* (Hall *et al.* 2013:775)
	Competitiveness and market share measures	None	• *"[…] measures of effectiveness of product returns management are […] the company's competitive advantage […]."* (Shaharudin *et al.* 2015:10) • *"Increment in market share (MSI) is the percent increment in the market share […]."* (Efendigil *et al.* 2008:280)
	Consumer satisfaction measures	Dhib *et al.* (2016:373) Hall *et al.* (2013:774, 775) Olorunniwo and Li (2010:459) Shaik and Abdul-Kader (2012:30) Shaik and Abdul-Kader (2014:95)	• *"Customer satisfaction index (CSI) is the ratio between the number of satisfied customers and total number of customers."* (Efendigil *et al.* 2008:281) • *"[…] indicators of this category may be […] policies related to customer satisfaction […]."* (Nikolaou *et al.* 2013:179) • *"[…] performance monitoring of these operations […] can be achieved in terms of measures that relate to […] customer responsiveness […]."* (Sharif *et al.* 2012:2517) • *"Another important measure directly related to customer satisfaction is how fast WCC handles exceptions to the generally accepted returns policy."* (Genchev, 2009:147) • *"[…] to increase customer satisfaction Measures […] Response time for reimbursement […]."* (Agrawal & Choudhary, 2014:17) • *"Customer loyalty, […] measures the customer's repeat purchases as a result of customer satisfaction with the original purchase and product returns management."* (Shaharudin *et al.* 2015:10)
	Consumer service-related measures	Dhib *et al.* (2016:373) Genchev (2009:147) Genchev *et al.* (2011:256) Lee and Lam (2012:593)	• *"Service quality level (SQL) is the quality level of service requested by the customer."* (Efendigil *et al.* 2008:280) • *"[…] dependability […], which are also the well-known performance measures of any operations."* (Chan *et al.* 2010:6297) • *"Performance measures […] Customer perceived level of service […] Delivery reliability […] Total time to serve a customer […]."* (Lambert *et al.* 2011:567) • *"[…] several metrics for customer service management including […] speed of resolution […] Other suggested metrics may also be beneficial, such as tracking loyalty, churn, or perception of quality and service levels."* (Hall *et al.* 2013:775)
	Consumer protection measures	None	• *"[…] indicators of this category may be […] policies for preserving customer health and safety during use of products, […] management systems related to product information and labeling [sic] […] procedures for consumer privacy, […] type of instances of non-compliance with regulations concerning customer health and safety, […] the number of complaints upheld by regulatory or similar official bodies, […] voluntary code compliance, […] the type of instances of noncompliance with regulations concerning product information, […] procedures for adherence to standards related to advertising […] types of breaches of advertising and marketing regulations."* (Nikolaou *et al.* 2013:179)
	CI (consumer integration) and transparency measures	None	• *"Integration level index (ILI) is the index level related to B2C, […], E-commerce integration technologies among customer and company."* (Efendigil *et al.* 2008:280) • *"SCOR suggests metrics in its returns process that would lead to customer satisfaction […] return authorization/policy clearly communicated […]."* (Hall *et al.* 2013:775)
SC PM elements	***SC perspectives and objectives***	None	• *"Themes […] Service from supplier […] Goals […] Quality customer service* (Hall *et al.* 2013:777) • *"Service from supplier […] firms are concerned with the level of service that they from their supplier […] Also included in service from supplier is the goal of ensuring product and/or supplier quality […] a goal of "supplier performance management" […]."* (Hall *et al.* 2013:777)
	Supplier performance measures	None	• *"[…] performance monitoring of these operations […] can be achieved in terms of measures that relate […] supplier performance […]."* (Sharif *et al.* 2012:2517) • *"[…] a goal of "supplier performance management", and used a unique metric called, "quality performance index, which takes into account product and process quality measures."* (Hall *et al.* 2013:777) • *"Service from supplier […] Metrics […] Wait time – replacement product […] Wait time – credit […] Wait time – unspecified […] Service/satisfaction […] Unserviceable products […]."* (Hall *et al.* 2013:777)
	SC relationships	Shaik and Abdul-Kader (2014:95)	• *"Performance measure […] Relationships […] Maintain long term relations and alliances among RL partners."* (Shaik & Abdul-Kader, 2012:30)

Source: Compiled by the researcher

Table 6.24 shows the PM metrics for RL, including economic elements, operational and product return elements, organisational and resource-related elements, environmental elements, social, elements, market-related elements, and SC elements, which will be discussed in subsequent sections.

6.7.2.1 Economic PM elements for RL

Since RL can involve both economic drivers and barriers (see sections 2.3.1 and 2.4.1) that influence organisations' financial performance, economic PM elements can be important for the management of consumer returns. The economic PM elements for RL involve (1) financial perspectives and objectives, (2) economic performance measures, (3) various cost measures, (4) capital, investment, budget and loan measures, (5) value recovery measures, and (6) profit, income and cost saving measures.

The *financial perspective* that organisations can use for PM in RL associate with financial success, involving several *financial objectives* that can include maximising economic performance, reducing RL costs, asset recovery, profitability and reducing investments. Reaching the financial objectives demonstrate the potential economic outcomes associated with effective PM practices in RL.

In terms of the *economic performance measures* (KPIs and metrics), organisations can use the *economic performance* of RL as an indicator to measure the success of the overall RL function. Additionally, a variety of *cost measures* can be added to the PM framework for RL, including RL, network and infrastructure, operational, labour and miscellaneous costs and expenses. *RL cost measures* involve total RL costs consisting of (1) cost of the returned product (e.g. Rand value and inventory value of returned products), (2) RL process and activity costs, including return request and gatekeeping, collection, receiving, processing, inspection, sorting, disposition costs (e.g. repair cost and warranty cost), storage and repackaging costs, and (3) RLM costs.

Closely related to RL cost measures, *network* and *infrastructure cost measures* involve total network cost, including transport, facilities and inventory costs, costs of using the organisational infrastructure for RL, including IT and equipment costs. The *operational cost measures* associate with product return handling within a warehouse and can include unit operating costs or handling costs per returned product, fulfilment costs, overhead cost and cash-to-cash handling costs. *Labour cost* and *expense* measures involve any cost related to RL staff, including total payroll, benefits, labour cost per returned product, processing staff cost, administrative staff cost, operational staff cost and contracted worker costs.

Finally, other *miscellaneous cost and expense measures* related to RL can include total cost of ownership, which measures the cost of purchasing the product from the supplier, selling the product, receiving a consumer product returns, and reselling the recovered/returned product to a second consumer. Additionally, R&D costs, percentage of contracts paid per contractual agreements (e.g. outsourcing contracts or any contract related to RL), taxes paid for RL processes, and environmental

expenditures and/or penalties related to compliance or non-compliance with environmental laws, can be additional cost and expenses used for measuring financial performance in RL.

Capital, investment, budget and loans-related measures can include (1) total capital input, (2) financial investment in RL, (3) depreciation of investments in RL, (4) return on investment (ROI) rate, including return on working capital and fixed assets, (5) net present value for capital budgeting decisions, (6) variations in RL budget, and (7) capital break-down for interest on debts and loans.

Value recovery measures relate to revenue and monitory value recovered from returned products through disposition and product recovery activities in RL. Specifically, value recovery measures can include (1) percentage of costs recovered, (2) annual sales of returned products versus annual amount of sold products returned, (3) percentage of product returns sold or recovered, (4) net sales for reused or recovered products (after disposition), and (5) recovery percentage for each product category. Lastly, *profit, income* and *cost savings measures* in RL can include net profit versus productivity ratio (operational measure) in RL, increase/decrease of retained earnings and cost savings in the RL process, which can be important to demonstrate overall RL financial performance.

6.7.2.2 Operational and product return PM elements for RL

Since RL involves various operational and product return barriers that can hamper the effective RLM of consumer returns (see section 2.3.2), measuring operational and product return performance can be important. The operational and product return PM elements for RL involve (1) operational perspective and objectives, (2) operational efficiency, (3) operational accuracy and error measures, (4) product return and flexibility measures, (5) RL cycle-time and productivity measures, (6) disposition/recovery efficiency, (7) network and facility capacity and utilisation measures, (8) inventory measures, and (9) transport measures.

The *operational perspective* that organisations can use for PM in RL associate with operational success in RL to meet/exceed consumer needs, involving several *RL operational objectives* that can include obtaining operational efficiency, reduce RL cycle time, achieving productivity in RL, effective disposition and product recovery and efficient product returns. The RL operational objectives relate to the operational performance measures (KPIs and metrics) that organisations can use to measure and improve the overall efficiency of RL processes.

Operational efficiency measures in RL involve operational responsiveness, speed and quality in the RL process. Particularly, *operational responsiveness* as a measure focus on the efficiency and effectiveness of the RL process (e.g. ease of product returns and refunds for consumers), relating to the operational

perspective of meeting consumer needs. Likewise, *speed* can be used as an operational efficiency measure, which can include metrics like on-time-ship (or one-time-collection), tracking the velocity of returned products, inventory turns and dock-to-stock speed (e.g. speed from return receipt to return to stock).

Operational quality measures involve service quality (e.g. condition and timeliness of product repairs), quality of delivered products (which can affect return rates), quality of returned products and outbound shipping quality (e.g. quality of recovered product returned to consumer or market). The operational efficiency measures associate with customer satisfaction and service-related measures, which will be explored in section 6.7.2.5

Operational accuracy and *error measures* in RL involve the accuracy of and errors in the RL processes, which include (1) forecast technique accuracy, (2) inventory accuracy, (3) sorting accuracy (e.g. accurateness versus errors in sorting returned products for disposition), (4) accuracy level of staff handling returns (e.g. number of errors or percentage of correct decisions), (5) delivery performance (e.g. defect-free delivery), (6) returned product damages (e.g. damages during transportation and handling of returned products), and (7) consumer complaints in the RL process.

Product return and *flexibility measures* associate with consumer product returns and product return uncertainty. Specifically, *product return measures* can include usage of product return information (provided by consumer during a return request), type of product returns (or reasons for product returns), measuring number of false failure returns (see section 4.3), number of product returns received (product return volume), and reducing product return uncertainty. Similarly, RL *flexibility* measures the organisation's capability to deal with the uncertainty of product returns, which can include uncertainties in return time, condition, quality and volume (operational barriers).

Relating to operational efficiency and accuracy measures, *RL cycle time* and *productivity measures* associate with the average and total lead time from a customer return request to redistribution and reselling on secondary/primary markets, time spent in individual RL processes and time spent in handling returned products by RL staff. Various metrics can be used for measuring RL cycle time and productivity, including (1) total hours spent to complete each RL processes, (such as gatekeeping, collection, receiving, return processing, inspection/sorting and disposition/recovery cycle time), (2) number of returned products authorised but not received, (3) number of products/pallets received versus number of products/pallets processed, (4) total products received versus products authorised, (5) returned products handled by staff per hour, (6) returned product processed per hour, day, week or month (total RL cycle time per individual product), (7) number of returned products left unprocessed

after the set processing cycle time (e.g. after 48 hours), (8) idle time of returned products, (9) number of products returned to stock per day (for direct reuse disposition), and (10) recovery rate per product.

Like RL cycle time, *disposition/recovery efficiency measures* can associate with operational efficiency in RL but specifically focus on the effectiveness and efficiency of the disposition process, relating to the value recovery measures (economic measure) (see section 6.7.2.1). *Network and facility capacity utilisation measures* in RL relates to the facility and location practices in RL (see section 6.8), involving network capacity (usage of infrastructure for RL), facility capacity usage ratio (percentage used capacity for RL in the entire facility) and facility utilisation metrics, including the amount of storage space utilised (per day, week and month), number of containers used versus the number available (e.g. returned product sorting bins) and receiving or shipping doors/docks used versus the number available.

Inventory measures associate with managing returned inventory in the facility, which can include total returned product inventory, the number of days of returned products in inventory and inventory control. *Transport measures* associate with returned product transportation or recovered product redistribution and can include transport capacity (e.g. number of returned/recovered products in the vehicle and unused space in the vehicle), transport planning and load management of vehicles.

6.7.2.3 Organisational and resource-related PM elements for RL

Like the economic and operational elements, the PM of organisational and resource-related elements can be important in RL due to the organisational barriers (such as lack of attention, strategic planning and training) in RL (see section 2.3.3). Organisational and resource-related PM elements for RL involve (1) organisational perspectives and objectives, (2) organisational capability measure, (3) IT and information flow measures, (4) human resources and staff-related measures, (5) product life cycle and return minimisation measures, and (6) risk and safety measures.

The *organisational perspectives* of PM in RL can include a strategic perspective and an innovation and learning perspective, which associate with several *organisational objectives*, including developing new (or improved) RL processes, continuous improvement initiatives, creating more value through innovation and learning, and reducing returns (through return avoidance initiatives). *Organisational capability* can be an important strategic measure for RL, involving the capability of the organisation to meet the needs of RL parties (internal and external) through effective use of resources in RL. Similarly, *IT and information flow measures* involve IT capability (using IT effectively for RL), technology

innovation capability, implementation of state-of-the-art technologies, and information flow, associating with the organisational objectives of innovation and developing/improving RL processes.

Various *human resource* and *staff-related measures* can be used for PM in RL, including (1) human resource utilisation and employment level (e.g. employees used in RL versus employees available), (2) breakdown of employees (e.g. composition of senior managers and other staff involved in RL), (3) management initiatives, (4) staff competence, (5) staff training and skills, (6) staff benefits, (7) employee satisfaction and (8) employee morale.

Product life cycle and *return minimisation measures* involve reviewing a product throughout its life cycle and measuring the return rate of a product (frequency of return), which can help organisations with identifying the recoverability of the product and reduce the overall return rate of the product. For example, reviewing a retail branded product with a high return rate and a lower recovery rate, may motivate a retailer to improve the product (through innovation) to reduce the return rate and/or improve the recovery rate. Essentially, product life cycle and return minimisation measures relate to the objectives of developing new RL processes, innovation and minimisation of returns. Finally, *risk* and *safety measures* for RL can include measures related to risk management (e.g. number of risks identified in RL and number of risks that occurred) and safety (e.g. employee, product and equipment safety).

6.7.2.4 Environmental PM elements for RL

Since society and consumers pay more attention to environmental practices (see section 2.3.1), measuring environmental performance can be important for retailers. The environmental PM elements for RL involve (1) environmental perspectives and objectives, (2) compliance with environmental regulation measures, (3) environmental impact and energy consumption measures, (4) pollution and waste measures, and (5) environmental certificates and award measures.

The *environmental perspective* that organisations can use for PM in RL involves environmental consciousness and laws, associating with *environmental objectives,* which can include environmentally friendly practices, increase in environmental performance and compliance with environmental regulations. Consequently, environmental measures involve *compliance of environmental regulation,* which include the level of environmental compliance and incidence of non-compliance.

Additionally, *environmental impact* and *energy consumption measures* involve (1) the impact of RL processes, products (e.g. eco-friendliness of the product through life cycle assessments), services and transportation on the environment, and (2) energy utilisation and consumption, including direct energy

(e.g. annual fuel consumption and electricity used in the RL process), indirect energy (e.g. total water consumption and water reuse) and control of energy consumption in the RL process.

Although closely related to environmental impact and energy consumption, *pollution* and *waste* measures in RL focus on measuring pollution and the amount of waste that may harm the environment and the capability of the organisation to reduce waste. Specific measures associated with pollution and waste includes greenhouse emissions, ozone-depleting emissions, air emissions, chemical spills and water pollution, indirect greenhouse gases, transport of hazardous waste, percentage of waste materials, amount of waste disposal (landfill and incineration), and disposing capability and capacity.

Finally, *environmental certificates* and *award* measures in RL associate with the environmental performance of the organisation, which include number of environmental certifications (e.g. ISO 14001 in South Africa) and any awards received for environmental excellence.

6.7.2.5 Social PM elements for RL

Like the environmental PM elements, social elements (e.g. corporate citizenship) form part of the RL drivers, which motivate the need to measure social performance (see section 2.3.1). The social PM elements for RL include social perspective, objectives and measures, including social performance, corporate image and social policies.

The *social perspective* and *objectives* that organisations can use for PM in RL associate with the ability to lead as a corporate citizen, promote ethical practices, building a good corporate image and meeting the expectations of the society. Associating with the social perspective and objectives, *social performance* and *corporate image* measures for RL include social responsibility performance, awards received for social and ethical practice, donations to the community and other groups (RL disposition option), market reputation and corporate image in the society.

Finally, *social policy* measures for RL involves policies that manage the impact of RL on the society and policies related to human rights, including human right performance, prevention of discrimination, affirmative action (e.g. Black Economic Empowerment (BEE) in South Africa), prevention of forced and child labour, and staff training on human rights.

6.7.2.6 Market-related PM elements for RL

The market-related PM elements, including perspective, objectives and consumer satisfaction, consumer service-related, consumer protection, CI (consumer integration) and transparency measures,

cannot only be important due to consumer pressures and competitive factors that drive effective RLM (see section 2.3.1) but also due to the importance of consumer satisfaction and service in dealing with consumer returns.

The *market-related perspective* for PM in RL involves a consumer perspective, focussing on the market-related *objectives* of improving consumers' view of RL processes, consumer satisfaction, customer service, improving consumer relationship and transparency. However, based on *competitiveness* and *market share measures,* including competitive advantage and market share increment (percentage of market share), organisations may increase their competitive advantage and market share as market-related objectives.

Nevertheless, several market-related measures directly associate with the consumer perspective and consumer-focussed objectives. For instance, *consumer satisfaction measures,* which can include consumer satisfaction index, consumer satisfaction policies, consumer responsiveness (e.g. responsiveness to exceptions outside the return policy and consumer response time), and consumer loyalty (determined through repeat purchases), associate with the consumer satisfaction objectives.

Although closely related to operational efficiency measures (section 6.7.2.2), *consumer service-related measures* focus mainly on consumer perception and can include service quality level (e.g. service expected by consumers), dependability, delivery reliability, and time to serve, which can be determined through consumer surveys (PM strategy of feedback mechanisms) (see section 6.7.1.1).

Associating with the well-being of consumers, *consumer protection measures* for RL can include product health and safety policies, consumer privacy practices, consumer complaints to regulatory bodies, (non-)compliance of consumer protection legislation, (non-)compliance of product information requirements, and (non-)compliance of advertising and marketing regulations.

Finally, related to the objectives of maintaining relationships with consumers and communication, *CI* and *transparency measures* can include (1) integration level index (such as the level of ecommerce IT used to integrate with consumers) and (2) clear communication of return policies and procedures to consumers. These measures emphasise the importance of CI as a RL practice to manage consumer returns (see section 6.4.2).

6.7.2.7 SC PM elements for RL

Although PM for RL mostly focusses on the internal performance of organisations, the SC barriers can be problematic for effective RLM (see section 2.3.4), making SC PM elements important. The SC PM

elements for RL involves SC perspective, objectives and supplier performance and relationship measures. Specifically, the *SC perspective* involves supplier service and performance, focussing on the *SC objectives* of receiving quality service and products from suppliers and supplier performance management.

Relating to perspective and objectives, *supplier performance measures*, like quality performance index and supplier services in terms of consumer returns (e.g. wait times for warranty replacements, repairs and refunds/credits), can be important since it can influence RL performance of the organisation. Likewise, measuring *SC relationships* (e.g. partnerships and alliances) can be important due to the significance of SCI as a RL practice for effective RLM (see section 6.4.1).

Essentially, the variety of PM elements, including PM perspectives, objectives and measures for RL, demonstrate the importance of careful strategic planning and development of a PM framework for RL to manage RL performance of consumer returns. This importance will be further emphasised in the next section, which focusses on the outcomes of PM in RL.

6.7.3 Outcomes of PM practices in RL

The outcomes of PM practices involve the benefits and performance outcomes associated with the effective implementation of PM strategies, requirements and elements, which can be important to effectively manage consumer returns. The outcomes of PM practices in RL included (1) economic, (2) operational, (3) organisational (4) environmental, (5) social, (6) market-related, and (7) SC outcomes. Table 6.25 provides an overview of the findings related to the *outcomes of PM practices* to manage consumer returns, including the categories, subcategories, supporting sources for the subcategories and key quotations that support both the subcategories and the discussion of the findings.

Table 6.25 Findings related to outcomes of PM practices to manage consumer returns

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
Economic outcomes	***Measure, control and manage costs***	None	• *"Direct cost […] and ROI […] are appropriate for measuring cost […] inbound organizations [sic] focused on the inventory value of the returned product or cost of the return."* (Hall *et al.* 2013:776) • *"Results analysis is an important process in a reverse logistics reform, as it is essentially a continuous feedback mechanism for the ever-changing reverse logistics situation. Proper results analysis at adequate time intervals enables: […] Control the costs […]."* (Lee & Lam, 2012:594) • *"In the financial perspective, RL costs are found to be the most preferred […] For any successful RL enterprise, the control of total RL costs incurred is important […]."* (Shaik & Abdul-Kader, 2012:31) • *"Another important factor that impacts on the cost of managing returns […] Measuring the level of "no fault founds" was therefore considered important […]."* (Bernon *et al.* 2011:500)
	Measure financial performance	Genchev (2009:147) Shaik and Abdul-Kader (2012:30)	• *"[…] reverse logistics financial performance can be measured with the following direct economic indicators […] net sales of reuse, resalable, and recyclable […] costs of used and returned materials, […] percentage of contracts that were paid in accordance with agreed terms, […] total payroll and benefits for staff in reverse logistics procedures […] distributions to providers of capital broken down by interest on debt and borrowings, […] increase/decrease in retained earnings at end of period […] taxes paid […] with reverse*

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
			logistics procedures, […] subsidies associated with reverse logistics […] donations to community, civil society, and other groups associated with reverse logistics." (Nikolaou *et al.* 2013:177-178)
	Increase economic performance and financial success	Tiwari (2013:240)	• *"An important issue in evaluating performance seeks to improve economic factors with implementation of measure performance."* (Dhib *et al.* 2016:373) • *"Logistics and supply chain managers work to achieve the best balance between level of service provided and the cost to provide the service. The intent is to maximize [sic]economic performance. Therefore, an evaluation of economic performance is an important indicator […]."* (Skinner *et al.* 2008:524) • *"[…] Achieving financial success […] Performance measure […] Total RL costs […] Total capital input […] Annual sales of returned products […] Revenue recovered […]."* (Shaik & Abdul-Kader, 2012:30)
	Maximise value recovery	None	• *"To […] capture maximum value […] Performance measure: Total RL costs (TRLC) Total capital input (TCPI) Annual sales of returned products (ASRP) Revenue recovered (RVRD)."* (Shaik & Abdul-Kader, 2014:95) • *"To […] capture maximum value […] Measures […] 1. Annual sales of returned product 2. Cost of additional equipment and labor [sic] 3. Cost of transportation of returned products […]."* (Agrawal & Choudhary, 2014:18)
	Cost effectiveness and efficiency	None	• *"[…] metrics can facilitate cost effectiveness for outbound reverse logistics […]."* (Hazen *et al.* 2015:167) • *"Performance measure […] Network capacity […] Appropriate infrastructure [..]should be chosen for a cost effective […] RL network."* (Shaik & Abdul-Kader, 2012:30) • *"[…] performance outcomes […] include cost effectiveness […]."* (Chileshe *et al.* 2015:194)
	Costs savings/ reduction	None	• *"Enterprises need to measure their logistics performance to […] reduce their operation cost […]."* (Agrawal & Choudhary, 2014:15) • *"Financial perspective concentrates on achieving financial success […] by reducing costs and expenditures […]."* (Shaik & Abdul-Kader, 2012:26) • *"To reduce the overall cost of the RL operations […] Measures […] 1. Annual sales of returned product 2. Cost of additional equipment and labor [sic] 3. Cost of transportation of returned products […]."* (Agrawal & Choudhary, 2014:18) • *"To reduce the overall cost of the RL operations […] Performance measure: Total RL costs (TRLC) Total capital input (TCPI) Annual sales of returned products (ASRP) Revenue recovered (RVRD)."* (Shaik & Abdul-Kader, 2014:95) • *"Return cycle time was listed as a metric by participants for […] cost reduction […]."* (Hall *et al.* 2013:776) • *"Performance measure […] Product life cycle reviews […] To perform product life cycle review of products, […] seeking potential savings to the RL enterprise […]."* (Shaik & Abdul-Kader, 2012:30)
	Increase revenue/ profits	None	• *"Enterprises need to measure their logistics performance to improve their revenue growth […]."* (Agrawal & Choudhary, 2014:15) • *"Financial perspective concentrates on achieving financial success […] increase revenue."* (Shaik & Abdul-Kader, 2012:26)
Operational outcomes	***Measure and monitor operational performance***	None	• *"[…] types of operational performance […] measured – operational responsiveness and operational service quality."* (Skinner *et al.* 2008:524) • *"[…] performance monitoring of these operations […] can be achieved in terms of measures that relate to a combination of indirect factors (e.g. customer satisfaction, flexibility, information […] flow, risk management, and supplier performance) and direct factors (e.g. costs, benefits, customer responsiveness, and productivity)."* (Sharif *et al.* 2012:2517)
	Address operational barriers and risk in RL	None	• *"Measuring and rewarding avoidance initiatives can increase the predictability and manageability of products being returned."* (Janse *et al.* 2010:508) • *"[…] flexibility than can take care of the variation in the type of return and hence is an important performance indicator."* (Bokade & Raut, 2013:42) • *"Operational responsiveness is the ability of the business process to respond to changing conditions, which results in greater efficiency and reduction of the risk."* (Tiwari, 2013:240)
	Determine RL process efficiency and effectiveness	None	• *"[…] key performance indicators used to assess the effectiveness and efficiency of RL activities, the managers cited use of on-time ship, dock-to-stock speed, inventory accuracy, and outbound shipping quality […] errors and customer complaints […] and productivity […]."* (Li & Olorunniwo, 2008:385) • *"Cost metrics, cycle time metrics, satisfaction/loyalty/churn metrics, etc. all reflect in some way on whether an organization is achieving process efficiency or effectiveness."* (Hall *et al.* 2013:776)
	Increase operational efficiency and effectiveness	Shaik and Abdul-Kader (2014:95)	• *"Operational responsiveness is the ability of the business process to respond to changing conditions, which results in greater efficiency […]."* (Tiwari, 2013:240) *op metric* • *"[…] achieving effectiveness and efficiency in the work […] Performance measure […] RL cycle time […] Network capacity […] Transport capacity […] Recovery efficiency rate […]."* (Shaik & Abdul-Kader, 2012:30) • *"[…] performance outcomes […] include operating level effectiveness."* (Chileshe *et al.* 2015:194)
	Improve RL processes	None	• *"The feedback loop between returns operations and pre-established performance indicators allows for continuous process […] improvement."* (Genchev *et al.* 2011:256) • *"Results analysis is an important process in a reverse logistics reform, as it is essentially a continuous feedback mechanism for the ever-changing reverse logistics situation. Proper results analysis at adequate time intervals enables: […] Identify the processes or tasks that*

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
			are not value added for the reverse logistics operation […].” (Lee & Lam, 2012:594)
	Reduce RL cycle times	None	• *“A key aspect for retailers was […] the speed at which returned products were processed back in to a saleable position. A number of them were measuring their performance with the intention of shortening the time taken.”* (Bernon *et al.* 2016:596) • *“To reduce the product recovery time […] Measures […] 1. Disposition time 2. Idle time of returned products 3. Capacity utilization [sic] […].”* (Agrawal & Choudhary, 2014:17-18)
	Improve return transport management	None	• *“Performance measure […] Transport capacity […] Transport planning and load management of vehicles to minimize [sic] […] damage to product returns and at maximizing [sic] vehicle utilization [sic].”* (Shaik & Abdul-Kader, 2012:30)
	Improve inventory management	None	• *“Qualitative metrics can be observed, […] they are listed as follows: (1) Reduction in uncertainty, leading to better inventory management […].”* (Lee & Lam, 2012:593)
Organisational outcomes	***Determine organisational performance, competence and success***	None	• *“[…] metrics must be properly aligned with goals if they are to add value to the firm and accurately assess performance […].”* (Hall *et al.* 2013:770) • *“BSC is permitted to analyzed [sic] strategy, organization and logistic competence by combining nonfinancial indicators such as service quality, employee morale and customer satisfaction.”* (Dhib *et al.* 2016:373) • *“[…] metrics can be observed, that may exert a bearing on the overall performance of a company after the new reverse logistics solutions are implemented, and they are listed as follows: (1) Reduction in uncertainty […] (2) Better customer service […].”* (Lee & Lam, 2012:593) • *“Each performance outcome can help firms to […] evaluate success […].”* (Khor *et al.* 2016:98)
	Facilitate planning, decision-making and control	None	• *“[…] companies with developed performance measurement systems put more stress on RL in their strategic planning.”* (Škapa & Klapalová, 2012:687) • *“Each performance outcome can help firms to set objectives […] and determine future courses of action […].”* (Khor *et al.* 2016:98) • *“Control is expressed through having an appropriate performance measurement system.”* (Bernon *et al.* 2011:498) • *“[…] the goals and objectives of the enterprise can be clustered […] and encourages the decision and policy makers to concentrate on accomplishing the objectives […].”* (Shaik & Abdul-Kader, 2012:26) • *“[…] performance of reverse logistics depends on […] when we have complete information about the business environment which is necessary to take decisions at every level.”* (Tiwari, 2013:240)
	Facilitate RL implementation and innovation	Ravi and Shankar (2006:93)	• *“[…] in order to achieve successful results for the implementation of product returns, companies should consider a holistic approach to performance measurement in product returns with a variety of the indicators […].”* (Shaharudin *et al.* 2015:12) • *“Benchmarking and performance metrics in reverse logistics operations could provide the company an opportunity to identify the gaps while implementing reverse logistics programs.”* (Ravi, 2014:301) • *“[…] benefits of implementing RL should be supported by clear metrics.”* (Chileshe *et al.* 2015:194) • *“Performance perspective […] Innovation […] To develop new RL operations […] measure […] Management initiatives and employee competency (MIEC) Information Technology capability (ITCP) Process technology innovation capability (PTIC) Product life cycle reviews (PLCR).”* (Shaik & Abdul-Kader, 2014:95) • *“To develop new RL operations […] Measures […] Number of ISO 9000 and EPA certification […] Implementation of leading technologies […] Information flow […].”* (Agrawal & Choudhary, 2014:18)
	Performance management	None	• *“The performance measurement […] system is a key element in enabling the process of performance management […].”* (Ravi & Shankar, 2015:888)
	Enables a comprehensive overview of RL performance	None	• *“The development of PM framework and incorporation of performance measures represents an important step in adopting an integrated and comprehensive approach to RL performance.”* (Shaik & Abdul-Kader, 2012:23) • *“To have comprehensive overall PM with system’s view, a large number of performance measures may be required from different RL operation perspectives.”* (Shaik & Abdul-Kader, 2012:25)
	Measure and determine RLM performance and capabilities	None	• *“Logistics and supply chain managers work to achieve the best balance between level of service provided and the cost to provide the service. […] an evaluation of economic performance is an important indicator of a firm’s reverse logistics performance.”* (Skinner *et al.* 2008:524) • *“Appropriate performance metrics system should be needed to measure, […] RL practices […].”* (Prakash & Barua, 2015:600) • *“[…] identification of the right indicator to measure the effectiveness of product returns management is important.”* (Shaharudin *et al.* 2015:12) • *“Two key cost drivers were identified as important for measuring performance. The overall cost of the returns operations, […] and the asset recovery levels obtained from returned products.”* (Bernon *et al.* 2011:499) • *In analyzing [sic] […] reverse logistics performance, consider tracking these metrics: Disposition cycle time […] Amount of product reclaimed and resold […] Percentage of […] Waste.”* (Rogers *et al.* 2013:47)

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
			• *"Strategic performance perspective […] for performance measurement […]."* (Agrawal & Choudhary, 2014:17) • *"[…] measures of effectiveness of product returns management are […] customer satisfaction […] and the company's competitive advantage."* (Shaharudin *et al.* 2015:10) • *"[…] the economic performance can be an effective measure of firm's reverse logistics capabilities."* (Tiwari, 2013:240)
	Monitor RL progress and performance	None	• *"Firms adopt both recommended and internally developed reverse logistics metrics in order to monitor the performance of these processes […]."* (Hazen *et al.* 2015:160) • *"Importance of Metrics To monitor progress against its reverse logistics plan […]."* (Rogers *et al.* 2013:46) • *"Results analysis is an important process in a reverse logistics reform, as it is essentially a continuous feedback mechanism for the ever-changing reverse logistics situation. Proper results analysis at adequate time intervals enables: (1) Effective monitoring about the efficiency of the solution implementation […]."* (Lee & Lam, 2012:594)
	Enables modification and adjustments	None	• *"A review of the performance measures should be done regularly in order to adjust the objectives to the current market conditions or replace them by better ones."* (Lambert *et al.* 2011:567) • *"Results analysis is an important process in a reverse logistics reform, as it is essentially a continuous feedback mechanism for the ever-changing reverse logistics situation. Proper results analysis at adequate time intervals enables: […] Appropriate adjustments and modifications to be made whenever there is a change in business landscape, and/or in response to external/internal feedback."* (Lee & Lam, 2012:594)
	Enables growth and goal attainment	None	• *"Benchmarking of reverse logistics operations and developing appropriate performance metrics in reverse logistics operations are import actions needed for growth."* (Ravi & Shankar, 2006:93) • *"[…] it is recognized [sic] that establishing metrics […] foster goal attainment […]."* (Hazen *et al.* 2015:167) • *"[…] must engage in continuous improvement of their strategies, processes, and capabilities […] to meet the RL goals […]. Hence, it is necessary to understand the overall performance of the RL."* (Shaik & Abdul-Kader, 2014:89) • *"[…] through continuous improvement of the infrastructure via innovation and learning for the achievement of the objectives."* (Shaik & Abdul-Kader, 2012:26)
	Improve RL performance, efficiency and effectiveness	None	• *"The performance measurement […] system is a key element in enabling the process of […] performance improvement […]."* (Ravi & Shankar, 2015:888*)* • *"[…] it is recognized [sic] that establishing metrics […] drive performance."* (Hazen *et al.* 2015:167) • *"[…] concentrates on meeting the demands and requirements of stakeholders […] Due to the uncertainty and variability of product returns, the processes help […] enhancing the RL performance."* (Shaik & Abdul-Kader, 2012:26) • *"RFID […] also measure returns over time to ensure continual improvements […]."* (Kumar *et al.* 2009:197) • *"Performance perspective […] Growth […] for continuous improvement competitive in the market […] measure […] Management initiatives and employee competency (MIEC) Information Technology capability (ITCP) Process technology innovation capability (PTIC) Product life cycle reviews (PLCR)."* (Shaik & Abdul-Kader, 2014:95) • *"Performance measure […] Management initiatives and Employee competency […] The management support and employee training and skills provided to improve the effectiveness and efficiency of the RL."* (Shaik & Abdul-Kader, 2012:30) • *"Performance measure […] Total capital input […] The depreciation associated with investments aimed at improving RL efficiency."* (Shaik & Abdul-Kader, 2012:30)
	Improve and facilitate RLM	Shaik and Abdul-Kader (2014:102) Prakash and Barua (2015:600)	• *"[…] companies should consider a holistic approach to performance measurement in product returns with a variety of the indicators for the overall effectiveness of product returns management."* (Shaharudin *et al.* 2015:12) • *"[…] successful management of reverse logistics/product returns requires the use of […] performance metrics.* (Stock & Mulki, 2009:44) • *"The feedback loop between returns operations and pre-established performance indicators allows for continuous […] program improvement."* (Genchev *et al.* 2011:256) • *"To ensure the success of their reverse logistics initiatives, the best-practice organizations [sic] tie KPIs to enterprise goals."* (Partida, 2011:64) • *"To support product return programmes, companies need to evaluate their performance."* (Bernon & Cullen, 2007:54)
	Facilitate CFI	None	• *"Appropriate metrics can help to shape communication and coordination across functions. For instance, reverse logistics metrics might help to […] inform marketing professionals with regard to supplier selection and retention."* (Hazen *et al.* 2015:160)
	Facilitate facility/location practices	None	• *"The best-practice organizations [sic] use […] assessments of actual process performance to design their reverse logistics networks."* (Partida, 2011:63) • *"Performance measure […] Network capacity […] Appropriate infrastructure and allocation of resources should be chosen for […] efficient RL network."* (Shaik & Abdul-Kader, 2012:30) • *"Per item handling cost: A cost-per-touch type of metric can be readily computed by dividing total facility costs per month by the number of items processed. This is also a valuable way to compare the efficiencies of different facilities."* (Rogers *et al.* 2013:47)
	Facilitate	None	• *"[…] establishment of metrics as a means by which organizations [sic] can […] formalize*

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
	formalisation (SPP) in RL		*[sic] their reverse logistics processes."* (Hazen *et al.* 2015:163)
	Facilitate RPA practices	None	• *"To […] decrease the no of items entering the RSC […] Measures […] 1. Disposition time 2. Idle time of returned products 3. Capacity utilization [sic] […]."* (Agrawal & Choudhary, 2014:17-18) • *"Minimizing [sic] returns is also a concern. The return rate is the metric by which the goal is measured."* (Hall *et al.* 2013:777)
Environmental outcomes	***Determine environmental performance***	Daaboul *et al.* (2014:5)	• *"[…] identify […] environmental performance […] Some environmental performance indicators that are used in reverse logistics mainly focus on reducing CO2: energy use per item, annual fuel consumption […] percentage of waste […] incidents of and fines for non-compliance."* (Nikolaou *et al.* 2013:178)
	Monitor environmental compliance	Shaik and Abdul-Kader (2014:95)	• *"The overall environmental compliance of RL is critical to continuous monitoring and regulatory compliance of environment-related issues."* (Shaik & Abdul-Kader, 2012:32)
	Meet environmental targets	None	• *"[…] must engage in continuous improvement of their strategies, processes, and capabilities […] to meet the RL goals of fulfilling […] environmental targets […]. Hence, it is necessary to understand the overall performance of the RL."* (Shaik & Abdul-Kader, 2014:89)
	Environmental protection	Nikolaou *et al.* (2013:178)	• *"Performance measure […] Disposing capability […] ensuring safety and protecting environment to the non-reuse part of recovered product."* (Shaik & Abdul-Kader, 2012:30) • *"[…] tracking these metrics: […] Waste: How much product and other materials are moved to landfills, incinerated […] to minimize [sic] product in the waste streams."* (Rogers *et al.* 2013:47)
Social outcomes	***Measure social performance***	None	• *"[…] to measure the social responsibility performance of a reverse logistics system […] social responsibility indicators will be developed […]."* (Nikolaou *et al.* 2013:177)
	Meet society needs	None	• *"Social perspective is based on the ability to lead […] by meeting the obligations and expectations of communities and society."* (Shaik & Abdul-Kader, 2012:26)
	Improve corporate image	None	• *"Social perspective is based on the ability to lead as a corporate citizen […] building good image […]."* (Shaik & Abdul-Kader, 2012:26) • *"To improve customer view of RL operations and services […] Measures 1. Customer satisfaction Index 2. No of eco friendly products 3. Response time for reimbursement […]."* (Agrawal & Choudhary, 2014:17) • *"[…] customer service was the most frequently cited goal […] is seen as a top priority to maintaining an organization's [sic] customer base and presenting a positive firm image."* (Hall *et al.* 2013:775)
Market-related outcomes	***Increase market value and competitiveness***	None	• *"The social perspective, corporate image […] leads to an increase in market value […]."* (Shaik & Abdul-Kader, 2012:32) • *"To […] be competitive in the market […] Measures […] Number of ISO 9000 and EPA certification […] Implementation of leading technologies […] Information flow […]."* (Agrawal & Choudhary, 2014:18)
	Understand consumer behaviour	None	• *"The performance of reverse logistics […] Operational responsiveness is basically the agility of reverse logistics. Agility happens when we are in a position to analyse the customer behaviour patterns […]."* (Tiwari, 2013:240)
	Meet consumer demand/ needs	Shaik and Abdul-Kader (2014:95) Genchev (2009:147)	• *"[…] organizations [sic] […] need to be able to measure and quantify how they are performing […] meeting their various customer's needs. Setting service goals and developing and utilizing proper metrics is essential."* (Huscroft *et al.* 2013b:315) • *"Performance measure […] Customer satisfaction […] Meeting the demands of the customers."* (Shaik & Abdul-Kader, 2012:30)
	Increase consumer satisfaction	None	• *"SCOR suggests metrics in its returns process that would lead to customer satisfaction and reduced wait times, such as return order cycle time, return authorization/policy clearly communicated, […]."* (Hall *et al.* 2013:775) • *"[…] to increase customer satisfaction […] Measures 1. Customer satisfaction Index 2. No of eco friendly products 3. Response time for reimbursement […]."* (Agrawal & Choudhary, 2014:17)
SC outcomes	***Monitor and manage SC performance***	None	• *"Firms adopt both recommended and internally developed reverse logistics metrics in order to monitor the performance […] along the entire value chain, and especially amongst both buyer and supplier marketing interactions."* (Hazen *et al.* 2015:160) • *"[…] a goal of "supplier performance management", and used a unique metric called, "quality performance index, which takes into account product and process quality measures."* (Hall *et al.* 2013:777)
	Facilitate SCM	None	• *"[…] performance model […] concentrated on managing supply chain practices, improving the performance of each system such as Supply Chain Operation Reference (SCOR), Quality Management Excellence Model (EFQM), BSC (Balanced Scored Card) and GSCF (Global supply chain framework)."* (Dhib *et al.* 2016:373)
	Increase SC efficiency	None	• *"Performance measure […] Process technology innovation capability […] Automating physical, information and financial flows foster a seamless reverse chain. Use of technology streamlines processes and procedures across chain partners of the RL enterprise […]."* (Shaik & Abdul-Kader, 2012:30)
	Facilitate SCI	None	• *"Performance measure […] Information Technology capability […] The information and communication technology to meet the needs of the RL such as share product return data, financial data and performance with RL partners."* (Shaik & Abdul-Kader, 2012:30) • *"Performance measure […] Relationships […] Maintain long term relations and alliances among RL partners."* (Shaik & Abdul-Kader, 2012:30)

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
			• *"The social perspective, corporate image […] followed by relationships […] This leads to […] building the relationships with RL network partners."* (Shaik & Abdul-Kader, 2012:32)

Source: Compiled by the researcher

Table 6.25 shows that the PM strategies, requirements and elements (sections 6.7.1 and 6.7.2) in RL involves (1) economic, (2) operational, (3) organisational (4) environmental, (5) social, (6) market-related, and (7) SC outcomes, which will be discussed in subsequent sections.

6.7.3.1 Economic outcomes of PM practices in RL

The economic outcomes of PM practices in RL include (1) measuring, controlling and managing costs, (2) measuring financial performance, (3) increasing economic performance and financial success, (4) maximising value recovery, (5) cost efficiency and effectiveness, (4) cost savings/reductions, and (5) revenue and profitability.

In terms of *measuring*, *controlling* and *managing costs*, organisations can (1) measure RL costs through the economic measures (KPIs and metrics) of RL cost, ROI (investment measure) and value recovery (e.g. value of returned product), (2) control RL costs through PM strategies, including creating feedback mechanisms and analysing performance, and economic PM elements, including a financial perspective and RL cost measures, and (3) manage RL costs through product return measures related to the type of consumer returns. Additionally, organisations can measure their *financial performance* in RL through various economic measures, including total RL cost, labour cost, contract cost, tax, capital and loans, and the social performance measure of donations to communities, to obtain a better understanding on the overall economic efficiency of RL.

Several PM practices in RL can *increase economic performance* and *lead to financial success*, including the (1) PM strategies of a cost-benefit analysis, the implementation of a PM framework and the evaluation of performance results, (2) organisational requirement of management involvement and, (3) economic measures of economic performance, RL cost, capital, value recovery and profit. Similarly, the economic measures of RL cost (such as transport cost), capital, value recovery and profit can help with *maximising value recovery.*

PM practices in RL can lead to several cost advantages that associate with cost efficiency and effectiveness and cost savings/reduction. Particularly, *cost efficiency* and *effectiveness* can be obtained through outcomes related to identifying appropriate metrics (PM strategy) and network capacity and utilisation metrics (operational measures).

Additionally, *cost savings/reduction* in RL can be realised through several PM elements, including the economic elements related to a financial perspective and economic measures (such as economic performance, RL cost, capital, value recovery and profit measures), the operational measure of RL cycle time and the organisational measure of a product life cycle review. Finally, focussing on PM practices in RL can help to *increase revenue/profits* of organisations, especially through the economic PM element of a financial perspective that focus on obtaining financial success in RL.

6.7.3.2 Operational outcomes of PM practices in RL

The operational outcomes of PM practices in RL include (1) measuring and monitoring operational performance, (2) addressing operational barriers and risk determining, (3) RL process efficiency and effectiveness, (4) increasing operational efficiency and effectiveness, (5) improving RL processes, (6) reducing RL cycle time, (7) improving return transport management, and (8) improving inventory management.

Measuring and *monitoring operational performance* can be achieved through various measures (KPIs and metrics), including operational responsiveness, operational service quality and flexibility (operational measures), costs (economic measures), information flow measures and risk management (organisational measures), consumer satisfaction (market-related measure) and supplier performance (SC measure). Furthermore, organisations can *address operational barriers* (e.g. uncertainties in the quantity and timing of returns) and *risks* in RL (see section 2.3.2), through the strategic development of a reward system (PM strategy) and measuring operational responsiveness, flexibility (operational measures) and return rate (organisational measure).

Additionally, *RL process efficiency* and *effectiveness* can be determined through the establishment of appropriate KPIs (PM strategy), management involvement (organisational requirement) and several measures, including cost measures, operational measures (such as speed, quality, accuracy, RL cycle time and productivity), and consumer satisfaction measures. More importantly, organisations can *increase* their *operational efficiency* and *effectiveness* through establishing operational measures, including operational responsiveness, RL cycle time, network capacity and transport capacity.

RL processes can be *improved* through the PM strategies of developing appropriate KPIs for RL, creating feedback mechanisms and analysing RL performance, which shows the importance of PM practices for managing consumer returns. Additionally, *RL cycle time* can be *reduced* through identifying appropriate objectives (part of developing a PM framework for RL) (see section 6.7.1.1), and through establishing the operational measures of operational speed, disposition cycle time and idle

time (part of RL cycle time and productivity measures) (see section 6.7.2.2), and facility capacity utilisation.

Organisations can *improve return transportation management* (e.g. better vehicle utilisation and less in-transit damages), which can be achieved by establishing measures of transport capacity and utilisation (operational measures). Finally, *inventory management* can be *improved* through the product return measure, reduction in uncertainty (see section 6.7.2.2), emphasising the important role of PM practices in RL to reduce operational risks and barriers in RL.

6.7.3.3 Organisational outcomes of PM practices in RL

PM practices in RL involves numerous organisational outcomes, which include (1) determining organisational performance, competence and success, (2) facilitating planning, decision-making and control, (3) facilitating RL implementation and innovation, (5) facilitating performance management, (6) enabling a comprehensive approach to RL performance, (7) measuring and determining RLM performance and capabilities, (8) monitoring RL progress and performance, (9) enabling modifications and adjustments, (10) enabling growth and goal attainment, (11) improving RL performance, efficiency and effectiveness, (12) improving and facilitating RLM, (13) facilitating CFI, (14) facilitating facility/location practices, (15) facilitating RL formalisation (strategic planning and procedure (SPP) practices), and (16) facilitating RPA practices.

PM in RL can help organisations to determine overall *organisational performance, competence* and *success*, which can be obtained through the PM strategies of using existing PM frameworks (e.g. BSC or SCOR) (see section 6.7.1.1) for RL and strategic linking of PM elements (such as aligning objectives with metrics), and through several PM measures, including product return measures (part of operational measures), human resource measures related to staff morale (organisational measure), and customer satisfaction and service measures (market-related measures).

PM in RL can be important for RL *planning, decision-making* and *control*, which can be important to address the organisational barrier of a lack of strategic planning in RL (see section 2.3.3). Specifically, developing a PM framework for RL, identifying appropriate PM objectives and considering factors that can impact PM in RL (such as business environment) can help organisations to (1) add RL to their strategic plans, (2) determine future course of action, (3) guide decision-makers to focus on objectives, (4) facilitate decision-making and (5) increase control. Essentially, the strategic development of a PM framework and system for RL can help organisations with the entire *performance management* process in RL.

Subsequently, PM in RL can *facilitate RL implementation* and *innovation*, especially, through the PM strategies related to a holistic approach to PM in RL (strategic approach), RL benchmarking and identifying appropriate KPIs and metrics. Additionally, RL innovation can be facilitated through PM elements, including the organisational perspective and objective related to innovation and development of new RL processes, the organisational measures related to IT (e.g. state-of-the-art IT and IT innovation) and information flow, human resources (e.g. management initiatives and staff competence) and product life cycle reviews, and the environmental measure related to environmental certificates.

While a holistic approach to PM in RL can be an important part of a PM strategy, organisations can obtain a *comprehensive overview* of their *RL performance* through developing a PM framework for RL that includes numerous performance metrics (PM strategies). Furthermore, organisations can *measure* and *determine RLM performance* and *capabilities* through (1) PM strategies, including a cost-benefit analysis, identification of appropriate measures and performance evaluation, (2) management involvement (organisational requirement), and (3) PM elements in RL, including economic measures (cost, value recovery and economic performance), an operational measure (RL cycle time), a strategic (organisational) perspective, an environmental measure (waste measure), and market-related measures (competitiveness and consumer satisfaction).

PM strategies in RL can contribute to several performance-related outcomes, including *monitoring RL progress* and *performance* by using existing FL metrics, developing and identifying appropriate RL metrics, creating feedback mechanism and analysing performance data. Moreover, the PM strategies of regular performance reviews, creating feedback mechanisms and analysing performance data *enables modifications* and *adjustments* to RL processes and practices to fit business environment changes. Additionally, the PM practices related to strategic understanding of PM, strategic RL benchmarking, developing appropriate metrics for RL (PM strategies) and focussing on continuous improvement in RL (organisational requirement) *enables growth* and *goal attainment*, emphasising the organisational perspective of innovation (organisational PM element) (see section 6.7.2.3).

Subsequently, the PM strategies, including a holistic approach, the development of large quantities of KPIs and metrics for RL, the strategic linking of KPIs to organisational objectives, the creation of performance feedback mechanisms and a performance evaluation in RL, can *improve* and *facilitate RLM*. Furthermore, *improvement in RL performance, efficiency* and *effectiveness* can be realised through strategic considerations in PM (e.g. considering the impact of PM on RL parties), utilising RFID for PM (IT requirement) and developing a PM framework that consists of identifying perspectives and measures for RL, including (1) economic measures related to capital and investment,

(2) organisational perspective of growth/innovation, and (3) organisational measures related to IT, human resources and product life cycles.

The final few outcomes of PM in RL associate with other RL practices discussed in this chapter, including CFI (section 6.4.3), facility/location practices (section 6.8), RPA practices (section 6.9.3) and RL formalisation (see section 6.9.4). Specifically, identifying and developing appropriate metrics for RL can *facilitate CFI* by encouraging communication between different departments. Furthermore, PM practices, including strategic evaluation and analysis of performance, economic measures (related to costs) and network capacity measures (operational), can *facilitate facility/location practices,* like RL network design, network capacity and infrastructure, and facility management.

Similarly, PM in RL can *facilitate RPA* practices by preventing unnecessary product returns to enter the SC. Particularly, organisations can use operational measures related to RL cycle time and productivity (e.g. idle time and disposition time) and facility capacity, and the organisational measure of return rate to prevent unnecessary product returns. Finally, establishing appropriate RL metrics can *facilitate formalisation* in RL, which forms part of the strategic planning and procedure (SPP) practices in RL. Essentially, PM practices in RL can be important for various other RL practices, which can be critical for the effective management of consumer returns.

6.7.3.4 Environmental outcomes of PM practices in RL

The environmental outcomes of PM practices in RL include (1) determining environmental performance, (2) monitoring environmental compliance, (3) meeting environmental targets, and (4) environmental protection.

Certain environmental measures, including energy use per product, annual fuel consumption, waste percentage and incidences of non-compliance with environmental laws, can help organisations to *determine* their *environmental performance*. Similarly, environmental measures related to environmental compliance of RL, enables continuous *monitoring of environmental compliance,* preventing possible non-compliance fines.

Additionally, the PM practices related to strategic understanding of RL performance (PM strategy) and focussing on continuous improvement in RL (organisational requirement) can help organisations to *meet environmental targets.* Finally, environmental measures related to pollution and waste, including disposing capability and amount of waste sent to landfills or incineration plants, can help with *environmental protection,* emphasising the significance of environmental drivers in RL (see section 2.3.1.3).

6.7.3.5 Social outcomes of PM practices in RL

The social outcomes of PM in RL include (1) measuring social performance, (2) meeting society needs and (3) improving corporate image. To *measure social performance* organisations can identify several social measures, which may include corporate image, social policies, donations and social or ethical awards (see section 6.7.2.5). Additionally, developing a social perspective as part of PM elements in a PM framework for RL, can facilitate in *meeting* the *needs* of *society*, emphasising the importance of considering stakeholder needs before implementing a PM framework for RL (see section 6.7.1.1).

Similarly, *corporate image* can be *improved* not only through a social perspective (social PM element) but also through a consumer perspective and objective (market-related PM elements), operational measures (e.g. operational responsiveness and accuracy) and an environmental measure (e.g. environmental impact of RL). Evidently, various PM elements can apply to various outcome categories, showing the importance of developing a comprehensive RL framework and system for PM in RL (see section 6.7.1.1).

6.7.3.6 Market-related outcomes of PM practices in RL

The market-related outcomes of PM practices in RL include (1) increasing market value and competitiveness, (2) understanding consumer behaviour, (3) meeting consumer demands/needs, and (4) increasing consumer satisfaction. Specifically, *market value* and *competitiveness* can be increased through a social perspective and corporate image measures (social PM elements), organisational measures related to IT (e.g. state-of-the-art IT) and information flow, and an environmental measure related to the number of environmental certificates.

Understanding consumer behaviour can be possible through the operational responsiveness measure (operational PM element), emphasising the importance of creating feedback mechanisms, like consumer surveys, to accurately analyse RL performance (PM strategies) (section 6.7.1.1). Additionally, *meeting consumer demands/needs* can be possible through the PM strategies of identifying metrics and evaluating performance, and market-related PM elements of setting market-related objectives (e.g. customer service objectives) and customer satisfaction measures.

Consequently, PM in RL can help to *increase consumer satisfaction* by using standard (traditional) performance frameworks (such as SCOR) and identifying appropriate metrics for RL (PM strategies), measuring responsiveness and RL cycle time (operational measures), measuring environmental impact (e.g. number of eco-friendly products offered), and measuring consumer satisfaction and CI (e.g. transparency about return policies) (market-related measures). Therefore, PM strategies and various

PM elements can help organisations to increase consumer satisfaction through understanding consumers and meeting consumer needs, which can be essential to manage consumer returns.

6.7.3.7 SC outcomes of PM practices in RL

The SC outcomes of PM practices in RL include (1) monitoring and managing SC performance, (2) facilitating SCM, (3) increasing SC efficiency, and (4) facilitating SCI. *Monitoring and managing SC performance* can be possible through the PM strategies of using standard FL metrics and developing appropriate metrics for RL, and the SC PM elements related to supplier performance management (objective and measure) (see section 6.7.2.7). Furthermore, utilising standard PM frameworks (such as SCOR and BSC) for RL can *facilitate SCM*, which can help address SC barriers in RL (such as a lack of collaboration and SC support) (see section 2.3.4).

To *increase SC efficiency* in RL, organisations can focus on organisational PM elements of an innovation perspective and IT-related measures (such as technology innovation). Similarly, an innovation perspective and IT-related measures (such as IT capability), a social perspective and measures (such as corporate image) and a SC relationship measure can play important roles in *facilitating SCI,* which emphasise the importance of implementing various RL practices to manage consumer returns.

Essentially, PM practices in RL can facilitate measuring, monitoring, adjusting and improving RL performance and bring several benefits, which can be important for the effective management of consumer returns. In the next section, PM practices in RL will be concluded with a description, conceptual framework and summary of findings for PM practices to manage consumer returns.

6.7.4 Description, conceptual framework and summary of findings for PM practices to manage consumer returns

Like RL in/outsourcing and disposition practices, PM practices in RL contain a single description, conceptual framework and summary of findings. Based on the findings presented in section 6.7, PM practices in RL can be important for the management of consumer returns, and will be described as follows:

> PM practices for the management of consumer returns involve (1) PM strategies, including strategic approaches to PM, understanding PM, strategic considerations for PM, a cost-benefit analysis, establish teams for PM, strategic use of existing and standard PM frameworks/models and measures, strategic benchmarking, developing a strategic PM framework and system for RL through strategic identification, development and establishment of performance perspectives, objectives, and appropriate KPIs and metrics, establish standardised measures, strategic linking in PM, implementation of PM, performance monitoring and reviews, creating feedback mechanisms and using performance data, developing a reward system, and evaluating and analysing performance results, (2) PM requirements, including an economic requirement (measuring the financial impact of RL), IT requirement (utilise

RFID) and organisational requirements (focus on continuous improvement in RL, RL objectives in strategic plans, RL commitment and management involvement).

As part of the strategic development of a PM framework for RL, PM practices in RL consist of various PM elements, including (1) economic elements (financial perspectives, objectives, and economic performance, cost, capital, investment, budget and loan, value recovery profit, income and cost saving measures), (2) operational and product return elements (operational perspective, objectives, and operational efficiency, accuracy and error, product return and flexibility, RL cycle-time, productivity, disposition/recovery efficiency, network and facility capacity and utilisation, inventory, and transport measures), (3) organisational and resource elements (organisational perspectives, objectives, and organisational capability, IT and information flow, human resources and staff, product life cycle, return minimisation, risk and safety measures), (4) environmental elements (environmental perspectives, objectives, and environmental regulation compliance, environmental impact, energy consumption, pollution, waste, environmental certificates and award measures), (5) social elements (social perspective, objectives and social performance, corporate image and social policy measures), (6) market-related elements (market-related perspective, objectives and consumer satisfaction, service-related, protection, and CI and transparency measures), and (7) SC elements (SC perspective, objectives and supplier performance and relationship measures).

The PM strategies, requirements and elements in RL can result in several outcomes, including (1) economic outcomes (measure, control and manage costs, measure financial performance, increase economic performance and financial success, maximise value recovery, cost efficiency, effectiveness, and savings/reductions, and revenue/profitability), (2) operational outcomes (measure and monitor operational performance, address operational barriers and risks, determine RL process efficiency and effectiveness, increase operational efficiency and effectiveness, improve RL processes, reduce RL cycle time, and improve return transport and inventory management), (3) organisational outcomes (determine organisational performance, competence and success, facilitate with planning, decision-making, control, RL implementation, innovation and performance management, enable a comprehensive approach to RL performance, measure and determine RLM performance and capabilities, monitor RL progress and performance, enable modifications, adjustments, growth and goal attainment, improve RL performance, efficiency and effectiveness, improve and facilitate RLM, and facilitate CFI, facility/location, RPA and formalisation practices), (4) environmental outcomes (determine environmental performance, monitor environmental compliance, meet environmental targets, and environmental protection), (5) social outcomes (measure social performance, meet society needs and improve corporate image), (6) market-related outcomes (increase market value and competitiveness, understand consumer behaviour, meet consumer demands/needs and increase consumer satisfaction), and (7) SC outcomes (monitor and manage SC performance, facilitate SCM and SCI, and increase SC efficiency).

Figure 6.19 provides a conceptual framework of PM practices to manage consumer returns, which includes the PM strategies and requirements, outcomes and elements. Specifically, the framework illustrates the links between PM strategies and requirements, outcomes and elements, which can result in effective PM to manage consumer returns. The most significant PM practices (strategies and requirements), elements and outcomes are emphasised through italics, which will be elaborated upon in Table 6.26. The links between the PM strategies and requirements can be demonstrated by the PM strategy of developing a PM framework for RL, which can link with economic requirements (e.g. measuring financial impact on RL), IT requirements (e.g. utilise RFID for PM) and organisational requirements (e.g. continuous improvement and management involvement). Nevertheless, the PM strategies and requirements can be important for developing an appropriate PM framework for RL, linking with the PM elements that constitutes the PM framework for RL. However, the PM elements also link back to the PM strategies, which involves PM implementation, monitoring, reviews and analysis.

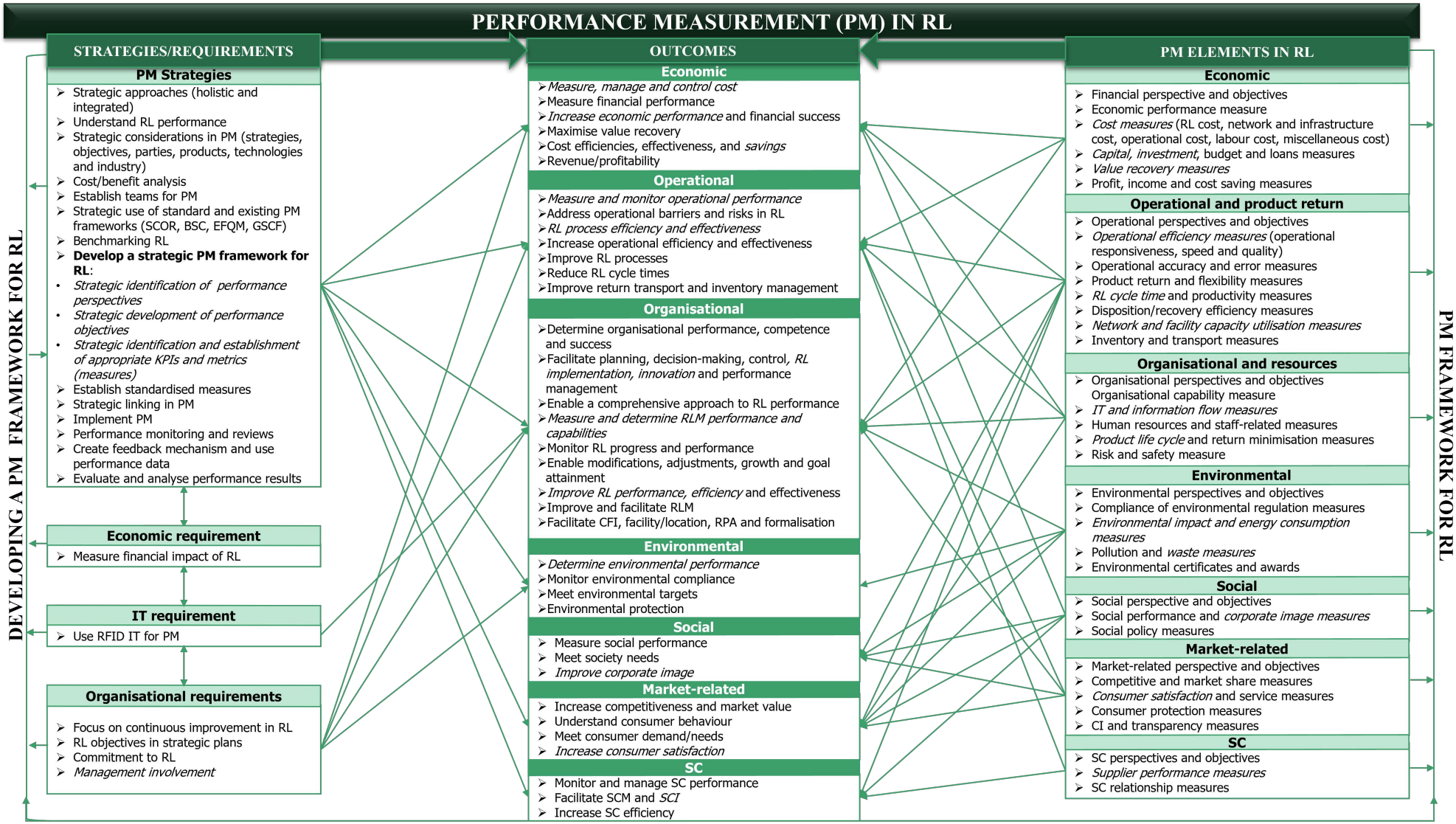


Figure 6.19 Conceptual framework of PM practices to manage consumer returns
Source: Compiled by researcher

Nonetheless, the main aim of the framework involves the links between the PM strategies, requirements and elements with the outcomes, demonstrating a cost and benefit relationship. Evidently, the PM strategies, requirements and elements can bring several benefits and help organisations to measure several performance areas related to RL, which can be essential for the effective management of consumer returns.

Based on Figure 6.19 and the discussions given in section 6.7, Table 6.26 provides a summary of the findings and managerial implications for PM practices to manage consumer returns.

Table 6.26 Summary of findings and managerial implications for PM practices to manage consumer returns

CATEGORY	KEY FINDINGS	MANAGERIAL IMPLICATIONS
Strategies and requirements	• PM in RL involves several strategies, including strategic approaches to PM, understanding of RL performance, strategic considerations for PM, a cost-benefit analysis, establish teams for PM, the strategic use of existing and standard PM frameworks/models and measures, benchmarking RL, the development of a strategic PM framework for RL, including the strategic identification, development and establishment of performance perspectives, objectives, and appropriate KPIs and metrics, establish standardise PM, strategic linking in PM, PM implementation, performance monitoring and reviews, the creation of feedback mechanisms and usage of performance data, develop a reward system, and performance results evaluation and analysis • The PM strategies associate with most of the PM outcomes, including economic, operational, organisational, environmental, market-related and SC outcomes. • From the PM strategies, developing of a strategic PM framework for RL, identifying appropriate KPIs and metrics, creating feedback mechanisms, and evaluating and analysing performance results associate with the most PM outcomes • The least significant PM strategies, with limited impact on the outcomes, include cost-benefit analysis, establish teams for PM, standardised PM, PM implementation, and conducting performance reviews • PM practices in RL involves a few requirements, including economic, IT and organisational requirements • From the PM requirements, the organisational requirements, especially management involvement, associate with the most PM outcomes, including economic, operational, organisational and environmental outcomes • The least significant requirements, with no impact on PM outcomes, include the economic requirement of measuring financial impact of RL and the organisational requirement of commitment to RL	• Organisations must develop a PM strategy that involves a holistic approach, an understanding of RL, strategic considerations, cost-benefit analysis, establishment of teams, standard PM frameworks and metrics, RL benchmarking, strategic development of PM framework consisting of perspectives, objectives and metrics, establishment of standardised PM, strategic linking of PM elements, performance monitoring, creating feedback mechanism, development of a reward system and evaluation and analyses of performance data and results • Organisations that seek various economic, operational, organisational, environmental, market-related and SC benefits in RL must implement PM strategies • Organisations must especially focus on developing a PM framework for RL that involves identifying and developing appropriate KPIs and metrics for RL, creating feedback mechanisms and analysing and evaluating performance results and data for effective PM in RL • For effective PM in RL organisations must focus on organisational requirements and management involvement
PM elements	• PM elements in RL consist of economic, operational and product return, organisational and resources, environmental, social, market-related, and SC elements that constitute of the PM framework for RL • All PM elements lead to PM outcomes • The most significant PM element (associating with the most outcomes) involves operational elements, followed by organisational, environmental, social and market-related elements • The least significant PM elements involve SC elements, leading to the least number of outcomes • From the economic elements, RL costs, capital, investment and value recovery measures contribute to most of the outcomes • From the operational elements, operational efficiency, RL cycle time and network and facility measures contribute to most of the outcomes • From the organisational elements, IT, information flow and product lifecycle measures contribute to most of the outcomes • From the environmental elements, energy impact and consumption, and waste measures contribute to most of the outcomes • From the social elements, corporate image measures contribute to	• To develop a PM framework for RL, organisations must incorporate economic, operational and product return, organisational and resources, environmental, social, market-related, and SC elements • Organisations must focus mostly on operational PM elements for effective and beneficial PM in RL • For effective economic PM in RL, organisations must focus on RL cost, capital, investment and value recovery measures • For effective operational PM in RL, organisations must focus on operational efficiency, RL cycle time, network and facility measures • For effective organisational and resource-related PM in RL, organisations must focus on IT, information flow and product lifecycle measures • For effective environmental PM in RL, organisations must focus on energy impact and consumption and waste measures • For effective social PM in RL, organisations must focus on corporate image measures • For effective market-related PM in RL, organisations must focus on customer satisfaction measures • For effective SC PM in RL, organisations must focus on supplier performance measures

	most of the outcomes • From the market-related elements, customer satisfaction measures contribute to most of the outcomes • From the SC elements, supplier performance measure contributes to most of the outcomes	
Outcomes	• PM practices in RL involve economic, operational, organisational, environmental, social, market-related and SC outcomes • The most significant outcomes of PM practices in RL involves organisational outcomes, followed by operational and economic outcomes • The least significant outcomes of PM practices in RL involves environmental outcomes • The most significant economic outcomes of PM practices in RL include measuring, controlling and managing cost, increase economic performance and cost savings/reductions • The most significant operational outcomes of PM practices in RL include measuring and monitoring operational performance and RL process efficiency and effectiveness • The most significant organisational outcomes of PM practices in RL include RL implementation and innovation, measure and determine RLM performance and capabilities and improve RL performance and efficiency • The most significant environmental outcome of PM practices in RL includes determine environmental performance • The most significant social outcome of PM practices in RL includes corporate image • The most significant market-related outcome of PM practices in RL includes consumer satisfaction • The most significant SC outcome of PM practices in RL includes facilitating SCI	• Organisations that seek economic, operational, organisational, environmental, social, market-related and SC benefits in RL can implement PM practices in RL • Organisations that seek to measure, manage and control costs must consider PM practices in RL • Organisations that seek to increase economic performance and realise cost savings in RL can consider PM practices in RL • Organisations that seek to measure and monitor operational performance must consider PM practices in RL • Organisations that experience inefficiencies in the RL process, must consider PM practices in RL • Organisations that seek to measure and determine RLM performance and increase RL performance must consider PM practices in RL • Organisations that experience difficulties in RL implementation and innovation must consider PM practices in RL • Organisations that seek to determine environmental performance must consider PM practices in RL • Organisations that seek to improve corporate image must consider PM practices in RL • Organisations that seek to increase consumer satisfaction must consider PM practices in RL • Organisations that experience challenges in SCI can consider PM practices in RL • For the effective management of consumer returns, organisations must identify/implement/consider PM strategies, requirements, elements and outcomes to develop the most appropriate PM framework for RL.

Source: Compiled by the researcher

Table 6.26 provides an in-depth understanding into the value of PM practices as part of the RL practices for consumer returns. Organisations can identify specific PM strategies, requirements, elements and outcomes to develop an appropriate PM framework for RL. Consequently, the suggested framework can help organisations to address the organisational barrier of a lack of PM in RL, which can contribute to the effective management of consumer returns. PM as a RL practice will further be explored in the interviews with industry experts (chapter 8).

In the next section, facility and location practices to manage consumer returns will be presented, discussed and analysed.

6.8 FACILITY AND LOCATION PRACTICES TO MANAGE CONSUMER RETURNS

Facility and location (hereafter facility/location) practices in RL represented one code category from the coding framework (see Appendix A) of the QCA. In reviewing the findings several categories of facility and location strategies were inductively identified from the QCA of RL literature, which included general facility/location, separate facility/location, integrated facility/location, centralisation, decentralisation and centralised return centre (CRC) practices. Based on the findings and the inductive classification of these categories, the subsequent paragraphs will briefly describe general, separate, integrated, centralised, decentralised facility/location and centralised return centre (CRC) practices.

General facility/location practices can be described as the general strategies and decision-making factors that enable organisations to design an optimum network for RL. Therefore, general facility/location practices can serve as a basis for the implementation of specific facility/locations (separate, integrated, (de)centralised and CRC) practices. *Separate facilities/locations* involve general separation of RL and FL in the form of facilities, locations, networks, infrastructure and operations. In contrast, *integrated facilities/locations* involve the integration of RL and FL in the form of facilities, locations, networks, infrastructure, resources and operations.

Centralisation involves a network of single or few facilities and locations that serve a wide region of markets. Therefore, centralisation means that a few facilities/locations further away from the markets perform various RL processes. In contrast, *decentralisation* involves a flat network of various facilities and locations for RL that serve specific regions/markets. Therefore, decentralisation means that various facilities closely located to markets perform the same RL processes.

CRCs involve specialised facilities that perform RL processes, mostly combining separate and centralisation facility/location strategies. Nevertheless, CRCs can form part of integrated and decentralisation strategies. For example, Hsu *et al.* (2009:516) explained that some DCs allocate space for CRCs to handle consumer returns. In the case study example of Hsu *et al.* (2009:520) a single retailer (in the USA) owns sixteen DCs across several regions serving various retail stores and thirteen of these DCs contain CRCs, handling consumer returns for various retail stores. Since fewer CRCs are assigned to DCs, CRCs serve more retail stores, hence, the term centralised return centres. Regardless of the combination of facility/location strategies associated with CRCs, several findings related to facility/location practices focus on the utilisation of CRCs for RL, and was, therefore, included as a category in facility/location practices.

In the subsequent sections, general facility/location practices, separate facilities/locations, integrated facilities/locations, centralisation, decentralisation and CRC practices will be analysed and discussed. The section will be concluded with a conceptual framework and summary of the findings for facility/location practices to manage consumer returns.

6.8.1 General facility/location practices to manage consumer returns

General facility/location practices involve general facility/location strategies, facility/location decision factors, requirements, and related outcomes, which can be important for the effective management of consumer returns. Table 6.27 provides an overview of the findings related to the *general facility/location practices to manage consumer returns*, including the categories, subcategories,

supporting sources for the subcategories and key quotations that support both the subcategories and the discussion of the findings.

Table 6.27 Findings related to general facility/locations practices to manage consumer returns

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
General facility/location strategies	***RL network design***	Alumur *et al.* (2012:67) Daaboul *et al.* (2014:3) Ene and Öztürk (2015:284) Ghezavati and Beigi (2016:3) Hahler and Fleischmann (2013:7) Kara *et al.* (2007:62) Lee and Dong, (2009:63) Pishvaee *et al.* (2010:269)	• *"RL network design is very complex due to including uncertainty of return products in terms of quantity, quality and supply timing […]."* (Ayvaz & Bolat, 2014:34) • *"Facility location and allocation problem is important […]."* (Ayvaz *et al.*, 2014:105) • *"RL networks are designed for strategic decisions […]."* (Agrawal *et al.* 2015:88) • *"[…] designing flexible reverse logistics networks to allow the establishment of additional appropriate logistics infrastructures […]."* (Li *et al.* 2016:223) • *"[…] companies need to optimally design their reverse logistics networks in order to facilitate the collection and flow of the goods in an optimal way."* (Mazahir *et al.* 2011:94) • *"[…] the design of reverse networks aims at organizing [sic] resources for optimal system performance […]."* (Roy *et al.* 2006:59)
	Strategic decisions related to facilities	Alshamsi and Diabat (2015:589) Alumur *et al.* (2012:67) Biehl *et al.* (2007:466) Du and Evans (2008:2618) Ghezavati and Beigi (2016:3) Ko and Evans (2007:348) Lee and Dong (2009:63) Li *et al.* (2016:223) Pishvaee *et al.* (2010:269) Sasikumar and Kannan (2008b:236) Srivastava and Srivastava (2006:540)	• *"RL networks are designed for strategic decisions including number of facilities, […] and their capacity or size."* (Agrawal *et al.* 2015:88) • *"General network structure, […] the number of echelons, the number of facilities required, […] the type of necessary facilities […] need to be determined to convey used products from their former users […]."* (Kara & Onut, 2010:717) • *"At the strategic level, the decisions are high-level, such as […] establishing the […] capacities of the sites […]."* (Lambert *et al.* 2011:563) • *"One of the major decisions is the facility location for (i) collecting the product from their own store or from a third party collection store, (ii) inspecting and sorting at a warehouse that is also used for forward distribution or at a dedicated collection centre, and (iii) reprocessing at the […] the original or specialized-third-party facility."* (Luitel *et al.* 2014:86) • *"The product return process entails the determination of the number […] of initial collection points for returned products and […] centralized [sic] return centers [sic] […]."* (Min *et al.* 2006a:57) • *"[…] established warehouses […] of the 3PL provider can be considered as potential locations for the installation of repair facilities and the local stores of the 3PL provider can be used as collection sites."* (Du & Evans, 2008:2620)
	Strategic decisions related to locations	Agrawal *et al.* (2015:88) Alshamsi and Diabat (2015:589) Chan *et al.* (2010:6301) Ghezavati and Beigi (2016:3) Hahler and Fleischmann (2013:7) Kara and Onut (2010:717) Kara *et al.* (2007:62) Ko and Evans (2007:348) Li *et al.* (2016:223) Luitel *et al.* (2014:86) Pishvaee *et al.* (2010:269) Sasikumar and Kannan (2008b:236) Tuzkaya *et al.* (2011:4544)	• *"At the strategic level, the decisions are high-level, such as […] establishing the location […] of the sites […]."* (Lambert *et al.* 2011:563) • *"The decisions involve: which locations to be chosen for installing repair facilities […]."* (Du & Evans, 2008:2618) • *"[…] designing the best reverse logistics network includes […] decisions: […] location/allocation of facilities."* (Daaboul *et al.* 2014:3) • *"Another important issue […] is whether the reverse chain should be centralized [sic] or decentralized [sic]."* (Gobbi, 2011:772) • *"The product return process entails the determination of the […] location of initial collection points for returned products and the location/allocation of centralized [sic] return centers [sic] […]."* (Min *et al.* 2006a:57)
	Strategic decisions related to transportation and product flows	Alshamsi and Diabat (2015:589) Ghezavati and Beigi (2016:3) Kara *et al.* (2007:62) Pishvaee *et al.* (2010:269) Tuzkaya *et al.* (2011:4544)	• *"The decisions involve: […] how to arrange the transportation flows between collection sites and facility sites."* (Du & Evans, 2008:2618) • *"[…] transportation links between the network elements need to be determined to convey used products from their former users […] and to future markets again."* (Kara & Onut, 2010:717) • *"The decisions of the dynamic logistics network configuration include […] the quantities of forward and returned products that are to be shipped in the transportation links […]."* (Lee & Dong, 2009:63) • *"Reverse logistics network design is a strategic decision which encompasses the determination of the […] allocation of return flows through the network."* (Li *et al.* 2016:223)
	Strategic decisions related to parties	None	• *"[…] the design of reverse networks aims at […] determining who will own the assets and handle the day-to-day management."* (Roy *et al.* 2006:59)
	Cost-benefit or trade-off analyses	None	• *"[…] network design […] that analyse the trade-offs of centralization [sic] and decentralization [sic]."* (Hahler & Fleischmann, 2013:7) • *"The reverse logistic network design may involve a trade-off relationship between the total costs and the total delivery tardiness. For example, in some cases, the companies may need to open more facility locations in order to decrease the total*

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
			delivery tardiness and fulfill [sic] higher customer satisfaction, which may lead to a greater fixed opening cost." (Lee *et al.* 2015:9071) • *"[…] as the distance between collection centers [sic] and customer locations increased, the total reverse logistics cost decreased and the longer distance between collection centers [sic] and customer locations led to reduction in the total number of collection centers [sic] and the subsequent savings in total reverse logistics."* (Ghezavati & Nia, 2015:3067)
	Benefit-driven facility/location strategies	Alshamsi and Diabat (2015:589)	• *"[…] the determination of the number and location […] for returned products […] in such a way that total reverse logistics costs (e.g., inventory carrying and transportation costs) are minimized [sic], capacity […] are fully utilized [sic], and the convenience of customers who return products is maximized [sic]."* (Min *et al.* 2006a:57) • *"In order to maximise the value recovered from used products, companies need to set up logistics structures that facilitate the arising goods flows in an optimal way."* (Tuzkaya *et al.* 2011:4544)
	Strategic selection and establishment of appropriate infrastructure	Tuzkaya *et al.* (2011:4544)	• *"[…] during the design of the support network […] requires appropriate logistics structures to be set up for the arising goods flow from users […]."* (Sasikumar & Kannan, 2008b:236) • *"Appropriate infrastructure […] should be chosen for a cost effective and efficient RL network."* (Shaik & Abdul-Kader, 2012:30)
Facility/location decision factors	***Economic factors in facility/location decisions***	Srivastava and Srivastava (2006:528) Mutha and Pokharel (2009:344) Partida (2011:63)	• *"[…] the initial investment is a crucial factor that affects all subsequent decisions: the layout of the transportation system and the optimal sites and locations of important infrastructures […]."* (Alshamsi & Diabat, 2015:589) • *"Facility decisions are affected by […] costs […]."* (Agrawal & Choudhary, 2014:15) • *"Since warehousing costs are proportionately related to total space dedicated to repair operations, one should consider the option of expanding the existing capacity of warehouses […] rather than establishing new facilities."* (Min & Ko, 2008:179) • *"[…] decisions about location and capacity are sensitive to a few input parameters and variables such as […] transportation costs […]."* (Srivastava & Srivastava, 2006:540) • *"[…] distance between collection centers [sic] and customer locations increased, the total reverse logistics cost decreased […]."* (Ghezavati & Nia, 2015:3067) • *"[…] the majority of companies eventually expand their transportation systems, instead of opening new facilities, as it is more cost effective."* (Alshamsi & Diabat, 2015:589)
	Operational factors in facility/location decisions	Zhou and Zhou (2015:61)	• *"[…] taken into account during the design of the support network such as […] supporting technology."* (Sasikumar & Kannan, 2008b:236) • *"[…] information technology emerged as an important issue when considering the control of the network."* (Bernon *et al.* 2011:494) • *"The choice of network infrastructure will relate to the […] ability of the organisation to integrate the existing network infrastructure with returns."* (Bernon & Cullen, 2007:54) • *"RL network design […] considering interaction, integration and coordination of different forward and reverse flows."* (Ayvaz & Bolat, 2014:34) • *"Facility decisions are affected by estimated returns, […] and operational considerations."* (Agrawal & Choudhary, 2014:15) • *"[…] origin and reasons for return provide specific characteristics to a reverse logistics network."* (Sharma & Singh, 2013:36) • *"[…] decisions about location and capacity are sensitive to a few input parameters and variables such as product returns (timing, quality and quantity) […]." (Srivastava & Srivastava, 2006:540)* • *"The PRV […] influences the choice of the recovery option and therefore the supply chain structure."* (Gobbi, 2011:772) • *"When designing a network structure of reverse logistics, there are many factors to be considered. These factors include the […] characteristics of the material flow and product characteristics […]."* (Kara *et al.* 2007:62)
	Organisational factors in facility/location decisions	Srivastava and Srivastava (2006:528)	• *"Facility decisions are affected by […] strategic […] considerations."* (Agrawal & Choudhary, 2014:15) • *"The returns facility decision, as it relates to the company's capabilities […]."* (Prahinski & Kocabasoglu, 2006:428) • *"The choice of network infrastructure will relate to the level of in-house competency […]."* (Bernon & Cullen, 2007:54) • *"[…] taken into account during the design of the support network such as […] choice of outsourcing vendors […]."* (Sasikumar & Kannan, 2008b:236)
	Market and SC related factors in facility/location decisions	None	• *"Facility decisions are affected by […] competitors' behavior [sic] […]."* (Agrawal & Choudhary, 2014:15) • *"[…] decisions about location and capacity are sensitive to a few input parameters and variables such as […] future demand for products."* (Srivastava & Srivastava, 2006:540) • *"[…] decisions about location and capacity are sensitive to a few input parameters and variables such as […] product ownership […]."* (Srivastava & Srivastava, 2006:540)

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
			• *"[…] taken into account during the design of the support network such as […] distribution channel […]."* (Sasikumar & Kannan, 2008b:236) • *"When designing a network structure of reverse logistics, there are many factors to be considered. These factors include the number and the type of participants in the system […]."* (Kara *et al.* 2007:62)
Economic requirements	***Investment***	None	• *"[…] investment […] of the transportation system and the optimal sites […] of important infrastructures […]."* (Alshamsi & Diabat, 2015:589)
	Costs	None	• *"The reverse logistic network design […] in some cases, the companies may need to open more facility locations […], which may lead to a greater fixed opening cost."* (Lee *et al.* 2015:9071) • *"Identifying where costs lie […] enables organizations [sic] to determine the best physical network for […] flow of returns."* (Partida, 2011:63)
IT requirements	***Utilise IT***	None	• *"[…] advanced planning and scheduling (APS) software. But its main function is to provide a support for decision making in designing a reverse logistics network."* (Daaboul *et al.* 2014:7) • *"[…] reduce the complexity of the reverse logistics systems and manage the network effectively […] One of the advances that can aid in creating an efficient network is data matrix; a 2D matrix barcode […]."* (Kongar *et al.* 2015:53) • *"The use of RFID technology solved some long-standing issues […] such as: the choice of location for returned products […]."* (Kongar *et al.* 2015:56)
Organisational requirements	***PM in RL***	None	• *"The best-practice organizations [sic] use […] assessments of actual process performance to design their reverse logistics networks […] uses organizational [sic] throughput information […] to identify network locations."* (Partida, 2011:63)
	RC	Roy *et al.* (2006:59)	• *"[…] allocation of resources […] for a […] RL network."* (Shaik & Abdul-Kader, 2012:30)
Facility/location outcomes	***Ability to expand facilities***	None	• *"[…] designing flexible reverse logistics networks to allow the establishment of additional appropriate logistics infrastructures and the expansion of the existing facilities for the arising service returns."* (Li *et al.* 2016:223)
	Optimise capacity utilisation	None	• *"[…] the determination of the number and location […] for returned products […] in such a way that […] capacity […] are fully utilized [sic] […]."* (Min *et al.* 2006a:57)
	Optimise network design	None	• *"Appropriate infrastructure and allocation of resources […] for […] efficient RL network."* (Shaik & Abdul-Kader, 2012:30) • *"Identifying where costs lie […] enables organizations [sic] to determine the best physical network for […] flow of returns."* (Partida, 2011:63) • *"One of the advances that can aid in creating an efficient network is data matrix; a 2D matrix barcode […]."* (Kongar *et al.* 2015:53) • *"The best-practice organizations [sic] use […] assessments of actual process performance to design their reverse logistics networks."* (Partida, 2011:63)
	Network control	None	• *"[…] information technology emerged as an important issue when considering the control of the network."* (Bernon *et al.* 2011:494)
Economic outcomes	***RL cost savings***	None	• *"[…] the determination of the number and location […] for returned products […] in such a way that total reverse logistics costs (e.g., inventory carrying and transportation costs) are minimized [sic] […]."* (Min *et al.* 2006a:57) • *"[…] as the distance between collection centers [sic] and customer locations increased, the total reverse logistics cost decreased and the longer distance between collection centers [sic] and customer locations led to reduction in the total number of collection centers [sic] and the subsequent savings in total reverse logistics."* (Ghezavati & Nia, 2015:3067)
	Cost effectiveness	None	• *"[…] the majority of companies eventually expand their transportation systems, instead of opening new facilities, as it is more cost effective."* (Alshamsi & Diabat, 2015:589) • *"[…] allocation of resources […] for a cost effective […] RL network."* (Shaik & Abdul-Kader, 2012:30)
	Value recovery	None	• *"In order to completely recover value from returned products through reverse logistics, companies need to optimally design their reverse logistics networks […]."* (Mazahir *et al.* 2011:94) • *"In order to maximise [sic] the value recovered from used products, companies need to set up logistics structures that facilitate the arising goods flows in an optimal way. To this end, one needs to decide where to locate the various processes of the reverse supply chain and how to link them in terms of storage and transportation."* (Tuzkaya *et al.* 2011:4544)
Operational outcome	***Improve RL process efficiency***	None	• *"[…] companies need to optimally design their reverse logistics networks in order to facilitate the collection and flow of the goods in an optimal way."* (Mazahir *et al.* 2011:94) • *"Network design is one of the most important decisions in reverse logistics and is essential for efficient recovery […]."* (Ene & Öztürk, 2015:284)
Organisational outcomes	***Facilitate RL implementation***	None	• *"Reverse logistics […] the design of the support network […] Efficient implementation requires appropriate logistics structures […]."* (Sasikumar & Kannan, 2008b:236
	Enhance RL performance	None	• *"[…] the design of reverse networks aims at organizing [sic] resources for optimal system performance […]."* (Roy *et al.* 2006:59)

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
	Effective RLM	None	• *"Facility location and allocation problem is important because of managing effectively transportation of used product from customers to recovery facilities, and supplying to market."* (Ayvaz *et al.* 2014:105) • *"The choice of network infrastructure will relate to the level of in-house competency for managing returns effectively […]."* (Bernon & Cullen, 2007:54)
	Facilitate decision-making	None	• *"[…] advanced planning and scheduling (APS) software […] to provide a support for decision making in designing a reverse logistics network."* (Daaboul *et al.* 2014:7)
Market-related outcomes	***Increase customer convenience***	Banomyong *et al.* (2008:37) Das and Chowdhury (2012:209)	• *"[…] the determination of the number and location […] for returned products […] in such a way that […] and the convenience of customers who return products is maximized [sic]."* (Min *et al.* 2006a:57)
	Increase consumer satisfaction	None	• *"The reverse logistic network design may involve a trade-off relationship […]in some cases, the companies may need to open more facility locations in order to […] fulfill higher customer satisfaction, which may lead to a greater fixed opening cost."* (Lee *et al.* 2015:9071)
SC outcome	***Facilitate SCM***	None	• *"Facility location decisions represent an important aspect of strategic planning for supply chain management."* (Ko & Evans, 2007:348)

Source: Compiled by the researcher

Table 6.27 indicates the general facility/location practices in RL, including strategies, facility/location decision factors, requirements and outcomes, which will be discussed in subsequent sections and concluded with a description and conceptual framework of general facility/location practices to manage consumer returns.

6.8.1.1 General facility/location strategies

General facility/location strategies involve (1) RL network design, (2) strategic decisions, relating to facilities, locations, transportation and flows and parties, (3) cost-benefit or trade-off analysis, (4) benefit-driven facility/location strategies, and (5) strategic establishment of an appropriate infrastructure.

RL network design involves strategies and decisions that enable organisations to establish the correct infrastructure and strategically select the most appropriate facilities/locations for RL. However, due to the uncertainties of RL (such as timing, quality and quantity of product returns) organisations need to strategically design a flexible network and appropriately organise resources, which can be important for managing consumer product returns.

As a part of RL network design, organisations must make several strategic decisions related to facilities, locations, transportation and product flows. The *strategic decisions related to facilities* involve (1) determining the number of facilities, (2) the capacity or size of facilities, (3) the type of facilities (e.g. warehouse, repair facility, collection facility or CRC), (4) deciding between separate or integrated facilities (discussed in sections 6.8.2, 6.8.3 and 6.8.6), and (5) using own facilities or third-party facilities. *Strategic decisions related to locations* involve determining the most suitable location

for facilities (such as collection points and CRCs) to perform RL processes and the choice between centralisation and decentralisation (discussed in sections 6.8.4, 6.8.5 and 6.8.6).

The *strategic decisions related to transportation* and *product flows* involve arranging transportation flows or determining transportation links between facilities/locations, estimating the quantities of products that must be shipped between facilities/locations, and determining the allocation of RL flows. Lastly, the *strategic decisions related to RL parties* involve deciding on the responsibilities of parties in the RL network. For example, the organisation can decide that the entire RL process will be handled in-house, except for using a delivery partner to transport product returns from consumers to and between facilities. Like other RL practices (e.g. IT, integration, RL in/outsourcing and disposition), general facility/location strategies involve a *cost-benefit* or *trade-off analysis.* This trade-off analysis can relate to the strategic decisions of general facility/location strategies by comparing the costs and benefits of centralisation and decentralisation. Furthermore, organisations can perform a cost-benefit analysis for the costs of establishing new facilities against the benefits of better customer service due to faster return lead times.

Similarly, organisations can perform a cost-benefit or trade-off analysis for the distance between consumer locations and facilities, for example, the longer the distance from consumer locations the fewer facilities need to be established, resulting in transport cost (economies of distance) and facility set-up costs savings. However, establishing a single facility in a centralised location can result in longer return lead time that may impact consumer satisfaction, demonstrating the strategic importance of performing effective cost-benefit analyses in facility/location practices to manage consumer returns. Consequently, organisations must focus on *benefit-driven facility/location strategies,* for instance, organisations must focus on developing a RL network that minimise RL costs, maximise facility capacity, maximise consumer convenience and service, and maximise recovery.

Finally, general facility/location strategies involve *strategic selection* and *establishment* of an *appropriate infrastructure,* which relates to RL network design and strategic decisions. For example, organisations can select the current infrastructure (used for FL) in the network design for combined facility decisions or establish a new infrastructure in the network design for separate facility decisions. Regardless, of the strategic decisions, organisations must select/establish an appropriate infrastructure for the effective management of consumer returns.

6.8.1.2 Facility/location decision factors

The facility/location decision factors, including economic, operational, organisational, market and SC factors, influence the strategic decisions related to facilities, locations, transportation and product flows, and parties (see section 6.8.1.1).

The *economic factors* that influence general facility/location decisions involves investment and costs. Particularly, organisations must consider *investment* of infrastructure and transport systems before making decisions about specific facility/location practices (e.g. integrated and centralisation practices). For example, an organisation that lacks the resources to invest in a new facility for RL may find using an integrated facility for both FL and RL processes more feasible. In terms of *costs*, facility (e.g. warehouse) costs can influence the decision to expand an existing facility instead of opening a new facility, favouring an integrated facility decision. Moreover, the transportation costs (e.g. fuel prices) can influence location, facility and capacity decisions. For example, organisations with high transportation costs may select a centralised location to achieve economies of distance. Alternatively, organisations can curb transportation costs by deciding to expand facilities instead of opening new facilities, emphasising the strategic importance of performing cost-benefit analyses for effective general facility/location practices (see section 6.8.1.1).

The *operational factors* can be the most significant factors for effective facility/location decisions, involving IT, infrastructure, RL/FL integration, product returns and product type/offering factors. Since *IT* can be critical to manage consumer returns (see section 6.3), the IT systems of the organisation must be considered in facility/location network design decisions. For example an organisation that uses an integrated IT solution (e.g. ERP) for both RL and FL, may be more inclined to choose integrated facilities for RL and FL (see section 6.8.3), while an organisation that invested in RLIT (section 6.3.3) may be more inclined to choose separate facilities. The *infrastructure* factors relate to *RL/FL integration*, which associate with integrated or separate facility strategic decisions (sections 6.8.2 and 6.8.3). For instance, for an organisation that can integrate RL with the existing FL infrastructure may be more inclined to choose integrated facilities, while organisations that lacks the capability to integrate RL/FL may choose separate facilities. Consequently, organisations must consider the integration and coordination of RL and FL flows for effective facility/location decisions.

For *product return* factors, organisations must consider quantity, quality, timing and type of return for optimal facility/location decision-making. For instance, high product return volume and frequency may be more suitable for separate facilities/locations and CRCs, while lower product return volume and frequency may be more suitable for integrated facility/location practices. Furthermore, organisations

that mostly receive new/unused product returns may benefit from using an integrated facility and decentralised locations since most products can be returned to inventory and quickly redistributed to the markets/consumers (see sections 6.8.4 and 6.8.5). Alternatively, organisations that mostly receive defective/used product returns may benefit from using a separate facility or CRCs since most products require product recovery (e.g. repair and refurbishment). Consequently, organisations may need to develop some forecasting methods and consider historical return rates, consumer return behaviour, return policies and disposition strategies for effective facility/location decisions.

Product offering/type factors may associate with product characteristics, like shelf life, product value, or product size. For example, perishable products or products with shorter lifecycles need faster return lead times, which means that decentralised locations may be more appropriate (see section 6.8.5). Additionally, high value products may require more security, which means that a separate facility strategy might be more feasible. In terms of product size, larger products require more storage, which means that organisations might need to expand or build a new facility to accommodate returns.

The *organisational factors* for effective facility/location decisions relate to organisational capabilities, competencies and RL in/outsourcing strategies. For example, organisations that lack capabilities and inhouse competency in product recovery, may choose third-party facilities for RL. Furthermore, organisations that follow partial or full RL outsourcing strategies must consider potential and current outsourcing partners, which can be important for effective strategic decisions related to facilities and parties (section 6.8.1.1). The importance of RL in/outsourcing strategies in facility/location decisions reemphasise the importance of the holistic implementation of RL practices to manage consumer returns.

Finally, the *market-related* and *SC factors* for effective facility/location decisions involve competition, future demand, product ownership and SC structure. Specifically, organisations must consider the RL network strategies of *competitors*, for instance, if competitors utilise CRCs, the organisation may choose to follow the same facility/location strategy. Alternatively, the lack of a decentralised approach by competitors may motivate organisations to follow a decentralised strategy for a potential competitive advantage. *Future demand* of products can influence facility capacity decisions since an increase in demand can result in an increase in product returns, which emphasise the importance of designing a flexible RL network (see section 6.8.1.1).

Similarly, *product ownership* can influence decisions related to locations and capacity of facilities. For example, an online retailer that sell own products and third-party seller products may keep own consumer product returns at the warehouse and send third-party consumer product returns to the third-

party sellers, influencing the size or capacity requirements of the facility. *SC structure* can involve considering the number and type of parties in the SC, which can link with the strategic decisions related to parties in facility/location strategies (section 6.8.1.1). Additionally, the network design of the SC can be an important consideration in facility/location decisions. For example, if the SC mostly consist of centralised facilities, an online retailer may decide to establish decentralised facilities for speedier return cycle times (see section 6.8.5)

Essentially, by considering economic, operational, organisational, market-related and SC facility/location decision factors, organisations can make effective strategic facility/location decisions and design an optimum RL network to manage consumer returns.

6.8.1.3 Requirements of general facility/location practices

The requirements of general facility/location practices, including economic, IT and organisational requirements, can be important for supporting the general facility/location strategies, which will be emphasised in the subsequent paragraphs.

The *economic requirements* of general facility/location practices involve investment and set-up costs, which relate to the general facility/location strategies. For instance, establishing an appropriate infrastructure (strategy) means that organisations must invest in the appropriate transportation system and facilities/locations in the network design. Moreover, opening new facilities for RL require set-up *costs* (e.g. capital, equipment and land), adding to the investment requirements. Consequently, financial management (FM) practices in RL can help organisations to identify the costs associated with various facility/location practices, which can be important for performing cost-benefit or trade-off analyses in facility/location strategies (see section 6.8.1.1).

The *IT requirements* of general facility/location practices involve *utilising IT* to support facility/location strategies in RL. For instance, the APS software (part of TLIT practices) and barcode IT can support RL network design and RFID can facilitate strategic decisions related to locations. Consequently, IT practices can be critical for effective facility/location strategies, demonstrating an important link between IT and facility/location practices.

The *organisational requirements* associate with PM and resource commitment (RC) practices in RL, which can be important for strategic decisions and RL network design in facility/location strategies. Particularly, through *PM practices* organisations can assess RL performance and use the throughput information to select appropriate facilities/locations in the RL network. For example, if organisations perform poorly in operational efficiency (slow return lead-times), a decentralised RL network can be

designed, or if organisations perform poorly in productivity (using staff for both RL/FL), a centralised RL network can be designed. Similarly, *RC* in RL can facilitate RL network design by allowing organisations to organise resources effectively and implement an appropriate infrastructure to support RL processes (see section 6.8.1.1), reemphasising the importance of RC practices to manage consumer returns.

Essentially, general facility/location strategies must be supported by other RL practices, including IT (section 6.3), PM (section 6.7), RC (section 6.9.1) and FM (section 6.9.2) practices, for the effective management of consumer returns. In the next section, the outcomes of general facility/location practices will be explored.

6.8.1.4 Outcomes of general facility/location practices

The outcomes of general facility/location practices include (1) facility/location, (2) economic, (3) operational, (4) organisational, (5) market-related and (6) SC outcomes, which can be described as the benefits related to general facility/location strategies, decision factors and requirements necessary for effective RL network design.

Unique to facility/location practices, the *facility/location outcomes* include the ability to expand facilities, optimal capacity utilisation, optimal network design and network control. Particularly, organisations can *expand facilities* through the general facility/location strategies of RL network design (e.g. designing a flexible network) and the establishment of an appropriate infrastructure for RL. Additionally, benefit-driven facility/location strategies can ensure *optimal capacity utilisation* of facilities, which may reduce the need to establish new facilities.

Several general facility/location practices can facilitate with *optimal network design* in RL, including (1) strategic establishment of an appropriate infrastructure for RL (general facility/location strategy), (2) identifying the cost of various facility/location practices (economic requirement), (3) utilise barcode IT for network design (IT requirement), (4) PM in RL, and (5) RC in RL (organisational requirements). Moreover, organisations can *control* the RL *network* by considering IT (operational facility/location decision factor) in network design decisions.

The *economic outcomes* of general facility/location practices include RL cost savings, cost effectiveness and maximum value recovery. Particularly, organisations can realise *RL cost savings* through the (1) general facility/location strategies of strategic decisions related to facilities and locations, performing cost-benefit or trade-off analyses and implementing benefit-driven facility/location strategies, and (2) economic facility/location decision factors related to transport costs.

Moreover, *cost effectiveness* can be realised through the economic facility/location decision factor of costs (e.g. expanding transport system instead of opening new facilities) and the organisational requirement of RC, emphasising the importance of cost-benefit analyses for effective facility/location strategies. Lastly, organisations can *maximise value recovery* through several general facility/location strategies, including (1) RL network design, (2) strategic decisions related to facilities, locations and transportation links, (3) benefit-driven facility/location strategies and (4) the establishment of appropriate infrastructure for the RL network.

The *operational outcome* of general facility/location practices involves *improvements in RL process efficiency*, which can be attained through the general facility/location strategy of RL network design. Evidently, organisations that optimally design networks for RL can optimise the flow of product returns, from the collection of returned products at consumer locations, transportation to facility locations, receiving the returned products at the facility, inspection, sorting and processing in the facility, disposition of the returned product (same or separate facility) to the redistribution of the recovered product back to the market (see chapters 4 and 5).

The *organisational outcomes* of general facility/location practices include (1) facilitating RL implementation, (2) enhancing RL performance, (3) effective RLM, and (4) facilitating decision-making. Particularly, the general facility/location strategies of RL network design and establishing an appropriate logistics infrastructure can *facilitate RL implementation.* Similarly, organisations can *enhance RL performance* through effective RL network design and RC for RL (organisational requirement). Moreover, the general facility/location strategy of effective network design in RL and the facility/location decision factor of organisational competency (e.g. considering the level of inhouse competency for effective network design) can result in *effective RLM*, demonstrating the importance of general facility/location practices in RL. Lastly, the IT requirement of utilising IT (such as APS software) for facility/location practices can *facilitate decision-making* in RL network design, contributing to several other outcomes associated with effective network design in RL.

The *market-related outcomes* of general facility/location practices involve consumer convenience and satisfaction. Particularly, organisations can *increase consumer convenience* through the implementation of benefit-driven facility/location strategies. For example, focussing on consumer convenience and establishing facilities close to consumers means that consumers can benefit from shorter return cycles or less transportation costs (for drop-off collection), which can improve consumer service. Similarly, organisations can *increase customer satisfaction* by performing a cost-benefit or trade-off analysis related to establishing new facilities (facility/location strategy) and incurring set-up costs for the establishment of new facilities (economic requirement), which can be important for a consumer-centric

RL process. Consequently, facility/location practices can indirectly play a role in the effective implementation of CI practices in RL (section 6.4.2).

Finally, the *SC outcome* of general facility/location practices involves *SCM*, which can be *facilitated* through the strategic decisions related to facilities and locations, demonstrating that general facility/location practices in RL can be important for RSCM.

Essentially, despite being limited to a few outcomes, general facility/location practices provide various facility/location, economic, operational, organisational, market-related and SC benefits, which can be important for the effective management of consumer returns. In the next section, the description and conceptual framework of general facility/location practices will be given.

6.8.1.5 Description and conceptual framework of general facility/location practices to manage consumer returns

Based on the findings presented in section 6.8.1, general facility/location practices in RL can be important for the management of consumer returns, and will be described as follows:

> General facility/location practices for the management of consumer returns involve (1) general facility/location strategies, including RL network design, strategic decisions related to facilities, locations, transportation and product flows, and RL parties, cost-benefit or trade-off analyses, benefit-driven facility/location strategies and selection or establishment of an appropriate infrastructure, (2) facility/location decision factors, including economic factors (cost and investment), operational factors (IT, infrastructure, RL/FL integration, product returns and product type/offering), organisational factors (capabilities, competencies and RL in/outsourcing strategies) and market-related and SC factors (competitors, future demand, product ownership and SC structure), and (3) general facility/location requirements, including economic requirements (investment and costs), IT requirements (utilise appropriate IT) and organisational requirements (PM and RC practices).
>
> The general facility/location strategies, decision factors and requirements can result in several outcomes, including (1) facility/location outcomes (ability to expand facilities, optimal capacity utilisation, optimal network design and network control), (2) economic outcomes (RL cost savings, cost effectiveness and maximum value recovery), (3) an operational outcome (improve RL process efficiency), (4) organisational outcomes (facilitate RL implementation, enhance RL performance, effective RLM and facilitate decision-making), (5) market-related outcomes (improve consumer convenience and satisfaction), and (6) a SC outcome (facilitate SCM).

Figure 6.20 provides a conceptual framework of general facility/location practices to manage consumer returns. Particularly, the framework illustrates the links between general facility/location strategies, decision factors, requirements and outcomes, which can be important for designing an optimum RL network for the effective management of consumer returns. The links between the general facility/location strategies and decision factors can be demonstrated by the economic facility/location decision factor of cost that links with the general facility/location strategies related to strategic decisions on facilities and locations in RL, performing cost-benefit analysis and focussing on benefit-driven strategies.

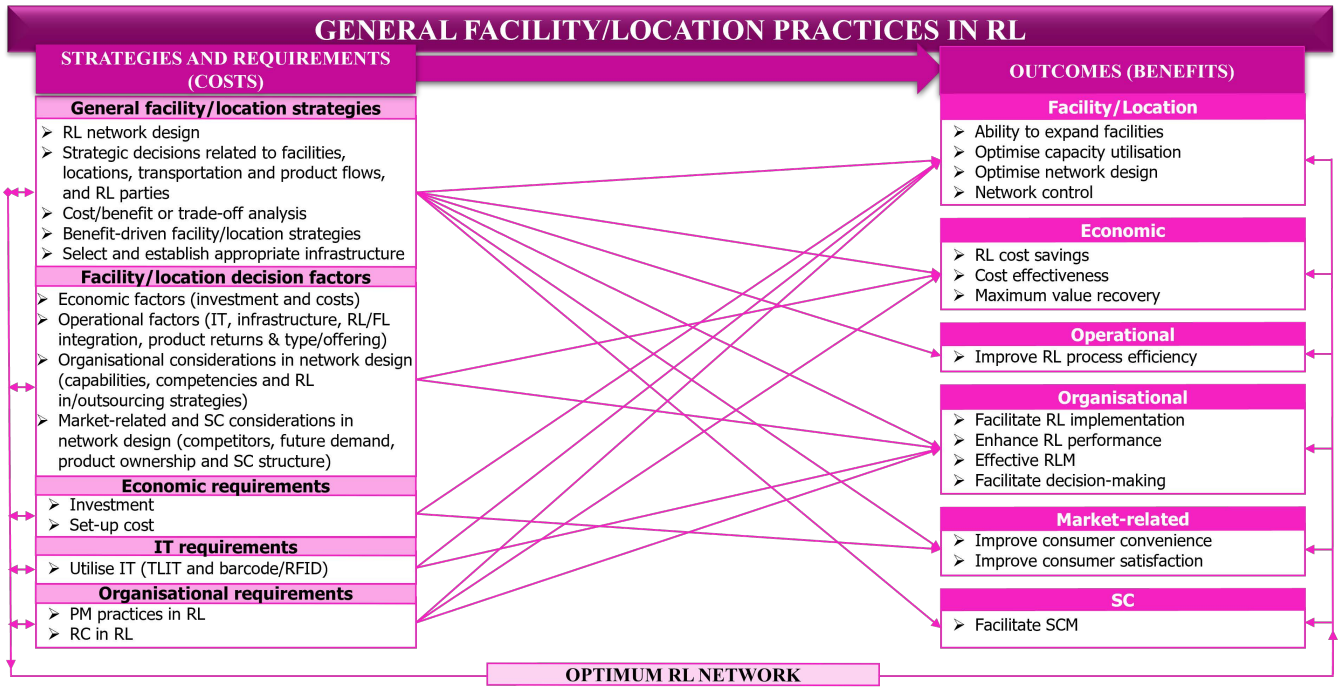


Figure 6.20 Conceptual framework of general facility/location practices to manage consumer returns
Source: Compiled by researcher

Moreover, the organisational facility/location decision factors of organisational capabilities can link with the economic requirements (costs and investment) and organisational requirement of RC, demonstrating a link between facility/location decision factors and requirements. The links between the general facility/location strategies and requirements can be demonstrated by the facility/location strategy of RL network design that links with the economic (cost and investment), IT (utilise IT) and organisational requirements (PM and RC practices). More importantly, the framework demonstrates that the general facility/location strategies, decision factors and requirements can result in an optimum RL network, contributing to the general facility/location outcomes.

Regarding the links between general facility/location strategies, requirements and outcomes, the framework demonstrates that general facility/location strategies can be the most significant practice category, linking with all the outcomes, including facility/location, economic, operational, organisational, market-related and SC outcomes. Nevertheless, the general facility/location decision factors and requirements can support effective implementation of general facility/location strategies, and indirectly link with various outcomes. Additionally, from the general facility/location requirements, the organisational requirements contribute to the most outcome categories, including facility/location, economic and organisational outcomes.

In terms of the outcomes of general facility/location practices, facility/location and organisational outcomes can be the most significant outcome categories (associated with most of the practice

categories), which means that general facility/location practices can be the most beneficial for organisations that seek facility/location and organisational benefits through RL practices. In contrast, the operational and SC outcomes can be the least significant categories (only associated with general facility/location practices strategies), meaning that general facility/location practices may be less important for organisations that seek operational and SC benefits in RL. Nonetheless, all the outcomes of general facility/location practices provide important benefits in key areas of RL in this study, including RL costs, RL processes, RLM, consumer convenience and satisfaction and RSCM.

Essentially, the links between the general facility/location strategies, requirements and outcomes demonstrate the importance of a holistic approach to the management of consumer returns, meaning that organisations must carefully consider and analyse the costs (strategies and requirements) and benefits (outcomes) of general facility/location practices for the effective management of consumer returns.

In the next section, separate facility/location practices in RL will be analysed and discussed.

6.8.2 Separate facility/location practices to manage consumer returns

Based on the strategic decisions in general facility/location practices, organisations that choose separate facilities/locations to manage consumer returns must implement strategies and requirements related to separating RL and FL operations in single or separate facilities at single or separate locations to manage consumer returns. Table 6.28 provides an overview of the findings related to the *separate facility/location practices to manage consumer returns*, including the categories, subcategories, supporting sources for the subcategories and key quotations that support both the subcategories and the discussion of the findings.

Table 6.28 Findings related to separate facility/location practices to manage consumer returns

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
Separate facility/location strategies	***Open-loop RL network design***	None	• *"In the design of reverse network, it may occur in one of two contexts: closed-loop or open loop system. […] In open loop system flows enter at the one point of logistics system and leave at other."* (Dhib *et al.* 2016:374)
	Strategic decisions related to separate facility/location practices	None	• *"[…] setting up additional appropriate logistics infrastructure for the arising flows of used and recovered products. Physical location, facilities and transportation links need to be chosen […]."* (Lee & Dong, 2009:61)
	Cost-benefit analysis	None	• *"Separate reverse logistics facilities from forward facilities […] may also be cost-intensive to implement, and for this reason organisations should carefully consider the cost-benefit trade-off."* (Badenhorst, 2016:10)
	Strategic establishment of a separate network and infrastructure	None	• *"In order to deal with commercial returns and faulty products, a company may set up a separate reverse logistics network […]."* (Piplani & Saraswat, 2012:1424) • *"[…] some companies prefer to build a separate infrastructure in order to facilitate the operation of the reverse logistics process."* (Bernon & Cullen, 2007:43) • *"[…] reverse logistics […] requires setting up additional appropriate logistics infrastructure for the arising flows of used and recovered products."* (Lee & Dong, 2009:61)
	Strategic establishment,	Min and Ko	• *"[…] the need to establish new, separate facilities […]."* (Barker & Zabinsky,

	implementation and utilisation of separate facilities	(2008:179) Vlachos (2016:16)	2008:255) • *"Separate reverse logistics facilities from forward facilities […] may also be cost-intensive to implement […]."* (Badenhorst, 2016:10) • *"[…] reverse flows, […] separate DC facilities are used."* (Li & Olorunniwo, 2008:385)
	Strategic utilisation of separate facilities at single location	De Leeuw *et al.* (2016:723)	• *"A hybrid warehouse-repair facility […] is defined as installing a warehouse and a repair center [sic] at the same location."* (Ko & Evans, 2007:350)
	Strategic separation of a single facility	None	• *"[…] distribution center [sic] is considered a one-unit building, the area for returns processing and the returns receiving gate are treated separately."* (Genchev, 2009:141) • *"Some warehouses, however, may dedicate their space for repair or refurbishment […]."* (Min & Ko, 2008:179) • *"Employees have only one point to enter/exit the returns area."* (Genchev, 2009:142) • *"Assigning a separate mailing address to the returns dock […]."* (Genchev, 2009:140)
	Strategic separation of RL and FL	Rogers *et al.* (2012:111) Weeks *et al.* (2010:1090)	• *"[…] a completely separate returns process where product was returned to the distribution center [sic]."* (Bernon *et al.* 2016:595) • *"Reverse logistics activities must be allowed to function separately as a separate entity."* (Subhashini, 2016:11)
Economic requirements	***Investment***	None	• *"[…] invest in the construction of reverse logistics facilities […]."* (Vlachos, 2016:16)
	Costs	None	• *"Separate reverse logistics facilities from forward facilities […] may also be cost-intensive to implement, and for this reason organisations should carefully consider the cost-benefit trade-off."* (Badenhorst, 2016:10) • *"[…] fixed costs associated with new facilities."* (Min & Ko, 2008:179)
Operational requirements	***High return volume***	None	• *"When return volumes are high, […] a dedicated facility makes more sense."* (Stock & Mulki, 2009:41)
	Extensive RL operations	Nine	• *"[…] significant processing of the returns is necessary, […] a dedicated facility makes more sense."* (Stock & Mulki, 2009:41)
Organisational requirement	***Partial RL outsourcing strategy***	None	• *"WCC has an airport-like security system run by a specialized [sic] separate firm. Employees have only one point to enter/exit the returns area […]."* (Genchev, 2009:142)
Economic outcomes	***Economies of scale***	None	• *"The benefits of processing at a secondary facility include economies of scale […] The drawbacks include the need to establish new, separate facilities."* (Barker & Zabinsky, 2008:255)
	Cost savings	None	• *"Some warehouses, however, may dedicate their space for repair or refurbishment in an effort to save fixed costs associated with new facilities."* (Min & Ko, 2008:179)
Operational outcomes	***Improve product return control and security***	None	• *"A major reason behind separating returns from outbound distribution related to security issues."* (Genchev, 2009:141) • *"[…] airport-like security system run by a specialized [sic] separate firm. Employees have only one point to enter/exit the returns area […] The number of unaccounted returns is drastically minimized [sic]."* (Genchev, 2009:142)
	Facilitate and improve RL processes	Piplani and Saraswat (2012:1424)	• *"[…] setting up additional appropriate logistics infrastructure for the arising flows of used and recovered products. Physical location, facilities and transportation links need to be chosen […] for the purpose of recovery […]."* (Lee & Dong, 2009:61) • *"[…] to build a separate infrastructure in order to facilitate the operation of the reverse logistics process."* (Bernon & Cullen, 2007:43) • *"[…] since all returns processes are done in one location, they can more quickly identify problems in the returns process and make improvements."* (De Leeuw *et al.* 2016:723) • *"Some warehouses, however, may dedicate their space for repair or refurbishment […]."* (Min & Ko, 2008:179) • *"[…] returned products were often mixed with new products waiting to be shipped. In addition, the shipping gate was frequently blocked by returns and much time was wasted sorting through the mix. […] Assigning a separate mailing address to the returns dock avoids these situations.* (Genchev, 2009:140) • *"Reverse logistics activities must be allowed to function separately as a separate entity. If the reverse and forward distribution activities are combined, it may lead to several confusions and problems."* (Subhashini, 2016:11)

Source: Compiled by the researcher

Table 6.28 indicates separate facility/location practices in RL, including strategies, requirements and outcomes, which will be discussed in subsequent sections. The section will be concluded with a description and conceptual framework for separate facility/location practices to manage consumer returns.

6.8.2.1 Separate facility/location strategies in RL

The separate facility/location strategies in RL include (1) an open-loop RL network design, (2) strategic decisions related to separate facility/location practices, (3) cost-benefit analysis, (4) strategic establishment of a separate network and infrastructure, (5) strategic establishment, implementation and utilisation of separate facilities, (6) strategic utilisation of separate facilities at a single location, (7) strategic separation of a single facility, and (8) strategic separation of RL and FL.

Separate facility/location strategies involve an *open-loop RL network design*, which means that RL flows are separated from FL flows. For example, an organisation that mostly sell product returns to third parties, may design an open-loop network for RL since the returned products enter a separate SC. *Strategic decisions* in *separate facility/location practices* associate with general facility/location strategic decisions, which can include decisions related to facilities, locations and transportation links (section 6.8.1). For example, the organisation must determine the number of separate facilities/locations, choose the type of separate facilities (e.g. return centre, repair facility or DC) and decide between centralisation and decentralisation strategies.

Like other RL practices, organisations must perform *cost-benefit analyses* for separate facility/location practices. Particularly, organisations must consider the cost implications of establishing a separate network, infrastructure and facilities for RL and identify the potential benefits of implementing separate/facility location practices (see section 6.8.2.3). Consequently, if the costs of establishing separate infrastructure/facilities for RL out-weigh the benefits organisations may need to consider other alternatives (such as separating RL and FL in an established facility).

Accordingly, separate facility/location strategies can involve the *strategic establishment* of a *separate network* and *infrastructure* to manage consumer returns, emphasising an open-loop RL network design. Similarly, organisations may *strategically establish, implement* and *use separate facilities* for RL, which emphasises the importance of performing a cost-benefit analysis for separate facilities. Additionally, separate facility/location strategies in RL can entail the *strategic utilisation* of *separate facilities* at a *single location.* For example, a traditional warehouse and a repair facility at the same location in different buildings, running as separate entities.

Alternatively, separate facility/location strategies can involve the *strategic separation* of a *single facility,* which can be a warehouse or DC with separate areas for RL processes. Strategic separation of a single facility (performing both FL and RL operations) involves allocating a dedicated space for RL and creating a separate entry/exit for RL, a separate security for RL and a physical address for product

returns. For example, product returns arrive at a separate receiving dock and RL employees enter and exit the warehouse in separate area and work in separated areas in the warehouse (e.g. separate offices, storage area, and kitchen).

Regardless of the form of facility or location separation, a separate facility/location strategy signifies the *strategic separation* of *RL* and *FL*, which means that RL processes/operations function independently from FL operations. The strategic separation of RL and FL in separate facility/location strategies can involve a separate RL department, utilisation of RLIT (e.g. return software), dedicated RL staff, dedicated resources and separate operations.

6.8.2.2 Requirements of separate facility/location practices in RL

Separate facility/location practices involve few requirements, including economic, operational, and organisational requirements. The *economic requirements* of separate facility/location practices involve investment and costs, which relate to the separate facility/location strategies of establishing separate infrastructure and facilitates for RL. Additionally, the investment and cost requirements may associate with the strategic separation of a single facility for RL (e.g. dedicated security, staff and equipment), reemphasising the importance of performing a cost-benefit analysis for separate facility/location practices.

The *operational requirements* of separate facility/location practices involve high return volume and extensive RL operations. Particularly, a *high return volume* can be important for justifying the costs of establishing a separate infrastructure/new facility for RL, which emphasises the importance of the general facility/location operational decision factor of return volume for effective facility/location decisions (see section 6.8.1.2). Similarly, separate facility/location practices must involve *extensive RL operations* to justify the establishment and use of separate facilities.

Finally, the *organisational requirement* of separate facility/location practices involves a *partial RL outsourcing strategy* appropriate for strategically separating RL and FL in a standard facility. Since returned products can arrive in less secure packaging from consumers, outsourcing to a specialised security organisation can be important in preventing the potential theft of returned products.

In the next section, the outcomes of separate facility/location practices will be discussed.

6.8.2.3 Outcomes of separate facility/location practices in RL

The outcomes of separate facility/location practices are limited to economic and operational outcomes, which point to the importance of performing a cost-benefit analysis as part of the separate facility/location strategies (see section 6.8.2.1).

Nevertheless, the *economic outcomes* of separate facility/location practices include economies of scale and cost savings/reduction. Particularly, strategically establishing a new and separate facility for RL can help organisations achieve *economies of scale*, emphasising the high return volume (operational) requirement of separate facility/location practices (section 6.8.2.2). Alternatively, organisations can realise *cost savings* (such as fixed costs) through the strategic separation of a single facility (such as a warehouse) to perform RL processes.

The *operational outcomes* of separate facility/location practices involve improving product return control and security and facilitating and improving RL processes. Particularly, separate facility/location practices related to separating RL and FL in a single facility (strategy) and a partial RL outsourcing to a security organisation (organisational requirement) can *improve product return control* and *security*. Additionally, organisations can *facilitate* and *improve RL processes* through the several separate facility/location strategies, including (1) strategic decisions related to the number of separate facilities and locations, (2) strategic establishment of a separate network and infrastructure for RL, (3) strategic establishment and utilisation of a separate facility for RL, (4) strategic utilisation of separate facilities at a single location for RL, (5) strategic separation of a single facility, and (6) strategic separation of RL and FL processes.

Particularly, establishing a separate infrastructure can facilitate RL disposition processes and strategically separating a single facility (e.g. separate mailing address and dedicated space) can facilitate and improve receiving, sorting and disposition processes. For example, a separate return dock can prevent the mixing of returned products and new products streamlining the receiving and sorting processes. Consequently, separating RL and FL processes can help organisations identify inefficiencies in RL processes and reduce overall operational problems.

Despite the limited outcomes, separate facility/location practices may involve other benefits related to the utilisation of CRCs for RL since CRCs form part of separate facility/location practices (see section 6.8). Consequently, organisations that require a separate facility/location strategy (e.g. high return volume) must explore the utilisation of CRCs for additional facility/location, economic, operational,

organisational and market-related benefits (see section 6.8.6.2). In the next section, separate facility/location practices will be concluded with a description and conceptual framework.

6.8.2.4 Description and conceptual framework of separate facility/location practices to manage consumer returns

Based on the findings presented in section 6.8.2, separate facility/location practices in RL can be important for the management of consumer returns, and will be described as follows:

> Separate facility/location practices for the management of consumer returns involve (1) separate facility/location strategies, including open loop RL network design, strategic decisions related to separate facilities and locations, cost-benefit analyses, strategic establishment of a separate network and infrastructure, strategic establishment, implementation and use of a separate facility, strategic use of separate facilities at a single location, strategic separation of a single facility, and strategic separation of RL and FL, and (2) separate facility/location requirements, including economic requirements (investment and costs), operational requirements (high return volume and extensive RL operations) and an organisational requirement (partial RL outsourcing strategy). The separate facility/location strategies and requirements can result in a few outcomes, including (1) economic outcomes (economies of scale and cost savings) and (2) operational outcomes (product return control and security and facilitate and improve RL processes).

Figure 6.21 provides a conceptual framework of separate facility/location practices to manage consumer returns.

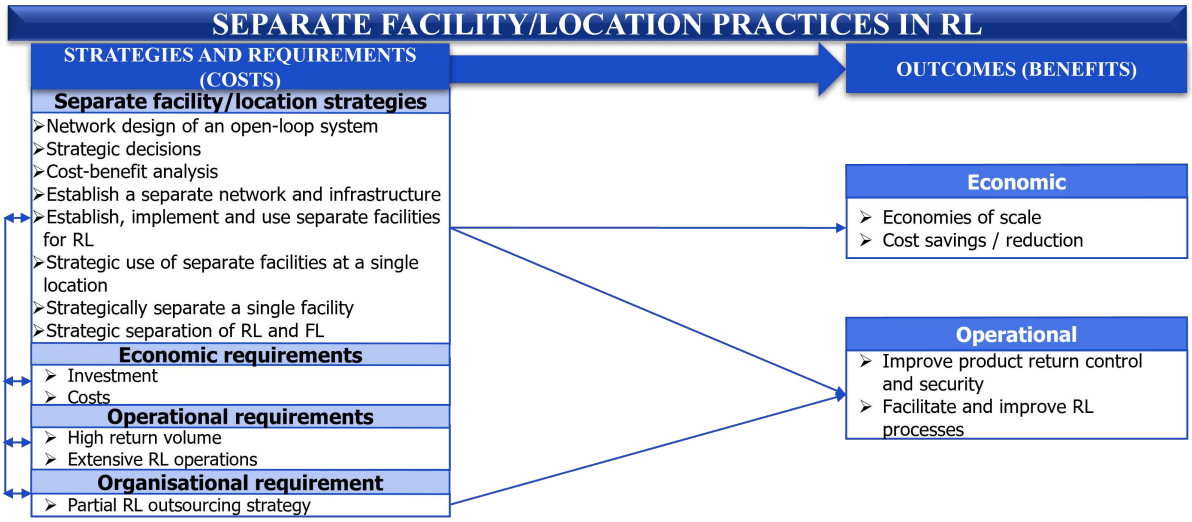


Figure 6.21 Conceptual framework of separate facility/location practices to manage consumer returns
Source: Compiled by researcher

Figure 6.21 illustrates the links between the strategies, requirements and outcomes of separate facility/location practices, demonstrating a cost and benefit relationship. For example, the links between separate facility/location strategies and requirements can be demonstrated by the separate facility/location strategy of establishing, implementing and using a separate facility for RL, which links with the economic requirements of investments and costs and the operational requirement of high return volume. Additionally, the separate facility/location strategy of separating a single facility for RL

and FL process separation can link with the organisational requirement of a partial RL outsourcing strategy.

Regarding the links between separate facility/location strategies, requirements and outcomes, the framework demonstrates that separate facility/location strategies, can be the most significant practices, linking with both economic and operational outcomes. In terms of the separate facility/location requirements, only the organisational requirement of partial outsourcing contribute to the operational outcome category. Nevertheless, like emphasised above, the economic and operational requirements can be important for the implementation of separate facility/location strategies and, therefore, indirectly contribute to the outcomes of separate facility/location practices.

From the outcomes of separate facility/location practices, the operational outcome category can be the most significant (associated with separate facility/location strategies and the organisational requirement), demonstrating that organisations that experience operational barriers and inefficiencies in RL processes can benefit from implementing separate facility/location practices.

Essentially, the links between the separate facility/location strategies, requirements and outcomes demonstrate the importance of a holistic approach to the management of consumer returns, meaning that organisations must carefully consider and analyse the costs (strategies and requirements) and benefits (outcomes) of separate facility/location for the effective management of consumer returns.

In the next section, integrated facility/location practices will be analysed and discussed.

6.8.3 Integrated facility/location practices to manage consumer returns

Integrated facility/location practices can be viewed as the opposite of separate facility/location practices, focussing on RL and FL (RL/FL) integration and strategic combination of facilities, infrastructure and resources. Additionally, the findings of integrated facility/location practices are more extensive than separate facility/location practices, implying that integrated facilities/locations may be preferred in practice to manage consumer returns. Nonetheless, like separate facility/location practices in RL, integrated facility/location practices must be chosen based on the general facility/location strategic decisions and factors (section 6.8.1), and involve strategies, requirements and related outcomes for the effective management of consumer returns.

Table 6.29 provides an overview of the findings related to the *integrated facility/location practices to manage consumer returns*, including the categories, subcategories, supporting sources for the subcategories and key quotations that support both the subcategories and the discussion of the findings.

Table 6.29 Findings related to integrated facility/locations practices to manage consumer returns

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
Integrated facility/ location strategies	***Prioritise combined facility/location practices***	None	• *"[…] integrating forward and reverse logistics should be the first priority in order to reduce cost and improve customer satisfaction."* (Vlachos, 2016:15)
	Integrated and closed-loop RL network design	Alshamsi and Diabat (2015:597) Bernon and Cullen (2007:53) Lau and Wang (2009:459) Min and Ko (2008:191) Sasikumar and Kannan (2008b:238)	• *"Separating the design may lead to sub-optimality and therefore integration of design of forward and reverse logistics network is needed."* (Choudhary *et al.* 2015:434) • *"In the design of reverse network, it may occur in one of two contexts: closed-loop or open loop system. In a closed loop system, sources and sinks coincide so that flows cycle in the system."* (Dhib *et al.* 2016:374)
	Strategic considerations and decisions for integrated facility/location practices	None	• *"[…] the interaction between the distribution of forward products and returned products also needs to be considered due to the influence of the activities of reverse logistics on forward logistics such as the occupancy of the storage spaces and transportation capacity."* (Lee & Dong, 2009:61) • *"[…] by the integration of both forward and reverse logistics, […] in a closed-loop network model and by considering different transportation modes […]."* (Alshamsi & Diabat, 2015:597) • *"In reverse logistics, how to integrate the forward and reverse channels is an important decision making point."* (Demirel & Gökçen, 2008:1198)
	Strategic analyses for integrated facility/location practices	Sasikumar and Kannan (2008b:238) Vlachos (2016:6)	• *"[…] fixed facility costs and variable unit processing costs, however, the transportation costs can be significantly reduced through the optimal combination of facilities and allocation of materials."* (Yu & Solvang, 2016:12) • *"[…] trade-offs between the forward logistics and the reverse logistics in optimizing [sic] the overall logistics system."* (Kim *et al.* 2013:509) • *"Gathering and integrating the reverse logistic information […]and analyzing [sic] them with the information of the forward logistics […]."* (Shi *et al.* 2012:226)
	Strategic utilisation of a standard facility	Jayaraman *et al.* (2008:419) Olorunniwo and Li (2011:3)	• *"[…] in practice companies sometimes operate same distribution-center [sic] (DC) facilities for both forward and reverse flows […]."* (Li & Olorunniwo, 2008:385) • *"Warehousing serves a dual function in forward and reverse logistics."* (Dowlatshahi, 2012:1266) • *"Almost all respondents […] indicated that they used their regular warehouses/distribution centers [sic] to process product returns as opposed to having a dedicated returns processing facility."* (Stock & Mulki, 2009:41)
	Strategic utilisation of combined facilities and locations	Srivastava and Srivastava (2006:530) Yu and Solvang (2016:12)	• *"A combined facility is defined as a warehouse or DC where both forward and reverse logistics activities occur in the same location."* (Stock & Mulki, 2009:41) • *"[…] distribution-cum-collection centre which is advantageous when compared to separate distribution or collection centre […] this activity is sharing of material-handling equipment and infrastructure […]."* (Choudhary *et al.* 2015:434) • *"Both forward products and returned products can be transferred via hybrid processing facilities."* (Lee & Dong, 2009:62)
	Strategic utilisation of an established network and infrastructure	Choudhary *et al.* (2015:434) Keh *et al.* (2012:32)	• *"In order to deal with commercial returns and faulty products, a company may set up a separate reverse logistics network or use the existing forward supply chain […]."* (Piplani & Saraswat, 2012:1424) • *"[…] utility of their physical network by combining the reverse operation with the forward operation."* (Bernon & Cullen, 2007:43) • *"[…] hybrid processing facilities […] sharing material handling equipment and infrastructure."* (Lee & Dong, 2009:62)
	Strategic utilisation of existing expertise, resources, capabilities and operations	Alshamsi and Diabat (2015:597) Choudhary *et al.* (2015:434) Lee and Dong (2009:62) Yu and Solvang (2016:12)	• *"This integration […] by reusing knowledge and experience already acquired during forward logistics operations."* (Keh *et al.* 2012:32) • *"The use of an existing warehouse for returned items […] is consistent with the strategic utilisation of a firm's existing resources."* (Dowlatshahi, 2012:1269) • *"Warehousing serves a dual function in forward and reverse logistics. The duality of functions means that warehousing facilities must be capable of both shipping finished products (forward logistics) and receiving returned products/parts products (reverse logistics). The utilisation of existing warehousing capabilities such as storage space, labour, equipment and operational methods can significantly enhance the effectiveness of the RL system. […]."* (Dowlatshahi, 2012:1266)
	Strategic integration of RL and FL	Agarwal *et al.* (2016:3) Agrawal *et al.* (2016d:20) Alshamsi and Diabat (2015:597) Beh *et al.* (2016:20) Bernon and Cullen (2007:43) Choudhary *et al.* (2015:434) Hong *et al.* (2008:173) Jayaraman *et al.* (2008:419)	• *"[…] reverse logistics […] should be […] well-coordinated with the forward logistics."* (Kim *et al.* 2013:510) • *"[…] a reverse logistics channel is widely integrated into forward logistics in terms of processes, resources, skills, information management, and infrastructure."* (Keh *et al.* 2012:33) • *"[…] economically integrate both the forward logistics and backward logistics […]."* (Kim & Goyal, 2011:2536) • *"Returns information captured should be integrated with forward supply chain information […]."* (Sasikumar & Kannan, 2008b:238)

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
		Lau and Wang (2009:459) Lieckens and Vandaele (2012:23) Shaharudin *et al.* (2015:9) Shi *et al.* (2012:226) Vlachos (2016:15)	• *"[…] companies report that some employees handle forward logistics (FL) and RL through the same distribution center (DC)."* (Olorunniwo & Li, 2011:3) • *"[…] integration of collection, inspection and consolidation of used products with forward logistics in reverse logistics programs."* (Ravi & Shankar, 2015:889) • *"[…] to integrate the existing forward logistics network with the backward logistics network for product returns […]."* (Min & Ko, 2008:191)
	Strategic separation of operational flows	None	• *"[…] the distinction between inbound and outbound flow of parts and products is essential for the proper functioning of the overall warehousing operations. This separation does not necessarily imply that the warehouse is totally divided into two separate entities."* (Dowlatshahi, 2012:1271)
	Strategic establishment of hybrid facilities	None	• *"[…] building such hybrid processing facilities might include cost savings and pollution reduction as a result of sharing material handling equipment and infrastructure."* (Lee & Dong, 2009:62)
Economic requirement	***Costs***	None	• *"[…] the facility operating costs may only have slightly change in different scenarios due to the relatively small variations in fixed facility costs and variable unit processing costs […] through the optimal combination of facilities […]."* (Yu & Solvang, 2016:12) • *"Installing inspection equipment in few warehouses will costs less than installing it in each collection points."* (Luitel *et al.* 2014:94)
IT requirement	***Utilise TLIT***	None	• *"Integration of forward and reverse logistics […] through the use of integrated logistics information management system to reduce waste and to improve profitability."* (Lau & Wang, 2009:459) • *"[…] enterprise systems also enable information sharing of forward logistics and reverse logistics […]."* (Shi *et al.* 2012:228)
Operational requirement	***Equipment***	None	• *"Installing inspection equipment in few warehouses will costs less than installing it in each collection points."* (Luitel *et al.* 2014:94)
	Compatible operations	None	• *"[…] separation does not necessarily imply that the warehouse is totally divided into two separate entities. In fact, the compatibility of warehousing operations is more important than the physical separation."* (Dowlatshahi, 2012:1271)
	Low return volume	None	• *"When return rates and/or volumes are low, a combined facility is usually optimal."* (Stock & Mulki, 2009:41) • *"[…] return volumes are low, they can typically be handled in a portion of the warehouse or DC where forward logistics takes place."* (Stock & Mulki, 2009:41)
Organisational requirements	***RL implementation***	None	• *"[…] reverse logistics recovering the economic value from the used products should be efficiently implemented and well coordinated with the forward logistics."* (Kim *et al.* 2013:510)
	RL insourcing strategy	None	• *"To run a selfsupport system, the demand for management skills is high as the company will be responsible […] for integrating both forward and reverse logistics […]."* (Lau & Wang, 2009:461)
	RL formalisation practices	None	• *"RL process managers formalize [sic] their processes; […] aligning 'new' reverse process with established pipelines and transportation channels […]."* (Hall *et al.* 2013:777)
	Management involvement	Jayaraman *et al.* (2008:419)	• *"Managers need to consider integration of collection, inspection and consolidation of used products with forward logistics in reverse logistics programs."* (Ravi & Shankar, 2015:889) • *"RL process managers […] aligning 'new' reverse process with established pipelines and transportation channels […]."* (Hall *et al.* 2013:777)
	Staff buy-in	None	• *"[…] integration may disturb the whole of the forward supply chain. Employee's awareness and motivation for the change is essential for successful integration."* (Agrawal *et al.* 2016d:20)
	Staff with dual functions	Agrawal *et al.* (2016d:20)	• *"[…] some employees handle FL and RL through consolidation of returns in DCs, which may also serve the forward supply flow […]."* (Olorunniwo & Li, 2011:7)
	Combined department	None	• *"[…] responsibility of RL is assigned to the supply chain department rather than having separate department. Therefore integration of forward and reverse supply chain plays an important role."* (Agrawal *et al.* 2016d:20)
SC requirement	***Combine and integrate SC and RSC***	Keh *et al.* (2012:33) Prakash and Barua (2015:603)	• *"[…] combine the forward supply chain (FSC) with RSC to form a whole supply chain that creates improved value."* (Hong *et al.* 2008:173) • *"Efficiently integrating forward and reverse SCs for managing product, finance and information flow in both directions […]."* (Agarwal *et al.* 2016:3)
Facility/ location outcomes	***Optimum network design***	None	• *"Separating the design may lead to sub-optimality and therefore integration of design of forward and reverse logistics network is needed."* (Choudhary *et al.* 2015:434)
	Optimise network utilisation	None	• *"[…] companies want to optimise the utility of their physical network by combining the reverse operation with the forward operation."* (Bernon & Cullen, 2007:43)
Economic outcomes	***Address economic barriers***	None	• *"[…] a reverse logistics channel is widely integrated into forward logistics in terms of processes, resources, skills, information management, and infrastructure […] to overcome […] economic barriers […] during reverse logistics implementation."* (Keh *et al.* 2012:33)

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
	Facilitate FM	None	• *"[…] to integrate the existing forward logistics network with the backward logistics network for product returns and therefore help the firm […] estimate the true cost of managing product returns from the holistic perspective."* (Min & Ko, 2008:191) • *"[…] by integrating forward and reverse SC to manage […] finance […] in both directions easily and efficiently."* (Prakash & Barua, 2015:603)
	Economic benefits	None	• *"Gathering and integrating the reverse logistic information […]and analyzing [sic] them with the information of the forward logistics […] […] are critical activities to increase the economic benefits of the entire logistic system."* (Shi *et al.* 2012:226) • *"[…] combine the forward supply chain (FSC) with RSC to form a whole supply chain that creates improved value."* (Hong *et al.* 2008:173)
	Reduce investment requirements	None	• *"Co-locating facilities is preferred as this leads to some savings in capital and manpower investment as well as transportation costs."* (Srivastava & Srivastava, 2006:530)
	Cost savings	Srivastava and Srivastava (2006:530) Sasikumar and Kannan (2008b:238)	• *"[…] integrating forward and reverse logistics should be the first priority in order to reduce cost […]."* (Vlachos, 2016:15) • *"[…] distribution-cum-collection centre which is advantageous when compared to separate distribution or collection centre with regard to cost savings […] The main motivation behind this activity is sharing of material-handling equipment and infrastructure, prompting to use the above-mentioned integrated forward–reverse logistics network."* (Choudhary *et al.* 2015:434) • *"[…] the facility operating costs may only have slightly change […] in fixed facility costs and variable unit processing costs, however, the transportation costs can be significantly reduced through the optimal combination of facilities and allocation of materials."* (Yu & Solvang, 2016:12) • *"Integrate reverse logistics to forward logistics: Reduce implementation cost […] by pooling infrastructures and resources."* (Keh *et al.* 2012:32) • *"[…] building such hybrid processing facilities might include cost savings […] as a result of sharing material handling equipment and infrastructure*." (Lee & Dong, 2009:62) • *"Installing inspection equipment in few warehouses will costs less than installing it in each collection points."* (Luitel *et al.* 2014:94)
	Profitability	None	• *"[…] to economically integrate both the forward logistics and backward logistics, […] to guarantee the profitability of the forward-reverse logistics."* (Kim & Goyal, 2011:2536) • *"Integration of forward and reverse logistics […] to form a close loop through the use of integrated logistics information management system […] to improve profitability."* (Lau & Wang, 2009:459)
Operational outcomes	***Address operational barriers and challenges***	None	• *"Integrate reverse logistics to forward logistics: Reduce […] operational difficulties by pooling infrastructures and resources."* (Keh *et al.* 2012:32) • *"This integration also enables minimizing [sic] operational difficulties related to the implementation of such a process by reusing knowledge and experience already acquired during forward logistics operations."* (Keh *et al.* 2012:32) • *"[…] a reverse logistics channel is widely integrated into forward logistics in terms of processes, resources, skills, information management, and infrastructure […] to overcome operational […] barriers often experienced by firms during reverse logistics implementation."* (Keh *et al.* 2012:33)
	Address infrastructure barriers in RL	None	• *"The integration of reverse logistics within a traditional logistics chain enables reusing the infrastructure […] already available […]."* (Keh *et al.* 2012:32)
	Improve RL and FL process efficiency	None	• *"Returns information captured should be integrated with forward supply chain information […] The whole support network can then be designed in such a way that it can service both the forward and RL processes efficiently."* (Sasikumar & Kannan, 2008b:238)
	Enhance operational effectiveness	None	• *"[…] the distinction between inbound and outbound flow of parts and products is essential for the proper functioning of the overall warehousing operations. This separation does not necessarily imply that the warehouse is totally divided into two separate entities."* (Dowlatshahi, 2012:1271)
	Successful RL/FL integration	None	• *"[…] integration may disturb the whole of the forward supply chain. Employee's awareness and motivation for the change is essential for successful integration."* (Agrawal *et al.* 2016d:20)
Organisational outcomes	***Facilitate successful RL design and implementation***	None	• *"The use of an existing warehouse for returned items appears to be a prerequisite for the successful design and implementation of RL. This is consistent with the strategic utilisation of a firm's existing resources."* (Dowlatshahi, 2012:1269) • *"[…] reverse logistics […] is widely integrated into forward logistics in terms of processes, resources, skills, information management, and infrastructure […] to overcome […] barriers often experienced by firms during reverse logistics implementation."* (Keh *et al.* 2012:33)
	Facilitate planning and innovation	None	• *"Returns information captured should be integrated with forward supply chain information to achieve optimum planning […]."* (Sasikumar & Kannan, 2008b:238) • *"Feeding forward logistics with insights from reverse logistics […] drives*

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
			research and development in new directions." (Vlachos, 2016:6)
	Facilitate development of integrated RL/FL strategies	None	• *"[…] to integrate the existing forward logistics network with the backward logistics network for product returns and therefore help the firm develop ''end-and-end'' process management strategy […] from the holistic perspective."* (Min & Ko, 2008:191)
	Enhance RL system effectiveness	None	• *"The duality of functions means that warehousing facilities must be capable of both shipping finished products (forward logistics) and receiving returned products/parts products (reverse logistics). The utilisation of existing warehousing capabilities such as storage space, labour, equipment and operational methods can significantly enhance the effectiveness of the RL system."* (Dowlatshahi, 2012:1266)
	Enhance overall logistics system	None	• *"[…] trade-offs between the forward logistics and the reverse logistics in optimizing [sic] the overall logistics system."* (Kim *et al.* 2013:509)
	Facilitate information sharing and management	Prakash and Barua (2015:603)	• *"[…] enterprise systems also enable information sharing of forward logistics and reverse logistics […]."* (Shi *et al.* 2012:228) • *"Efficiently integrating forward and reverse SCs for managing […] information flow in both directions […]."* (Agarwal *et al.* 2016:3)
	Facilitate RC practices	None	• *"The integration of reverse logistics within a traditional logistics […] enables reusing […] resources already available […]."* (Keh *et al.* 2012:32) • *"Greater resource utilization [sic] can be achieved through integration of forward and reverse supply chain."* (Agrawal *et al.* 2016d:20)
	Facilitate RPA practices	None	• *"[…] combining the forward logistics […] with the reverse logistics creating greater synergies between them […] optimising the forward logistics operations because the reverse logistics process is a consequence of hidden mistakes in the forward supply chain – such as inadequate packaging, inferior materials and poor delivery performance."* (Beh *et al.* 2016:20)
Environmental outcomes	***Pollution reduction***	None	• *"[…] distribution-cum-collection centre which is advantageous when compared to separate distribution or collection centre with regard to […] carbon emission reduction. The main motivation behind this activity is sharing of material-handling equipment and infrastructure, prompting to use the above-mentioned integrated forward–reverse logistics network."* (Choudhary *et al.* 2015:434) • *"[…] building such hybrid processing facilities might include […] pollution reduction as a result of sharing material handling equipment and infrastructure."* (Lee & Dong, 2009:62)
	Waste reduction	None	• *"Integration of forward and reverse logistics […] to form a close loop through the use of integrated logistics information management system to reduce waste […]."* (Lau & Wang, 2009:459)
Market-related outcomes	***Increase responsiveness***	None	• *"Feeding forward logistics with insights from reverse logistics increases quick response […]."* (Vlachos, 2016:6)
	Improve consumer satisfaction	None	• *"[…] integrating forward and reverse logistics should be the first priority in order to […] improve customer satisfaction."* (Vlachos, 2016:15)
SC outcome	***Enhance SCM***	None	• *"[…] to guarantee and maintain the sustainable supply chain management, the reverse logistics […] should be efficiently implemented and well coordinated with the forward logistics."* (Kim *et al.* 2013:510)

Source: Compiled by the researcher

Table 6.29 indicates integrated facility/location practices in RL, including strategies, requirements and outcomes, which will be discussed in subsequent sections. The section will be concluded with a description and conceptual framework for integrated facility/location practices.

6.8.3.1 Integrated facility/location strategies in RL

Integrated facility/location strategies in RL include (1) prioritising integrated facility/location practices, (2) integrated and closed-loop network design, (3) strategic considerations and decisions for integrated facility/location practices, (4) strategic analyses for integrated facility/location practices, (5) strategic utilisation of a standard facility, (6) strategic utilisation of combined facilities and locations, (7) strategic utilisation of an established network and infrastructure, (8) strategic utilisation of existing

expertise, resources, capabilities and operations, (9) strategic integration of RL and FL, (10) strategic separation of operational flows, and (11) strategic establishment of hybrid facilities.

Like IT, integration, and RL outsourcing practices, integrated facility/location practices must be *prioritised* for the successful strategic integration of RL/FL. Contrasting separate facility/location practices, integrated facility/location strategies involve an *integrated* and *closed-loop network design,* which involves integrating RL/FL network design and establishing a closed-loop network for product returns to re-enter the original SC. Consequently, organisations that mostly deal with new/unused product returns can benefit from a closed-loop network design (also see section 6.8.1.2).

Like other facility/location practices, integrated facility/location strategies can include *strategic considerations* and *decisions.* Particularly, organisations must consider the distribution interaction of FL and RL, storage space, transportation capacity and modes of transportation as well as decide on the method of RL/FL integration. Moreover, organisations must perform *strategic analyses,* including cost-benefit, trade-off and information analyses, for integrated facility/location practices. The cost-benefit analysis may help organisations identify the economic benefits of utilising an established facility for RL operations, for example, performing a cost-benefit analysis by comparing increased operational costs (additional warehouse processes) with transportation cost savings.

Additionally, performing a trade-off analysis for RL/FL integration can be important for the efficiency of RL and FL operations. Organisations can consider trade-offs related to integrated infrastructure, warehouse space, equipment and resources, locations and transportation in the analysis. For example, warehouse space may be required for new products (from suppliers) but to recover costs from returned products, the space may be better for new/unused product returns that can be resold. In terms of the information analysis, organisations can analyse RL information to identify inefficiencies in FL operations, which can be important for return avoidance (RA). For example, high product returns related to wrong products can be used to identify problems in FL operations, such as picking errors or administration/systems errors (see section 6.8.3.3).

In terms of strategies related to facilities and locations, integrated facility/location practices mostly involve the *strategic utilisation* of a *standard facility,* which closely relates to the strategic use of a single facility in separate facility/location strategies (e.g. DC for both FL and RL) (see section 6.8.2.1). However, unlike the separate facility strategy, an integrated facility strategy uses a standard facility, like a warehouse or DC, to run integrated operations for both RL and FL processes. Nevertheless, an integrated facility/location strategy can involve the *strategic utilisation* of a *combined facility* and

location, meaning that RL and FL take place at the same location in a combined facility (e.g. combining a collection or a repair facility and a DC) for integrated operations.

Additionally, an integrated facility/location strategy involves the *strategic utilisation* of an *established network* and *infrastructure* for RL and FL operations, emphasising an integrated network design. Consequently, integrated facility/location practices in RL entail the *strategic utilisation* of *existing expertise, resources, capabilities* and *operations*, meaning that all FL expertise/knowledge, IT, equipment, storage, labour, capabilities and operational methods can be used for RL. Nevertheless, the integrated facility or standard facility for RL and FL (like a warehouse) must be capable of managing both RL and FL operations for effective utilisation of existing infrastructure and resources.

Essentially, integrated facility/location strategies entail the *strategic integration* of *RL* and *FL*, which associates with other integrated facility/location strategies, including prioritisation, integrated network design, strategic decisions (e.g. methods of integration), strategic analyses, strategic use of integrated facilities/locations and strategic use of existing network, infrastructure, expertise, resources and capabilities. Particularly, the strategic integration of RL/FL in integrated facility/location practices involves efficient coordination of FL and RL operations (e.g. integrated collection, transportation and sorting) and effective integration of resources (e.g. IT, equipment, costs and staff), skills, capabilities, information management (for information analysis), infrastructure and network. Nevertheless, *strategic separation* of *operational flows* (such as separating inbound and outbound flows) can be critical for the efficiency of an integrated facility. This separation excludes complete separation of RL and FL in separate facility/location practices (such as separate entry/exits, receiving docks, security, space and staff for RL) (section 6.8.2).

Finally, integrated facility/location strategies may involve the *strategic establishment* of *hybrid facilities* for integrated RL/FL operations. Organisations may as part of general facility/location decision factors (see section 6.8.1.2) identify that integrated facility/location practices may be the best facility/location strategy but may lack the capacity to run integrated operations in an established facility. Alternatively, organisation may run two separate facilities at the same location and decide to combine the separate facilities and build a hybrid facility to integrate RL and FL operations.

In essence, integrated facility/location strategies can be viewed as the opposite of separate facility/location strategies, in terms of network design, strategic decisions, strategic use of facilities and locations, sharing of infrastructure and resources and RL/FL integration.

6.8.3.2 Requirements of integrated facility/location practices in RL

The requirements of integrated facility/location practices include (1) economic (2) IT, (3) operational, (4) organisational, and (5) SC requirements. The *economic requirement* of costs relates to the strategic utilisation of combined facilities with additional processing costs and the need to install equipment for RL processes. Additionally, costs may be incurred for the establishment of hybrid facilities for RL/FL integration (see section 6.8.3.1). Nevertheless, the cost requirement for integrated facility/location practices may be less than the establishment of separate facilities and infrastructure in separate facility/location practices, demonstrating the importance of performing cost-benefit analysis in facility/location practices (see sections 6.8.1.1 and 6.8.3.1).

The *IT requirement* of integrated facility/location practices relate to the strategic integration of RL/FL in terms of sharing of IT. Particularly, organisations can *utilise TLIT* (traditional logistics) systems, like LIMS (logistics information management system) and ERP (enterprise system) for RL/FL integration (see section 6.3.3). Consequently, for successful integration of RL and FL, organisations can use IT systems capable of managing both RL and FL information, emphasising the importance of IT practices for the effective management of consumer returns.

The *operational requirements* of integrated facility/location practices involve equipment, compatible operations and low return volumes. Relating to the economic requirement of costs, integrated facility/location practices require the installation of *equipment* to perform RL processes in the standard warehouse facility. The equipment requirements can involve the installation of inspection equipment (such as testing equipment) or other equipment for disassembly and repair operations (see section 5.6.3.1).

Additionally, integrated facility/location practices require *compatible operations,* which associates with the strategic separation of operational flows in a standard facility (section 6.8.3.1). For example, RL flows running parallel to FL flows in the warehouse without delays or bottlenecks caused by either operation. Contrasting the high return volume requirement of separate facility/location practices (section 6.8.2.2), integrated facility/location practices require *low return volumes.* Consequently, high return volume can cause operational challenges in a combined facility, for example, employees that perform RL and FL activities may neglect FL activities due to the amount of product return handling requirements. The impact of return volume on facility/location decisions, emphasise the significance of considering return volume as an operational decision factor in general facility/location practices (see section 6.8.1.2).

Several *organisational requirements* associate with integrated facility/location practices, including (1) RL implementation, (2) RL insourcing strategies, (3) RL formalisation practices, (4) management involvement, (5) staff buy-in, (4) staff with dual functions, and (5) a combined department. Since integrated facility/location practices involve the strategic integration of RL and FL, organisations must *implement RL* for effective coordination between RL and FL. Consequently, organisations must pay attention to RL and focus on implementing various RL practices for successful integrated facility/location practices. *RL insourcing strategies* can be one example of such a RL practice for effective integrated facility/location practices. Evidently, organisations must focus on developing a self-support insourcing strategy for RL, requiring the development of RL capabilities and skills to successfully perform RL processes alongside FL processes in a combined facility (also see section 6.5).

Similarly, *RL formalisation practices* (part of SPP practices) can be important for effective RL/FL integration in integrated facility/location practices. For example, establishing formal operating procedures, rules and defined responsibilities (see section 6.9.4) for staff with dual RL and FL responsibilities. *Management involvement* can be critical for integrated facility/location practices like making strategic decisions related to the methods of RL/FL integration (see section 6.8.3.1) and strategically integrating RL and FL processes. Additionally, management involvement may be important for *staff buy-in*, which involves employee awareness and acceptance of RL/FL integration. Staff buy-in in integrated facility/location practices may relate to the organisational barriers in RL that involve a lack of awareness on the importance of RL and a resistance to change since RL involves a change in mindset (see section 2.3.3).

Furthermore, staff buy-in can be important for the requirement of *staff* with *dual functions*, which associates with the strategic sharing of resources and strategic integration of RL/FL (integrated facility/location strategies). Therefore, some staff must be tasked with RL and FL activities (such as receiving and sorting of new and returned products), emphasising the importance of the lower return volume (operational) and RL formalisation requirements. Evidently, integrated facility/location practices require a *combined department* (e.g. logistics or SC department) responsible for managing and performing integrated RL/FL operations in standard or combined facilities.

Finally, the *SC requirement* of *combining* and *integrating the SC* and *RSC*, which relates to the integrated facility/location strategies of an integrated closed-loop network design and RL/FL integration (section 6.8.3.1). Therefore, integrated facility/location practices require integrated SCM for the effective management of integrated RL and FL flows.

In the next section, the outcomes of integrated facility/location practices will be explored.

6.8.3.3 Outcomes of integrated facility/location practices in RL

Integrated facility/location practices involve numerous outcomes, including (1) facility/location (2) economic, (3) operational, (4) organisational, (5) environmental, (6) market-related and (7) SC outcomes, which will be discussed in subsequent sections.

6.8.3.3.1 Facility/location and economic outcomes of integrated facility/location practices in RL

The *facility/location outcomes* of integrated facility/location practices include optimum network design and optimising network utilisation. *Optimum network design* can be achieved through the integrated facility/location strategy of an integrated network design, which implies that organisations may find it challenging to design an optimum separate network for RL as part of separate facility/location strategies. Additionally, organisations can *optimise network utilisation* through the strategic integration of RL and FL operations (integrated facility/location strategy), reemphasising the importance of an integrated network design.

Integrated facility/location practices involve numerous *economic outcomes*, including (1) addressing economic barriers, (2) facilitating FM, (3) economic benefits, (4) reducing investment requirements, (5) cost savings, and (6) profitability. Since RL involves high costs and economic barriers (see section 2.3.1), the strategic integration of RL and FL in terms of infrastructure, resources, skills, information management and processes (integrated facility/location strategies) can be important to *address economic barriers* in RL. Additionally, the integrated facility/location practices related to strategic integration of the RL/FL network (strategy) and integration of SC and RSC (SC requirement) *facilitate FM* (financial management), which can be an important RL practice. For example, strategic integration of RL and FL can help organisations to identify true RL costs, which can be important for the managing of RL costs of consumer returns (also see section 6.9.2).

Similarly, organisations can achieve *economic benefits* through the integrated facility/location practices related to strategic information analysis, strategic integration of RL/FL information (strategies) and integration of the SC and RSC (SC requirement), adding value to the overall RL/FL system. Moreover, the strategic combination of a facility for RL/FL *reduces investment requirements* related to capital and manpower, emphasising the significance of integrated facility/location practices in addressing economic barriers in RL (e.g. financial investment barriers) (see section 2.3.1).

Several integrated facility/location practices can provide *cost savings*, including (1) prioritising integrated facility/location practices, (2) integrated network design, (3) strategic analysis for integrate facility/location practices, (4) strategic use of a combined facility, (5) strategic use of an established

infrastructure, (6) strategic use of existing resource (e.g. equipment), (7) strategic integration of RL and FL, (8) strategic establishment of a hybrid facility (strategies), (9) costs (economic) requirement (e.g. costs of installing equipment in fewer facilities can realise cost savings), and (10) equipment installation (operational) requirement.

Finally, *profitability* can be obtained through the integrated facility/location practices of a closed-loop network design, integrating RL/FL (e.g. economic integration) (combined strategies) and utilising TLIT (such as LIMS) (IT requirement). Consequently, organisations that experience various economic challenges and barriers in RL can benefit from implementing integrated facility/location practices to manage consumer returns.

6.8.3.3.2 Operational outcomes of integrated facility/location practices in RL

The operational outcomes of integrated facility/location practices include (1) addressing operational barriers and challenges, (2) addressing infrastructure barriers, (3) improving RL and FL process efficiency, (4) enhancing operational effectiveness, and (5) successful RL/FL integration. Like separate facility/location practices (section 6.8.2.3), integrated facility/location practices can *address operational barriers* and *challenges* in RL, especially through the strategic use of an established infrastructure and existing knowledge and expertise, and strategic integration of RL and FL in terms of resources, skills, information management, infrastructure and processes. Similarly, organisations can *address infrastructure barriers* (developmental barriers) in RL through the integrated facility/location strategy of integrating RL and FL. Consequently, organisations that lack the necessary infrastructure to effectively manage consumer returns (see section 2.3.2) can consider implementing integrated facility/location practices in RL.

Organisations can *enhance* the *efficiency* of *RL* and *FL processes* through the integrated facility/location strategies of an integrated network design and RL/FL integration (in terms of information), which can be important for the overall logistics and operational efficiency of organisations. Moreover, organisations can *enhance operational effectiveness* through the integrated facility/location strategy of separating operational flows of RL and FL in a standard (warehouse) facility. Finally, organisations can *successfully integrate RL/FL* through the integrated facility/location operational requirement of staff buy-in, demonstrating the importance of staff commitment and awareness in RL for the effective management of consumer returns.

6.8.3.3.3 Organisational outcomes of integrated facility/location practices in RL

Integrated facility/location practices associate with several organisational outcomes, including (1) facilitating successful RL design and implementation, (2) facilitating planning and innovation, (3) facilitating the development of integrated RL/FL strategies, (4) enhancing RL system effectiveness, (5) enhancing overall logistics system, (6) facilitating information sharing and management, (7) facilitating RC practices, and (8) facilitating RPA practices.

The integrated facility/location strategies of utilising a standard facility (e.g. a warehouse), utilising existing resources and integrating RL/FL (in terms of resources, skills, information management, infrastructure and processes) can *facilitate successful RL design* and *implementation*. Furthermore, the integrated facility/location strategies related to strategic information analysis (e.g. analysing return information) and strategic integration of RL/FL information can *facilitate planning* and *innovation*, bringing new insights and improvements through research and development initiatives.

Additionally, the integrated facility/location strategies of using and integrating an existing network for RL and FL can *facilitate* the *development* of *integrated RL/FL strategies*, which can be important for the effective management of consumer returns. Moreover, organisations can *enhance* the *effectiveness* of the *RL system* through the integrated facility/location strategies of utilising a standard (warehouse) facility and existing resources and capabilities (e.g. space, labour, equipment and operational method) for RL. Consequently, by performing a strategic trade-off analysis for RL and FL (combined strategy), organisations can *enhance* the overall *logistics system*, demonstrating the importance of implementing RL practices for overall business success.

Additionally, the integrated facility/location practices of utilising TLIT (e.g. ERP) (IT requirement) and integrating the SC and RSC (SC requirement) can *facilitate information sharing* and *management*. Similarly, the integrated facility/location practices related to the strategic integration of RL/FL (strategy) and integration of the SC and RSC can *facilitate RC practices*, which can be critical for the effective management of consumer returns (see section 6.9.1). Evidently, integrated facility/location practices can indirectly facilitate other RL practices that require RC, including CI and RL disposition practices (see sections 6.4.2 and 6.6).

Finally, the integrated facility/location strategy of integrating RL/FL can *facilitate RPA practices* since organisations can use return information to identify inefficiencies in the FL processes that result in unnecessary product returns (e.g. poor packaging and delivery inefficiencies), emphasising the

importance of performing an information analysis for effective combined/facility practices (see section 6.8.3.1).

6.8.3.3.4 Environmental, market-related and SC outcomes of integrated facility/location practices

The *environmental outcomes* of integrated facility/location practices include reduction in pollution and waste. Particularly, organisations can *reduce pollution* through the integrated facility/location strategies of an integrated network design, using or establishing a combined/hybrid facility for RL and FL, using an established infrastructure and using existing resources for RL. Similarly, organisations can *reduce waste* through the combined/facility location practices of an integrated closed-loop network design, strategic integration of RL/FL (strategies) and the utilisation of TLIT (e.g. LIMS) (IT requirement). Consequently, integrated facility/location practices can be more environmentally friendly than separate facility/location practices (without environmental outcomes) and can be important for organisations aiming to improve environmental performance.

The *market-related outcomes* of integrated facility/location practices involve consumer responsiveness and satisfaction. Particularly, organisations can *increase responsiveness* through a strategic information analysis for integrated facility/location practices, demonstrating the importance of using RL information for the efficiency of both RL and FL processes (operational outcomes) (section 6.8.3.3.2). Subsequently, organisations can *improve consumer satisfaction* through the integrated facility/location strategies of prioritising RL/FL integration and strategically integrating RL/FL, which demonstrate that integrated facility/location practices can be important for the effective management of consumer returns.

Finally, the *SC outcome* of integrated facility/location practices involves SCM. Specifically, organisations can *enhance SCM* through the integrated facility/location practices related to strategic integration of RL/FL (e.g. well-coordinated integration) (strategy) and RL implementation (organisational requirement). Consequently, organisations that seek sustainable SCM can benefit from implementing integrated facility/location practices in RL.

Essentially, organisations can realise various economic, operational, organisational, environmental, market-related and SC benefits through integrated facility/location practices, which can be essential for the effective management of consumer returns. In the next section, integrated facility/location practices will be concluded with a description and conceptual framework.

6.8.3.4 Description and conceptual framework of integrated facility/location practices to manage consumer returns

Based on the findings presented in section 6.8.3, integrated facility/location practices can be important for the management of consumer returns, and will be described as follows:

> Integrated facility/location practices for the management of consumer returns involve (1) integrated facility/location strategies, including prioritising integrated facility/location practices, integrated and closed-loop network design, strategic considerations and decisions, strategic analyses (cost-benefit, trade-off and information analyses), strategic utilisation of a standard facility, combined facilities and locations, an established network and infrastructure and existing expertise, resources, capabilities and operations, strategic integration of RL and FL, separating operational flows, and establishing hybrid facilities, and (2) integrated facility/location requirements, including an economic requirement (costs), an IT requirement (utilise TLIT), operational requirements (equipment, compatible operations and low return volume), organisational requirements (RL implementation, RL insourcing and formalisation practices, management involvement, staff buy-in, staff with dual functions and a combined department), and a SC requirement (combine and integrate the SC and RSC).
>
> The integrated facility/location strategies and requirements can result in several outcomes, including (1) facility/location outcomes (optimum network design and optimise network utilisation), (2) economic outcomes (address economic barriers, facilitate FM, economic benefits, reduce investment requirements, cost savings and profitability), (3) operational outcomes (address operational barriers and challenges, address infrastructure barriers, improve RL and FL process efficiency, enhance operational effectives and successful RL/FL integration), (4) organisational outcomes (facilitate successful RL design and implementation, facilitate planning and innovation, facilitate the development of integrated RL/FL strategies, enhance RL system effectiveness, enhance overall logistics system, facilitate information sharing and management, facilitate RC and facilitate RPA practices), (5) environmental outcomes (reduce pollution and waste), (6) market-related outcomes (improve responsiveness and consumer satisfaction), and (7) SC outcome (enhance SCM).

Figure 6.22 provides a conceptual framework of integrated facility/location practices to manage consumer returns.

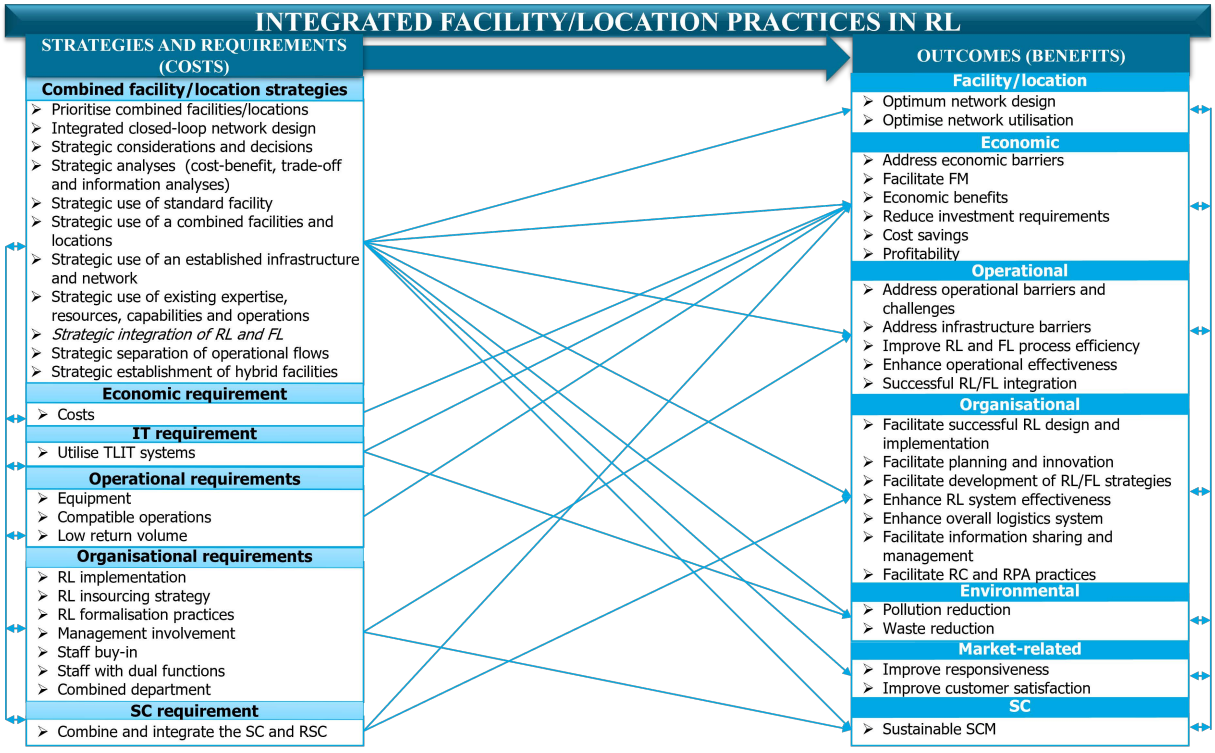


Figure 6.22 Conceptual framework of integrated facility/location practices to manage consumer returns

Source: Compiled by researcher

Figure 6.22 illustrates the links between the strategies, requirements and outcomes of integrated facility/location practices, demonstrating a cost and benefit relationship. The links between integrated facility/location strategies and requirements can be demonstrated by the integrated facility/location strategy of using a combined or standard facility for RL and FL, which links with the economic requirement of costs (installation), IT requirement of TLIT, operational requirement of equipment and organisational requirement of staff buy-in. Additionally, the integrated facility/location strategy of an integrated closed-loop network can link with the SC requirement of combining and integrating the SC and RSC.

Regarding the links between integrated facility/location strategies, requirements and outcomes, the framework demonstrates that integrated facility/location strategies, especially, the strategic integration of RL and FL, can be the most significant practice, linking with all the integrated facility/location outcomes, including facility/location, economic, operational, organisational, environmental, market-related and SC outcomes. Therefore, organisations must pay attention to the strategic integration of RL/FL and integrated facility/location strategies to achieve optimum results to manage consumer returns. From the integrated facility/location requirements, IT, organisational and SC requirements equally lead to the most outcome categories (two each), while economic and operational requirements lead to the least outcome categories (one each). Nevertheless, all integrated facility/location practices can lead to various outcomes, which can be important to manage consumer returns. From the outcomes of integrated facility/location practices, the economic outcome category can be the most significant (associated with most of the integrated facility/location practices), demonstrating that organisations experiencing economic barriers and cost-related problems in RL can benefit from implementing integrated facility/location practices. In contrast, the facility/location and market-related outcomes can be the least significant outcome categories (only associated with one practice category), meaning that integrated facility/location practices may be less important for organisations that experience facility/location and market-related challenges in RL.

Finally, the framework shows that the integrated facility/location outcome categories can be linked, for example, the operational outcome of successful RL/FL integration can link with all the outcome categories that associate with strategic integration of RL/FL, including facility/location, economic, organisational, economic, market-related and SC outcomes.

Essentially, the links between the integrated facility/location strategies, requirements and outcomes demonstrate the importance of a holistic approach to the management of consumer returns, meaning that organisations must carefully consider and analyse the costs (strategies and requirements) and benefits (outcomes) of integrated facility/location for the effective management of consumer returns.

In the next section, centralised facility/location practices will be analysed and discussed.

6.8.4 Centralised facility/location practices to manage consumer returns

Based on the strategic decisions in general facility/location practices, organisations that choose centralised facilities/locations for RL must implement strategies and requirements related to a centralised network, facilities and locations to achieve outcomes to manage consumer returns. Like separate facility/location practices, centralisation can be associated with centralised return centre (CRC) practices, if the return facilities are centrally located in the RL network (see the introduction of section 6.8). While centralised facilities will be included in centralisation, CRCs are excluded and discussed as a distinct practice in section 6.8.6. Table 6.30 provides an overview of the findings related to the *centralised facility/location practices to manage consumer returns*, including the categories, subcategories, supporting sources for the subcategories and key quotations that support both the subcategories and the discussion of the findings.

Table 6.30 Findings related to centralised facility/locations practices to manage consumer returns

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
Centralised facility/location strategies	***Strategic decisions and considerations related centralisation***	Gobbi (2011:779)	• *"The objective of this reverse logistics network design is to choose the […] degree of centralization [sic] of the network […]."* (Pishvaee *et al.* 2010:271) • *"[…] centralised returns are a related possibility when companies are considering the construction of their physical network."* (Bernon & Cullen, 2007:43) • *"Low recovery value and high investments require higher processing volume to make it economically viable. That's the reason that a centralized [sic], open loop network structure involving a small number of levels is preferred."* (Agrawal *et al.* 2015:83) • *"[…] using a centralised return strategy has problems such as an increase in shipping and transportation time […]."* (Jayaraman *et al.* 2008:419)
	Cost-benefit / trade-off analysis	None	• *"[…] it is important to clarify that for these warehousing managers, the benefits clearly outweighed the costs and hence the choice to use a centralised returns strategy to process returns."* (Jayaraman *et al.* 2008:419) • *"[…] returns are […] processed at a centralized location. The returns decay in value over time […] there is an intrinsic tradeoff in the decision – a longer interval between collections reduces transportation cost, but also reduces the value of asset recovery."* (Ruiz-Benítez *et al.* 2014:56)
	Benefit-driven strategies	None	• *"When centralization [sic] is pursued, the focus is on efficiency, cost reduction, and economies of scale."* (Gobbi, 2011:772) • *"The centralized [sic] structure is aimed at minimizing [sic] processing and transportation costs at the expense of a long lead time."* (Gobbi, 2011:779)
	Develop a centralised return strategy	Ramírez (2012:1139)	• *"A more centralized [sic] strategy can achieve greater benefit of economies of scale."* (Du & Evans, 2008:2618) • *"[…] the choice to use a centralised returns strategy to process returns."* (Jayaraman *et al.* 2008:419)
	Strategic establishment of a centralised open-loop network structure	Gobbi (2011:772)	• *"[…] a centralized [sic], open loop network structure involving a small number of levels is preferred."* (Agrawal *et al.* 2015:83) • *"[…] a centralized [sic] structure, all returned products are delivered first to a central facility […]."* (De Leeuw *et al.* 2016:717)
	Strategic establishment of a centralised return system	Hahler and Fleischmann (2013:4) Zikopoulos and Tagaras (2015:438)	• *"[…] a centralized [sic] returns system, in which all returns are processed in a centralized [sic] facility […]."* (De Leeuw *et al.* 2016:722)
	Strategic utilisation of a central facility and/or location for RL	Luitel *et al.* (2014:94) Ramírez (2012:1139)	• *"[…] all returned products are delivered first to a central facility […]."* (De Leeuw *et al.* 2016:717) • *"[…] all returns are processed in a centralized [sic] facility […]."* (De Leeuw *et al.* 2016:722) • *"[…] processing returns in a central point […]."* (Bernon *et al.* 2016:597) • *"[…] products are taken to a centralized [sic] location […]."* (Barker & Zabinsky, 2011:560) • *"[…] returns are picked up from a collection point and then processed at a centralized [sic] location."* (Ruiz-Benítez *et al.* 2014:56)

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
	Strategic utilisation of a few central facilities and locations for RL	None	• *"Installing inspection equipment in few warehouses will costs less than installing it in each collection points."* (Luitel *et al.* 2014:94) • *"In a centralized [sic] structure, each activity is installed at a few locations […].* (Gobbi, 2011:772)
Economic requirements	***Investment***	Agrawal *et al.* (2015:83)	• *"[…] centralized structure […] high investments required in terms of specialized [sic] recovery equipment and personnel."* (Gobbi, 2011:788)
	Costs	None	• *"[…] processing returns in a central point […] the downside is the potential for additional logistics costs especially where product is returned to store at a later date."* (Bernon *et al.* 2016:597) • *"[…] using a centralised return strategy has problems such as an increase in shipping and transportation time and the corresponding increase in transportation costs […]."* (Jayaraman *et al.* 2008:419) • *"[…] centralized [sic] warehouses […] only large numbers of returns would be sufficient to cover central storage costs."* (Ramírez, 2012:1139) • *"Installing inspection equipment in few warehouses will costs […]."* (Luitel *et al.* 2014:94)
Operational requirements	***Equipment***	Agrawal *et al.* (2015:83) Zikopoulos and Tagaras (2015:438)	• *"Installing inspection equipment in few warehouses […]."* (Luitel *et al.* 2014:94) • *"[…] centralized structure […] required […] specialized [sic] recovery equipment […]."* (Gobbi, 2011:788)
	High return volume	Agrawal *et al.* (2015:83)	• *"[…] if the firm's strategy is to use centralized warehouses, […] only large numbers of returns would be sufficient to cover central storage costs."* (Ramírez, 2012:1139)
	Consolidation	None	• *"[…] using a centralised return strategy has […] the difficulty in consolidating all return shipment to the centralised facility."* (Jayaraman *et al.* 2008:419)
Organisational requirement	***Management involvement***	None	• *"[…] for these warehousing managers, the benefits clearly outweighed the costs and hence the choice to use a centralised returns strategy to process returns."* (Jayaraman *et al.* 2008:419)
	Skilled staff	None	• *"[…] centralized structure […] required […] specialized [sic] […] personnel."* (Gobbi, 2011:788) • *"[…] availability of experienced work-force and sophisticated equipment […] to a centralized [sic] system."* (Zikopoulos & Tagaras, 2015:438)
Economic outcomes	***Reduce investment requirements***	None	• *"Centralization [sic] avoids multiple investments in specialized [sic] resources."* (Gobbi, 2011:785) • *"[…] high investments require higher processing volume to make it economically viable. That's the reason that a centralized [sic], open loop network structure involving a small number of levels is preferred."* (Agrawal *et al.* 2015:83)
	Economies of scale	None	• *"When centralization [sic] is pursued, the focus is on […] economies of scale."* (Gobbi, 2011:772) • *"A more centralized [sic] strategy can achieve greater benefit of economies of scale."* (Du & Evans, 2008:2618)
	Cost savings	Hsu *et al.* (2009:527)	• *"The centralized [sic] structure is aimed at minimizing [sic] processing and transportation costs at the expense of a long lead time."* (Gobbi, 2011:779) • *"[…] returns are […] processed at a centralized [sic] location. The returns decay in value over time […] there is an intrinsic tradeoff in the decision – a longer interval between collections reduces transportation cost, […]."* (Ruiz-Benítez *et al.* 2014:56) • *"[…] a centralized [sic] returns system, in which all returns are processed in a centralized [sic] facility, is potentially more capable of minimizing [sic] the costs of returns processes."* (De Leeuw *et al.* 2016:722) • *"Installing inspection equipment in few warehouses will costs less than installing it in each collection points."* (Luitel *et al.* 2014:94)
Operational outcomes	***Improve RL processes***	None	• *"[…] since all returns processes are done in one location, they can more quickly identify problems in the returns process and make improvements."* (De Leeuw *et al.* 2016:723)
	Improve RL process efficiency	None	• *"When centralization [sic] is pursued, the focus is on efficiency […]."* (Gobbi, 2011:772) • *"[…] processing returns in a central point is more efficient."* (Bernon *et al.* 2016:597)
Organisational outcomes	***Facilitate RC***	None	• *"Centralization [sic] avoids multiple investments in specialized [sic] resources."* (Gobbi, 2011:785)

Source: Compiled by the researcher

Table 6.30 indicates centralised facility/location practices in RL, including strategies, requirements and outcomes, which will be discussed in subsequent sections and concluded with a description and conceptual framework.

6.8.4.1 Centralised facility/location strategies in RL

Centralised facility/location strategies in RL include (1) strategic decisions and considerations related to centralisation, (2) a cost-benefit/trade-off analysis, (3) benefit-driven strategies, (4) developing a centralised return strategy, (5) strategic establishment of a centralised open-loop network structure, (6) strategic establishment of a centralised return system, (7) strategic utilisation of a central facility and/or location for RL, and (8) strategic utilisation of a few facilities and locations for RL.

Like other facility/location practices, centralised facility/location strategies entail *strategic decisions* and *considerations* to facilitate organisations with determining the appropriateness of a centralisation strategy while establishing a network structure for RL. Particularly the strategic decisions in centralised facility/location decisions relate to the degree of centralisation, for example, one central facility at a central location or a few central facilities at a few central locations, for the effective management of consumer returns. In terms of the strategic considerations, centralisation involve product recovery value, investment, volume and return lead time considerations, which means that organisations must consider economic and operational factors for a centralisation strategy.

Consequently, organisations with limited capital for investment, high return volumes and product returns of low recovery value, may benefit from implementing an open-loop centralisation strategy. For example, online grocery retailers that deal with perishable products that can only be destroyed or recycled (due to shelf-life limitations) may select centralisation to deal with product returns. Nevertheless, organisations must consider the longer return lead time associated with centralisation and the potential impact on customer service and satisfaction.

Subsequently, performing a *cost-benefit* or *trade-off analysis* can be important for centralised facility/location strategies, ensuring that the benefits (outcomes) of centralisation outweigh the costs (requirements). For example, for a centralisation strategy, organisations can perform an analysis by considering the costs of longer return lead-time against the benefits of transportation and processing cost savings. Essentially, like general facility/location strategies (section 6.8.1.1), organisations must focus on establishing *benefit-driven* centralisation strategies, including cost minimisation, economies of scale and efficiency for the effective management of consumer returns.

Based on the strategic decisions and considerations, a cost-benefit analysis and benefit-driven strategies, organisations can *develop a centralised return strategy* to guide the implementation of centralised facility/location practices to manage consumer returns. Additionally, organisations must *strategically establish a centralised open-loop network structure*, meaning that all product returns

arrive at a central facility/location for processing, inspection, sorting and disposition to eventually enter a different SC (see section 6.8.2.1) or get disposed of. Moreover, organisations must *strategically establish a centralised return system* to facilitate centralised collection, receiving, processing, inspection, sorting, disposition and redistribution of product returns through an open-loop network structure.

Regarding the degree of centralisation (strategic decision), organisations can *strategically utilise* of a *central facility* and/or *location* to perform RL processes. Alternatively, organisations can *strategically utilise a few central facilities and locations* for various RL processes. For example, organisations can centralise a collection facility to collect and consolidate product returns, dispatch the returned products to a central warehouse to perform inspection, sorting and testing, and then dispatch the returned products (that requires product recovery) to a central repair facility to perform disposition operations.

6.8.4.2 Requirements of centralised facility/location practices in RL

Like separate facility/location practices (see section 6.8.2.2), centralised facility/location practices include economic, operational, and organisational requirements. The *economic requirements* of centralised facility/location practices involve investment and costs. Particularly, the *investment* requirement of centralised facility/location practices associates with other requirements related to equipment (operational) and skilled staff (organisational), which can be important for the effective management of consumer returns. The *cost* requirements associate with the longer shipping and return lead times, which means that organisations may incur additional transport, logistics and storage/inventory costs by using a central facility/location for RL processes.

This contrasts the transport cost savings associated with fewer transportation return trips and economies of distance (see section 6.8.1.2) to a centralised location, emphasising the importance of a cost-benefit analysis and benefit-driven strategies for effective centralised facility/location practices (section 6.8.4.1). Moreover, organisations can incur equipment installation costs for using a few facilities at central locations to perform specific RL processes, which emphasise the investment requirements of a centralised network structure.

The *operational requirements* of centralised facility/location practices involve equipment, return volume and consolidation. Relating to the investment and cost requirements, centralised facility/location practices require specialised *equipment* (such as inspection and repair equipment) to perform RL processes at centralised facilities/locations (e.g. few central warehouses). The *high return volume* requirement can be important for a benefit-driven centralisation strategy that focus on cost

minimisation, emphasising the importance of volume considerations in the strategic considerations related to centralisation (section 6.8.4.1). Additionally, organisations must perform *consolidation* that involves combining product returns at a location for larger shipments, which reemphasise the importance of considering longer return lead times in centralisation strategies.

Finally, the *organisational requirements* of centralised facility/location practices include management involvement and skilled staff. *Management involvement* can be important for the strategic decisions and considerations related centralisation, development of a centralised return strategy, performing cost-benefit analyses and implementing benefit-driven centralisation strategies (see section 6.8.4.1). Relating to the economic (investment) and operational (equipment) requirements of centralisation, *skilled staff* can be important for operating specialised RL process equipment and performing challenging RL processes (like inspection and disposition). Consequently, the skilled staff requirement of centralisation demonstrates that organisations may choose centralisation for more specialised RL processes since it may be too costly to duplicate resources in various locations and facilities (associated with decentralisation) (see section 6.8.5).

6.8.4.3 Outcomes of centralised facility/location practices in RL

Centralised facility/location practices involve economic, operational and organisational outcomes, which can be important for the management of consumer returns.

The *economic outcomes* of centralised facility/location practices, include (1) reducing investment requirements, (2) economies of scale and (3) cost savings. Organisations can *reduce investment requirements* through the centralised facility/location practices related to (1) strategic considerations (such as considering investment and return volume), (2) strategic establishment of an open-loop network structure, (3) investment (economic requirement), and (4) high return volume (operational requirement). Consequently, utilising a single or fewer facilities/locations means less investment in resources for RL (such as installing inspection equipment and employing skilled staff at each facility) (see section 6.8.4.2), emphasising the importance of a cost-benefit analysis for centralisation (section 6.8.4.1).

Economies of scale can be obtained through the implementation of a benefit-driven centralisation strategy (focussing on economies of scale) and the development of a centralised return strategy, emphasising the high return volume (operational) requirement of centralisation (section 6.8.4.2). Accordingly, *cost savings* can be realised through several centralised facility/location practices, including (1) strategic considerations for centralisation, (2) cost-benefit analyses, (3) benefit-driven

centralisation strategies, (4) strategic establishment of a centralised network, (5) strategic establishment of a centralised return system, (6) strategic utilisation of a central facility and location for RL, (7) cost (economic) requirement, and (8) equipment (operational) requirement.

Centralised facility/location practices involve *operational outcomes* related to the improvement of RL processes and efficiency. Particularly, organisations can *improve RL processes* through the strategic utilisation of a central location since inefficiencies in RL processes can quickly be identified. Subsequently, centralised facility/location practices, including implementing benefit-driven centralisation strategies and utilising a central location for RL, can *improve RL process efficiency*, which can be important for the effective management of consumer returns.

Finally, the *organisational outcome* of centralised facility/location practices involves *RC* in RL, which relates to the reduced investment (economic) outcome of centralisation. Consequently, despite the investment requirement (economic) of centralisation utilising fewer facilities/locations reduce the need for duplication of resources (e.g. specialised equipment and skilled staff), reemphasising the importance of the centralisation strategies related to considering investment, performing a cost-benefit analysis and focussing on benefit-driven strategies (see section 6.8.4.1).

In the next section, centralised facility/location practices will be concluded with a description and conceptual framework.

6.8.4.4 Description and conceptual framework of centralised facility/location practices to manage consumer returns

Based on the findings presented in section 6.8.4, centralisation in RL can be important for the management of consumer returns, and will be described as follows:

> Centralised facility/location practices for the management of consumer returns involve (1) centralised facility/location strategies, including strategic decisions and considerations related to centralisation, a cost-benefit / trade-off analysis, benefit-driven strategies, developing a centralised return strategy, strategic establishment of a centralised open-loop network structure and a centralised return system, strategic utilisation of a central facility and/or location for RL, and strategic utilisation of a few facilities and locations for RL, and (2) centralised facility/location requirements, including economic requirements (investment and costs), operational requirements (equipment, high return volume and consolidation) and organisational requirements (management involvement and skilled staff). The centralised facility/location strategies and requirements can result in a few outcomes, including (1) economic outcomes (reduce investment requirements, economies of scale and cost savings), (2) operational outcomes (improve RL processes and RL process efficiency) and (3) an organisational outcome (facilitate RC).

Figure 6.23 provides a conceptual framework of centralised facility/location practices to manage consumer returns.

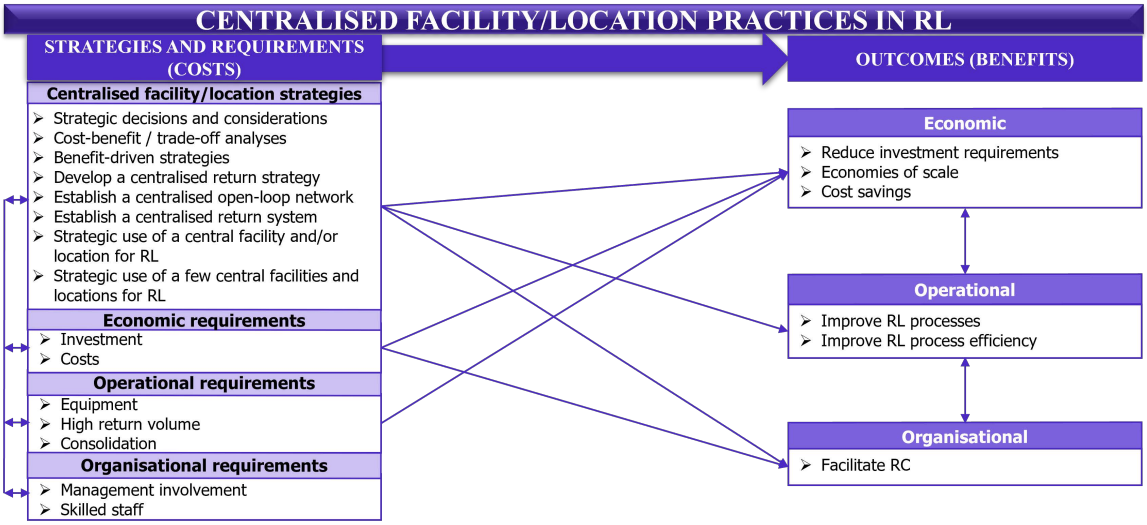


Figure 6.23 Conceptual framework of centralised facility/location practices to manage consumer returns

Source: Compiled by researcher

Figure 6.23 illustrates the links between the strategies, requirements and outcomes of centralised facility/location practices, demonstrating a cost and benefit relationship. The links between centralised facility/location strategies and requirements can be demonstrated by the economic requirements of investment, which links with the strategic considerations of centralisation (strategy), operational requirement of equipment and organisational requirement of skilled staff.

Regarding the links between centralised facility/location strategies, requirements and outcomes, the framework shows that centralised facility/location strategies, can be the most significant practice category, linking with all the outcome categories, including economic, operational, and organisational outcomes. Therefore, organisations must pay attention to the centralised facility/location strategies to achieve optimum results to manage consumer returns. From the centralised facility/location requirements, the economic requirement category leads to the most outcome categories (two out of three), while the organisational requirements exclude any outcomes.

From the outcomes of centralised facility/location practices, the economic outcome category can be the most significant (associated with most of the centralised facility/location practices), demonstrating that organisations experiencing economic barriers and cost-related problems in RL can benefit from implementing centralised facility/location practices. In contrast, the operational outcome category can be the least significant outcome categories (only associated with one practice category), meaning that centralised facility/location practices may be less important for organisations that experience operational challenges in RL.

Finally, the framework shows that the centralised facility/location outcome categories can be linked, for example, the economic outcome of reduce investment requirement can link with the organisational outcome of facilitating RC, and the operational outcome of improving RL process efficiency can link with the economic outcome of cost savings.

Essentially, the links between the centralised facility/location strategies, requirements and outcomes demonstrate the importance of a holistic approach to the management of consumer returns, meaning that organisations must carefully consider and analyse the costs (strategies and requirements) and benefits (outcomes) of centralised facility/location for the effective management of consumer returns.

In the next section, decentralised facility/location practices will be analysed and discussed.

6.8.5 Decentralised facility/location practices to manage consumer returns

Decentralisation as a facility/location practice to manage consumer returns can be described as the opposite of centralisation, which means that several facilities and locations can be utilised for RL processes. Like other RL practices, decentralised facility/location practices entail strategies and requirements, which can contribute to the outcomes for the management of consumer returns. Table 6.31 provides an overview of the findings related to the *decentralised facility/location practices to manage consumer returns*, including the categories, subcategories, supporting sources for the subcategories and key quotations that support both the subcategories and the discussion of the findings.

Table 6.31 Findings related to decentralised facility/location practices to manage consumer returns

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
Decentralised facility/location strategies	***Strategic decisions and considerations related to decentralisation***	None	• *"The appropriate level of decentralization [sic] of a returns network is influenced by the type of product. Time-sensitive products require fast turnaround processing, for which decentralized [sic] networks may be more beneficial."* (De Leeuw *et al.* 2016:723) • *"[…] decision on location about products collection should be made from JIT perspective. If the returned products require fast processing (e.g. they are perishable in nature […]), the collection points should be set close to the customer, and the frequency for collection should be increased."* (Chan *et al.* 2010:6301) • *"[…] the availability of the decentralized [sic] […] system is influenced by the investment in the number of collection points."* (Hahler & Fleischmann, 2013:4) • *"[…] Direct reusable products require only minor inspection, cleaning and minor maintenance. They are expected to form a flat network structure comprising a small number of levels. [...] This may be one of the reasons for having a decentralized [sic] network."* (Agrawal *et al.* 2015:83) • *"[…] decentralized [sic] collection systems are especially recommendable for smaller electronic devices […] decentralized [sic] is in general better when collecting used products that are highly heterogeneous in their quality, […] and […] decentralized [sic] is better for used products that are not too bulky."* (Hahler & Fleischmann, 2013:24)
	Benefit-driven strategy	Bernon *et al.* (2016:593) Banomyong *et al.* (2008:37)	• *"When decentralization [sic] is pursued, the focus is on increased geographical coverage, short lead time, and increased customer service."* (Gobbi, 2011:771)
	Strategic establishment of a decentralised flat	Gobbi (2011:772)	• *"In a decentralized [sic] structure, product returns are handled directly by retailers or returns facilities located nearby consumers."* (De Leeuw *et al.* 2016:718)

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
	network structure		• *"They are expected to form a flat network structure comprising a small number of levels [...] having a decentralized [sic] network."* (Agrawal *et al.* 2015:83)
	Strategic establishment of a decentralised return system	None	• *"[…] a decentralized [sic] returns system […] all information is shared with other returns facilities […]."* (De Leeuw *et al.* 2016:722) • *"[…] decentralized [sic] collection system […] for operating the necessary collection points […]."* (Hahler & Fleischmann, 2013:4)
	Strategic establishment of facilities/locations close to markets/ consumers	Bernon *et al.* (2016:593) De Leeuw *et al.* (2016:718) Ghezavati and Nia (2015:3067) Mazahir *et al.* (2011:94)	• *"The setting up of service centers [sic] near customers […]."* (Banomyong *et al.* 2008:37) • *"[…] the collection points should be set close to the customer […]."* (Chan *et al.* 2010:6301)
	Strategic utilisation of retail stores for RL	Ahsan and Rahman (2016:627)	• *"In a decentralized [sic] structure, product returns are handled directly by retailers […]."* (De Leeuw *et al.* 2016:718) • *"The decentralized [sic] structure […] products are returned to a store […]."* (De Leeuw *et al.* 2016:722)
	Strategic utilisation of decentralised facilities for RL	Ghezavati and Nia (2015:3067)	• *"In a decentralized [sic] structure, product returns are handled directly by […] returns facilities […]."* (De Leeuw *et al.* 2016:718)
	Strategic utilisation of multiple / flexible locations for RL	Bernon *et al.* (2016:593) Ghezavati and Nia, (2015:3067) Hahler and Fleischmann, (2013:3)	• *"Retailers prefer to provide returns convenience through the option of flexible returns location."* (Ahsan & Rahman, 2016:627) • *"[…] set collection options that provide consumers with the motivation to return products without any extra hassle […]."* (Das & Chowdhury, 2012:209)
	Strategic decentralisation of specific RL processes	Luitel *et al.* (2014:94)	• *"[…] the collection points should be set close to the customer […] for collection […]."* (Chan *et al.* 2010:6301) • *"[…] decentralizing [sic] the grading activities in a collection system [...]."* (Hahler & Fleischmann, 2013:24) • *"It is better to conduct the inspection closer to the customer […]."* (Mazahir *et al.* 2011:94)
Economic requirements	***Investment***	None	• *"[…] investment in the number of collection points."* (Hahler & Fleischmann, 2013:4)
	Costs	None	• *"[…] decentralized [sic] […] system faces fixed costs for operating the necessary collection points […]."* (Hahler & Fleischmann, 2013:4) • *"[…] inspection equipment […] will costs […] installing it in each collection points."* (Luitel *et al.* 2014:94)
IT requirement	***Utilise an appropriate IT infrastructure***	None	• *"[…] decentralization [sic] requires an appropriate information system infrastructure so that goods returned in store can be made available to online consumers again […]."* (De Leeuw *et al.* 2016:723)
	Utilise integrated IT	None	• *"[…] a decentralized [sic] returns […] all information is shared with other returns facilities in an integrated system."* (De Leeuw *et al.* 2016:722)
Operational requirement	***Equipment***	None	• *"Installing inspection equipment […] in each collection points."* (Luitel *et al.* 2014:94)
	Duplicate RL operations	None	• *"[…] in a decentralized [sic] structure, the same operation is conducted at several different locations in parallel.* (Gobbi, 2011:772)
	Simpler RL operations	None	• *"Direct reusable products require only minor inspection, cleaning and minor maintenance [...] This may be one of the reasons for having a decentralized [sic] network."* (Agrawal *et al.* 2015:83)
Facility/location outcome	***Greater geographical coverage***	None	• *"[…] decentralization [sic] […] increased geographical coverage […]."* (Gobbi, 2011:771)
Economic outcomes	***Cost avoidance***	None	• *"It is better to conduct the inspection closer to the customer […] in order to avoid any non-value-adding cost to the retrieved products such as transporting them to the […] facility."* (Mazahir *et al.* 2011:94)
Operational outcomes	***Facilitate product return quality uncertainties***	None	• *"[…] when collecting used products that are highly heterogeneous in their quality, […] and in the quality perception of the product holders […] decentralized [sic] is better […]."* (Hahler & Fleischmann, 2013:24)
	Improve RL process speed	Chan *et al.* (2010:6301)	• *"[…] fast turnaround processing, for which decentralized [sic] networks may be more beneficial."* (De Leeuw *et al.* 2016:723) • *"When decentralization [sic] is pursued, the focus is on […] short lead time […]."* (Gobbi, 2011:771) • *"The decentralized [sic] structure allows the company to provide fast product handling and fast product refunds (when products are returned to a store)."* (De Leeuw *et al.* 2016:722)
Organisational outcome	***Facilitate internal information sharing***	None	• *"[…] a decentralized [sic] returns system […] all information is shared with other returns facilities in an integrated system."* (De Leeuw *et al.* 2016:722)
Market-related outcomes	***Consumer convenience***	None	• *"[…] returns network was the ease with which customers could return products and the number of return points available to them to minimize [sic] distance travel times."* (Bernon *et al.* 2016:593) • *"The setting up of service centers [sic] near customers […] should be able to help minimize [sic] customers inconvenience in terms of time and cost involved […]."* (Banomyong *et al.* 2008:37)

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
			• *"[…] set collection options that provide consumers with the motivation to return products without any extra hassle […]."* (Das & Chowdhury, 2012:209) • *"[…] to provide returns convenience through the option of flexible returns location."* (Ahsan & Rahman, 2016:627)
	Increase customer service	None	• *"The proximity of collection centers [sic] […] can enhance the level of customer service due to easy access to customers' locations."* (Ghezavati & Nia, 2015:3067) • *"When decentralization [sic] is pursued, the focus is on […] increased customer service."* (Gobbi, 2011:771)

Source: Compiled by the researcher

Table 6.31 indicates decentralised facility/location practices in RL, including strategies, requirements and outcomes, which will be discussed in subsequent sections and concluded with a description and conceptual framework.

6.8.5.1 Decentralised facility/location strategies in RL

Decentralised facility/location strategies in RL include (1) strategic decisions and considerations related to decentralisation, (2) a benefit-driven strategy, (3) strategic establishment of a decentralised flat network structure, (4) strategic establishment of a decentralised returns system, (5) strategic establishment of facilities/locations close to markets/consumers, (6) strategic utilisation of retail stores for RL, (7) strategic utilisation of decentralised facilities for RL, (8) strategic utilisation of multiple / flexible locations for RL and, (9) strategic decentralisation of specific RL processes.

Like centralisation (section 6.8.4.1), the *strategic decisions* and *considerations* related to *decentralisation* associate with the degree of decentralisation and decisions related to optimum decentralised locations. However, organisations must consider several factors for selecting decentralised facility/locations for RL, including time requirements, investment, product characteristics, disposition options and product return quality. Specifically, organisations that require faster RL processes due to perishable products or products with shorter life cycles (e.g. portable electronics like smart watches, cellular devices and cellular accessories) may choose a decentralisation strategy.

Furthermore, decentralisation can be appropriate for organisations that invested (or allocated funds for investment) in several facilities (e.g. collection centres) closer to the markets. Relating to the operational (general facility/location) decision factor of product returns (see section 6.8.1.2), organisations that receive mostly new/unused products with limited RL operational requirements (e.g. minor inspection and repackaging) for direct reuse (disposition option) can benefit from utilising a decentralised network for quick redistribution to the markets. Alternatively, organisations receiving (less bulky) used product returns with high uncertainty in return qualities can benefit from

decentralisation since better situation-based (non-standardised) decision making can be performed in different facilities.

Subsequently, organisations must implement a *benefit-driven strategy* for decentralisation, focussing on geographical coverage, fast lead times and consumer service. Contrasting a centralised network structure (section 6.8.4.1), decentralisation involves the *strategic establishment* of a *decentralised flat network structure*, meaning that product returns arrive at multiple facilities/locations that perform the same RL processes (see section 6.8.5.2). Additionally, organisations must *strategically establish a decentralised returns system* for effective decentralised RL processes and information sharing across several facilities.

Regarding the decentralised facilities and locations for RL, organisations can *strategically establish facilities/locations closer to markets/consumers* for RL processes. Particularly, organisations can *strategically utilise retail stores* or *strategically utilise decentralised facilities* for RL processes. Consequently, decentralisation involves the *strategic utilisation of multiple / flexible locations* for RL, for example, using several drop-off collection centres (or points) convenient for consumers. Finally, organisations can *strategically decentralise specific RL processes*, for example, utilising collection points for decentralised product return collection and utilising decentralised repair centres for inspection and repair activities.

6.8.5.2 Requirements of decentralised facility/location practices in RL

Decentralised facility/location practices in RL involve a few requirements, including economic, IT and operational requirements. The *economic requirements* of decentralisation involve investment and costs, which relate to the decentralisation strategies. For instance, the *investment* requirement associates with the strategic consideration related to investment in several collection points (see section 6.8.5.1). Furthermore, *costs* associate with the strategic utilisation of multiple facilities/locations for RL processes, which can consist of fixed costs and installation costs of equipment in multiple facilities at multiple locations.

The *IT requirements* of decentralisation involve *utilising an IT infrastructure* and *integrated IT*, which can be important for the quick resale of returned products to consumers and effective information sharing across several facilities. Consequently, organisations that choose a decentralised return strategy can benefit from implementing general IT practices that associate with the development and utilisation of a new/current IT infrastructure and integrative IT for RL (see section 6.3.1).

Finally, the *operational requirements* of decentralisation involve equipment, duplicate RL operations and simpler RL operations. Associating with the economic requirement of installation costs, decentralised facilities require *equipment* to perform RL processes (e.g. inspection). Consequently, multiple facilities/locations in decentralisation require *duplicate RL operations*, meaning that several facilities must perform the same RL processes. For example, four RL facilities must all receive, process, inspect, sort, recover and redistribute product returns. Contrasting separate facility/location practices (see section 6.8.2.2), decentralisation requires *simpler RL operations* (such as minor inspection), associating with the strategic decisions and considerations of choosing decentralisation based on the reuse disposition option (see section 6.8.5.1).

6.8.5.3 Outcomes of decentralised facility/location practices in RL

The outcomes of decentralised facility/location practices involve (1) facility/location (2) economic, (3) operational, (4) organisational and (5) market-related outcomes, which will be discussed in subsequent paragraphs.

The *facility/location outcome* of decentralisation involves *greater geographical coverage*, which can be realised through the implementation of a benefit-driven decentralisation strategy. Moreover, through the decentralisation strategies related to establishing facilities/locations close to consumers and decentralisation of specific RL processes (such as inspection), organisations can realise the *economic outcome* of *cost avoidance*. Evidently, decentralisation can be a viable RL practice for organisations that seek to avoid unnecessary RL transportation costs to central facilities, emphasising the high transport cost requirement of centralisation (section 6.8.4.2).

The *operational outcomes* of decentralisation involve facilitating product return quality uncertainties and improving RL process speed. Particularly, organisations can *facilitate uncertainties* in *product return quality* by selecting a decentralisation strategy based on the strategic consideration of heterogenous return quality, demonstrating that decentralisation can address the operational barriers in RL related to product return uncertainties (see section 2.3.2). Additionally, organisations can *improve RL process speed* through strategic decisions and considerations related to time requirements, a benefit-driven decentralisation strategy, the strategic establishment of a decentralised network structure and strategic utilisation of retail stores for RL. For example, a multi/omnichannel retailer can encourage online consumers to return products to retail stores for fast processing (immediate refunds).

The *organisational outcome* of decentralisation involves *internal information sharing* between facilities, which can be realised through the strategic establishment of a decentralised returns system

(strategy) and utilisation of integrated IT (requirement). Consequently, decentralised facility/location practices may facilitate CFI (internal integration) practices, which can be important for the management of consumer returns (see section 6.4.3).

Finally, decentralised facility/location practices involve *market-related outcomes* that include consumer convenience and service. Particularly, organisations can enhance *consumer convenience* through the strategic establishment of facilities/locations close to consumers and utilisation of multiple/flexible locations for RL. For example, decentralised facilities/locations close to consumers can decrease the time and of costs for consumers to return products, emphasising the economic outcome of cost avoidance (e.g. transport costs) through decentralisation practices. Essentially, decentralised facility/location practices, including benefit-driven strategies (focussing on consumer service) and establishing facilities close to consumers, can *increase customer service*, which emphasise the decentralisation operational outcome of speedy RL processes.

In the next section, decentralised facility/location practices will be concluded with a description and conceptual framework.

6.8.5.4 Description and conceptual framework of decentralised facility/location practices to manage consumer returns

Based on the findings presented in section 6.8.5, decentralised facility/location practices in RL can be important for the management of consumer returns, and will be described as follows:

> Decentralised facility/location practices for the management of consumer returns involve (1) decentralised facility/location strategies, including strategic decisions and considerations related to decentralisation, a benefit-driven strategy, strategic establishment of a decentralised flat network structure, a decentralised returns system and of facilities/locations close to markets/consumers, strategic utilisation of retail stores, decentralised and multiple/flexible locations for RL, and strategic decentralisation of specific RL processes, and (2) decentralised facility/location requirements, including economic requirements (investment and costs), IT requirements (IT infrastructure and integrated IT), and operational requirements (equipment, duplicate RL processes and simpler RL operations). The decentralised facility/location strategies and requirements can result in a few outcomes, including (1) facility/location outcome (greater geographical coverage), (2) an economic outcome (cost avoidance), (3) operational outcomes (facilitate product return quality uncertainties and improve RL process speed), (4) an organisational outcome (internal information sharing), and (5) market-related outcomes (consumer convenience and improve customer service).

Figure 6.24 provides a conceptual framework of decentralised facility/location practices to manage consumer returns.

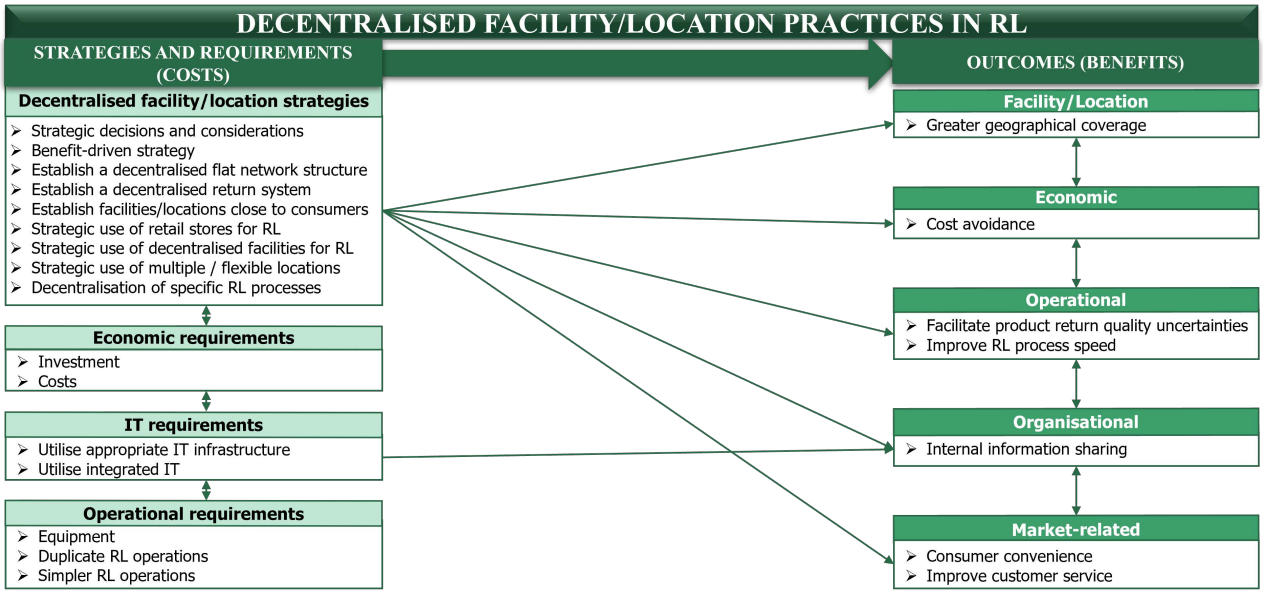


Figure 6.24 Conceptual framework of decentralised facility/location practices to manage consumer returns

Source: Compiled by researcher

Figure 6.24 illustrates the links between the strategies, requirements and outcomes of decentralised facility/location practices, demonstrating a cost and benefit relationship. The links between decentralised facility/location strategies and requirements can be demonstrated by the economic requirements of investment, which links with the strategic considerations of decentralisation (strategy) and the operational requirement of equipment. Additionally, the decentralisation strategy of establishing a decentralised returns system links with the IT requirement of integrated IT.

Regarding the links between decentralised facility/location strategies, requirements and outcomes, the framework demonstrates that decentralised facility/location strategies, can be the most significant practice category, linking with all the outcome categories, including facility/location, economic, operational, organisational and market-related outcomes. Therefore, organisations must pay attention to the decentralised facility/location strategies to achieve optimum results to manage consumer returns. From the decentralised facility/location requirements, only the IT requirement of integrated IT contribute to one outcome category, while the economic and operational requirements exclude any outcomes. Nevertheless, like emphasised above, the economic and operational requirements can be important for the implementation of decentralised facility/location strategies and, therefore, indirectly contribute to the outcomes of decentralised facility/location practices.

From the outcomes of decentralised facility/location practices, the organisational outcome category can be the most significant (associated with most of the decentralised facility/location practices), while all other outcome categories only associate with decentralised facility/location strategies. Finally, the framework shows that the decentralised facility/location outcome categories can be linked, for

example, the market-related outcome of consumer convenience can link with the facility/location outcome of greater geographical coverage and the economic outcome of cost avoidance. Similarly, the operational outcome of speedy RL processes can link with the organisational outcome of internal information sharing and market-related outcome of improved customer service.

Essentially, the links between the decentralised facility/location strategies, requirements and outcomes demonstrate the importance of a holistic approach to the management of consumer returns, meaning that organisations must carefully consider and analyse the costs (strategies and requirements) and benefits (outcomes) of decentralised facility/location for the effective management of consumer returns.

In the next section, CRC practices to manage consumer returns will be analysed and discussed.

6.8.6 Centralised Return Centre (CRC) practices to manage consumer returns

Despite being termed as a centralised return centre, CRCs can be a combination of separate, integrated, centralisation and decentralisation facility/location practices (see section 6.8). Regardless of the combination of facility/location practices, CRC practices can be described as the strategies and requirements related to the utilisation of specialised RL facilities/locations, which can contribute to important outcomes for the effective management of consumer returns. Table 6.**32** provides an overview of the findings related to the *CRC practices to manage consumer returns*, including the categories, subcategories, supporting sources for the subcategories and key quotations that support both the subcategories and the discussion of the findings.

Table 6.32 Findings related to CRC practices to manage consumer returns

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
CRC strategies	***Establish CRC strategy in RL***	None	• *"CRCs seem to be a popular reverse-logistics strategy where all products returned are sorted, processed and then shipped to their next destination."* (Jayaraman *et al.* 2008:419)
	Strategic decisions related to CRCs	None	• *"The product return process entails the determination of the number and location […] of centralized [sic] return centers [sic] […]."* (Min *et al.* 2006a:57) • *"Locating CRCs in the proper locations is an important problem […]."* (Tuzkaya *et al.* 2011:4545) • *"When an item arrives at the CRC, a determination must be made on where the product should be sent. The condition of each item is assessed, and the best disposition for the item is determined."* (Rogers *et al.* 2012:108)
	Cost-benefit analysis	None	• *"[…] establishing central returns centres […] may also be cost-intensive to implement, and for this reason organisations should carefully consider the cost–benefit trade-off."* (Badenhorst, 2016:10)
	Benefit-driven CRC strategies	None	• *"[…] the determination of the number and location of […] centralized [sic] return centers [sic] in such a way that total reverse logistics costs (e.g., inventory carrying and transportation costs) are minimized [sic], capacity of […] centralized [sic] return centers [sic] are fully utilized [sic], and the convenience of customers who return products is maximized [sic]."* (Min *et al.* 2006a:57)
	Strategic design, establishment and utilisation of CRCs	Jayaraman *et al.* (2008:417, 419) Min *et al.* (2006a:58) Sasikumar *et al.*	• *"The practices that were identified for overcoming these barriers included […] establishing CRCs […]."* (Badenhorst, 2016:10) • *"[…] overcoming operational barriers in reverse logistics […] the use of […] centralised return centres (CRCs) […]."* (Badenhorst, 2016:5) • *"CRCs that are designed to facilitate the processing of returned goods […]."* (Rogers *et*

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
		(2010:1226) Tuzkaya *et al.* (2011:4548)	*al.* 2012:111)
	Strategic utilisation of standard facilities for CRCs	None	• *"A portion of a DC is allocated to be the CRC that handles most returns from retail stores."* (Hsu *et al.* 2009:516)
Economic requirements	***Costs***	Badenhorst (2016:10)	• *"The CRC are owned and operated by the company […] setup cost of CRC […]."* (Sasikumar *et al.* 2010:1226) • *"[…] CRC establishment cost […]."* (Tuzkaya *et al.* 2011:4548) • *"[…] inspection, classification, and overhauling costs in CRCs […]."* (Tuzkaya *et al.* 2011:4550)
IT requirement	***Utilise IT***	None	• *"It is clear that information technology (IT) and information system (IS) are important to a […] CRC."* (Hsu *et al.* 2009:527) • *"In the CRC, IT can help […] complex decision making process of final disposition of the returned product."* (Jayaraman *et al.* 2008:418)
Organisational requirement	***Sophisticated and efficient RL programs***	None	• *"Through sophisticated reverse logistics programs, CRCs are better able to capitalize [sic] on returns visibility […]."* (Hsu *et al.* 2009:527) • *"With efficient reverse logistics programs in place, […] the CRC operations can be more effective."* (Hsu *et al.* 2009:527)
	Staff involvement	None	• *"In the CRC, IT can help the employees in the complex decision making process of final disposition of the returned product."* (Jayaraman *et al.* 2008:418)
Facility/location outcomes	***Optimum capacity utilisation***	None	• *"[…] the determination of the number and location of […] centralized [sic] return centers [sic] in such a way that […] capacity of […] centralized [sic] return centers [sic] are fully utilized [sic] […]."* (Min *et al.* 2006a:57)
	RL network benefits	None	• *"Locating CRCs in the proper locations is an important problem and yields significant […] benefits to the entire RLN."* (Tuzkaya *et al.* 2011:4545) • *"[…] centralized [sic] return centers [sic] may play a critical role in linking the initial collection points to […] repair facilities within the reverse logistics network."* (Min *et al.* 2006a:58)
Economic outcomes	***Economic benefits***	New	• *"Locating CRCs in the proper locations is an important problem and yields significant cost […] benefits to the entire RLN."* (Tuzkaya *et al.* 2011:4545)
	Economies of scale	None	• *"[…] centralised return centre (CRC) […] Such a system can generate economies of scale […]."* (Jayaraman *et al.* 2008:417)
	Cost savings/ reduction	Hsu *et al.* (2009:527)	• *"[…] the determination of the number and location of […] centralized [sic] return centers [sic] in such a way that total reverse logistics costs (e.g., inventory carrying and transportation costs) are minimized [sic], […]."* (Min *et al.* 2006a:57) • *"[…] centralised return centre (CRC) […] help reduce costs."* (Jayaraman *et al.* 2008:417)
	Profitability	None	• *"CRC operations are essential to increasing a retailer's bottom line profitability and reducing costs."* (Hsu *et al.* 2009:527)
Operational outcomes	***Address operational barriers***	None	• *"[…] the operational barriers in reverse logistics included problems with product quality, limited forecasting and visibility, inadequate information and technology systems and developmental barriers. The practices that were identified for overcoming these barriers included […] establishing CRCs […]." […]."* (Badenhorst, 2016:5)
	Improve product return visibility	Badenhorst (2016:5)	• *"Through sophisticated reverse logistics programs, CRCs are better able to capitalize [sic] on returns visibility at the earliest stage of the merchandise return."* (Hsu *et al.* 2009:527)
	Facilitate and improve RL process	None	• *"CRCs seem to be a popular reverse-logistics strategy […] There are several benefits that companies can accrue by using this strategy […] improve material authorisation […] The disposition of returned products to a CRCs makes it easier to determine whether a returned product may be reused as is, remanufactured, disassembled for components and parts or recycled."* (Jayaraman *et al.* 2008:419) • *"CRCs that are designed to facilitate the processing of returned goods as they are picked […]."* (Rogers *et al.* 2012:111) • *"Centralized [sic] return centers [sic] are dedicated to return handling and processing."* (Min *et al.* 2006a:58)
	Improve RL process speed, efficiency and effectiveness	None	• *"CRCs seem to be a popular reverse-logistics strategy where all products returned are sorted, processed and then shipped to their next destination. There are several benefits that companies can accrue by using this strategy. They include […] efficient sorting processes for products; […] speed the reconciliation process, […] compacting of disposition time […] expedite flow of materials in the reverse logistics pipeline."* (Jayaraman *et al.* 2008:419) • *"Locating CRCs in the proper locations is an important problem and yields […] time benefits to the entire RLN."* (Tuzkaya *et al.* 2011:4545) • *"CRCs are processing facilities devoted to handling returns quickly and efficiently."* (Tuzkaya *et al.* 2011:4545) • *"With efficient reverse logistics programs in place, […] the CRC operations can be more effective."* (Hsu *et al.* 2009:527)
Organisational outcomes	***Facilitate RLM***	None	• *"CRCs that are designed to facilitate the processing of returned goods as they are picked up from the stores. Typically, DCs do not work well managing both forward and reverse distribution at the same location. The forward product almost always takes precedence over the returned product."* (Rogers *et al.* 2012:111)

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
			• *"[…] centralized [sic] return centres for management of returns."* (Vijayan *et al.* 2014:12)
	Facilitate disposition practices	None	• *"CRCs seem to be a popular reverse-logistics strategy […] There are several benefits that companies can accrue by using this strategy. They include […] more consistent decisions about product disposition."* (Jayaraman *et al.* 2008:419) • *"When an item arrives at the CRC, a determination must be made on where the product should be sent. The condition of each item is assessed, and the best disposition for the item is determined."* (Rogers *et al.* 2012:108) • *"In the CRC, IT can help the employees in the complex decision making process of final disposition of the returned product."* (Jayaraman *et al.* 2008:418)
	Facilitate RL standardisation (SPP) practices	None	• *"CRCs seem to be a popular reverse-logistics strategy where all products returned are sorted, processed […] at a central depot […] This would lead to more standardised processes […]."* (Jayaraman *et al.* 2008:419)
Market-related outcomes	***Increase consumer convenience***	None	• *"[…] determination of the number and location of initial collection points for returned products and the location/allocation of centralized [sic] return centers [sic] in such a way that […] the convenience of customers who return products is maximized [sic]."* (Min *et al.* 2006a:57)
	Increase consumer service	None	• *"CRCs seem to be a popular reverse-logistics strategy where all products returned are sorted, processed and then shipped to their next destination. […] This would lead to [….] improved customer service: The centralised return depots can speed the reconciliation process, improve material authorisation and issuance of credit […]."* (Jayaraman *et al.* 2008:419)
	Improve consumer satisfaction	None	• *"[…] timeliness […] has a significantly greater impact on satisfaction. It is clear that information technology (IT) and information system (IS) are important to a […] CRC."* (Hsu *et al.* 2009:527)
	Improve consumer loyalty	None	• *"The centralised return depots can […] serve as a good marketing strategy to gain customer loyalty […]."* (Jayaraman *et al.* 2008:419)

Source: Compiled by the researcher

Table 6.**32** indicates CRC practices in RL, including strategies, requirements and outcomes, which will be discussed in subsequent sections and concluded with a description and conceptual framework.

6.8.6.1 The strategies and requirements of CRCs in RL

CRC strategies in RL include (1) establish a CRC strategy in RL, (2) strategic decisions related to CRCs, (3) a cost-benefit analysis, (4) benefit-driven strategies, (5) strategic design, establishment and utilisation of CRCs, and (6) strategic utilisation of standard facilities for CRCs.

Organisations must start by *establishing a CRC strategy in RL*, which guides the utilisation of a specialised facility to perform various RL processes. Furthermore, like other facility/location practices, CRC practices involve *strategic decisions*, including the number of CRCs and the choice of CRC location(s) (e.g. choosing an optimum central region) for the effective management of consumer returns. However, CRCs can involve strategic decision-making about product returns, for example, determining the most appropriate course for the returned product within the CRC (e.g. appropriate inspection areas) and determining the most suitable disposition options, demonstrating the importance of CRCs for the effective management of consumer returns.

Nevertheless, performing a *cost-benefit analysis* can be important for the establishment of CRCs, ensuring that the benefits (outcomes) of CRCs outweigh the costs (requirements). Essentially, like other facility/location practices, organisations must focus on *a benefit-driven CRC strategy* for the effective

management of consumer returns. Consequently, organisations must focus on cost minimisation, facility capacity maximisation and consumer convenience/service during the strategic decision-making on the number and location of CRCs.

Based on the CRC strategy, strategic decisions, cost-benefit analysis and benefit-driven strategies, organisations can *strategically design, establish* and *utilise CRCs* for RL. Therefore, the CRC must be designed to perform receiving, processing, inspection, sorting and disposition processes and related RL activities effectively and efficiently. Alternatively, organisations can *strategically utilise a standard facility for a CRC,* for example, allocating a portion of the DC to operate a CRC to manage consumer returns.

The *requirements* of CRC practices include economic, IT and organisational requirements. The *economic requirement* of CRC practices involves *costs*, which relates to the CRC strategies of establishing and utilising CRCs for RL. Particularly, organisations must incur set-up or establishment costs and other RL process costs, including inspection, sorting and disposition costs, emphasising the importance of performing a cost-benefit analysis for CRC practices. The *IT requirement* of CRC practices involve the *utilisation* of *IT,* which can be important for effective strategic decision-making in CRCs. Consequently, the IT utilisation requirement in CRCs, reemphasise the importance of IT practices for the effective management of consumer returns.

Finally, the *organisational requirements* of CRC practices involve sophisticated and efficient RL programs and staff involvement. Since the function of CRCs involves performing RL operations, organisations must establish *sophisticated* and *efficient RL programs.* Consequently, any barriers to the implementation of RL (such as economic, operational and organisational barriers) (see section 2.3) can impede the effectiveness of CRC practices, emphasising the importance of developing a CRC strategy for RL. Linking with the IT requirement, *staff involvement* can be important for strategic decision-making in CRCs, demonstrating an important link between the CRC strategies and requirements.

In the next section the outcomes of CRC practices will be explored.

6.8.6.2 Outcomes of CRC practices in RL

Several outcomes associate with CRC practices, including (1) facility/location (2) economic, (3) operational, (4) organisational and (5) market-related outcomes.

The *facility/location outcomes* of CRC practices include optimum capacity utilisation and RL network benefits. Like general facility/location practices (section 6.8.1.4), CRC practices can provide *optimum*

capacity utilisation, which can be achieved through strategic decisions related to the number of and locations of CRCs and implementing benefit-driven CRC strategies. Similarly, organisations can realise *RL network benefits* through strategic decisions on the optimum locations for CRCs and establishing and utilising CRCs in a RL network. Particularly, CRCs can play an important role in the RL network providing a link between collection points (closer to consumer) and recovery facilities (may be closer to suppliers), and thereby simplifying the network structure.

The *economic outcomes* of CRC practices include (1) economic benefits, (2) economies of scale, (3) cost savings/reduction and (4) profitability. Like the abovementioned facility/location outcomes, strategic decisions for the optimum locations for CRCs can provide economic benefits, which demonstrate the importance of effective strategic decision making for effective CRC practices. Moreover, through the strategic utilisation of CRCs, organisations can achieve *economies of scale* since larger scale RL operations can be performed in CRCs. Accordingly, *cost savings / reductions* can be realised through (1) strategic decisions related to the number and locations for CRCs, (2) benefit-driven CRC strategies, and (3) strategic utilisation of CRCs. Consequently, despite the economic requirement of costs, CRC practices can reduce RL costs, transportation costs and inventory carrying costs, emphasising the importance of performing a cost-benefit analysis for CRC practices (see section 6.8.6.1). Ultimately, organisations can realise greater *profitability* through the strategic utilisation of CRCs to manage consumer returns.

CRC practices involve numerous *operational outcomes*, including (1) addressing operational barriers, (2) improving product return visibility, (3) facilitating and improving RL processes, and (4) improving RL process speed, efficiency and effectiveness. Organisations can *address operational barriers in RL*, including problems with product returns, limited forecasting and visibility, IT and infrastructure barriers, through the strategic establishment of CRCs. Subsequently, organisations can *improve product return visibility* through the strategic utilisation of CRCs (strategy) and implementation of sophisticated RL programs (organisational requirement).

Furthermore, by establishing CRC strategies and strategically designing and utilising CRCs, organisations can *facilitate* and *improve RL processes*, including gatekeeping, processing and disposition processes. Likewise, organisations can *improve RL process speed*, *efficiency* and *effectiveness* through the CRC practices of (1) establishing CRC strategies, (2) strategic decisions for optimum locations for CRCs, (3) strategic utilisation of CRCs and (4) efficient RL programs (organisational requirement). Particularly, CRCs can improve the speed and efficiency of processing, sorting and disposition processes, expediting product return flows. Consequently, CRCs can improve

and enhance all post-receipt RL processes, demonstrating the importance of CRCs for the effective management of consumer returns.

Accordingly, the *organisational outcomes* of CRC practices involve RLM, RL disposition practices and RL standardisation practices. Particularly, organisations can *facilitate RLM* through the CRC strategies of designing and utilising CRCs for RL. Consequently, utilising a standard facility (e.g. DC) for RL can result in less attention being paid to RL, causing inefficiencies in the management of consumer returns. Several CRC practices can *facilitate RL disposition practices,* including (1) establishing a CRC strategy for RL, (2) strategic decisions related to CRCs, (3) strategic utilisation of CRCs (strategies), (4) IT utilisation (IT requirement), and (5) staff involvement (organisational requirement). Moreover, establishing a CRC strategy and utilising CRCs can *facilitate RL process standardisation* (SPP) *practices*, which can be equally important for the effective management of consumer returns (see section 6.9.4).

The *market-related outcomes* of CRC practices include consumer convenience, service, satisfaction and loyalty. Particularly, organisations can *increase consumer convenience* through the strategic decisions related to the number and locations of CRCs and benefit-driven CRC strategies. Additionally, establishing a CRC strategy and utilising CRCs can *increase consumer service* through the operational outcomes related to speedy and improved gatekeeping and processing processes. Likewise, organisations can improve *consumer satisfaction* by utilising IT in CRCs, which associates with speedy RL processes. Finally, organisations can use CRCs as a marketing strategy to *improve consumer loyalty*, demonstrating the strategic significance of CRCs for the effective management of consumer returns.

Essentially, CRCs can be a critical RL practices, bringing several facility and location, economic, operational, organisational and market-related benefits. In the next section, CRC practices will be concluded with a description and conceptual framework.

6.8.6.3 Description and conceptual framework of CRC practices to manage consumer returns

Based on the findings presented in section 6.8.6, CRC practices in RL can be important for the management of consumer returns, and will be described as follows:

> Centralised return centre (CRC) practices for the management of consumer returns involve (1) CRC strategies, including establishing a CRC strategy in RL, strategic decisions related to CRCs, cost-benefit analyses, benefit-driven strategies, strategic design, establishment and utilisation of CRCs, and strategic utilisation of standard facilities for CRCs, and (2) CRC requirements, including an economic requirement (costs), an IT requirement (utilise IT) and organisational requirements (sophisticated and efficient RL programs and staff involvement). The CRC strategies and requirements can result in several outcomes, including (1) facility/location outcomes (optimum capacity utilisation and RL network benefits), (2) economic outcomes (economic benefits, economies of

scale, cost savings/ reduction and profitability), (3) operational outcomes (address operational barriers, improve product return visibility, facilitate and improve RL processes and improve RL process speed, efficiency and effectiveness), (4) organisational outcomes (facilitate RLM, RL disposition practices and RL standardisation practices), and (5) market-related outcomes (increase consumer convenience and service and improve consumer satisfaction and loyalty).

Figure 6.**25** provides a conceptual framework of CRC practices to manage consumer returns.

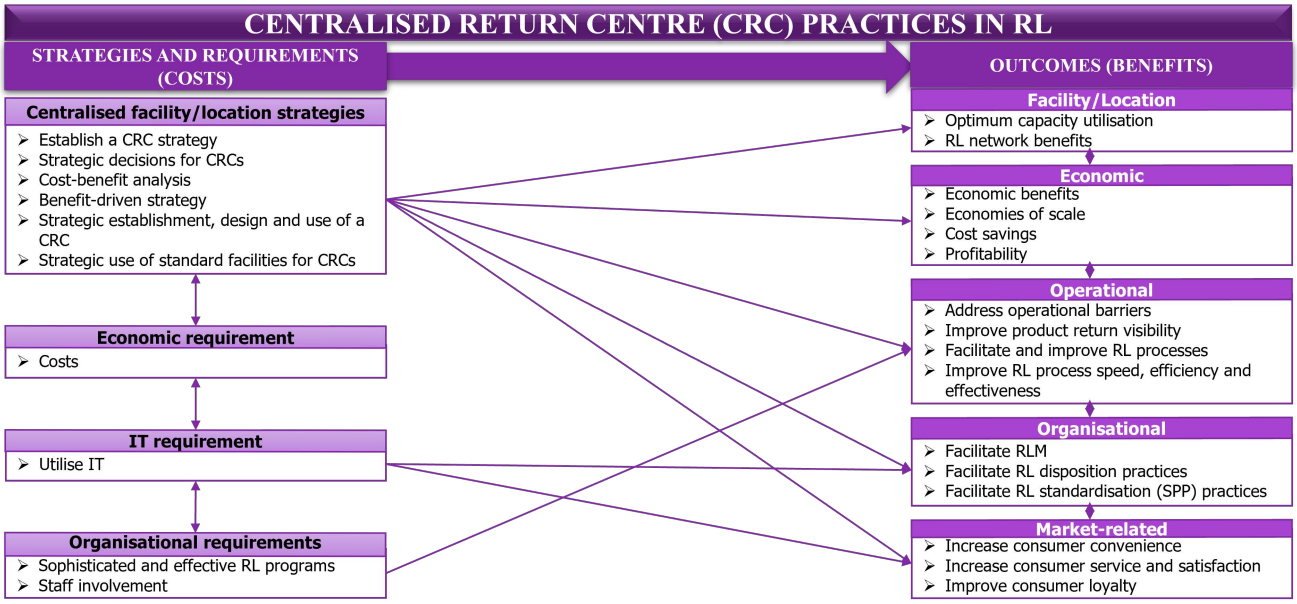


Figure 6.25 Conceptual framework of CRC practices to manage consumer returns
Source: Compiled by researcher

Figure 6.**25** shows the links between the strategies, requirements and outcomes of CRC practices, demonstrating a cost and benefit relationship. For example, the links between CRC strategies and requirements can be demonstrated by the strategic decisions related to CRCs, which links with the IT requirement and organisational requirement of staff involvement. Additionally, the CRC strategy of establishing CRCs for RL and link with the economic requirement of costs. Regarding the links between CRC strategies, requirements and outcomes, the framework demonstrates that CRC strategies can be the most significant practice category, linking with all the CRC outcomes, including facility/location, economic, operational, organisational and market-related outcomes. Therefore, organisations must pay attention to CRC strategies to achieve optimum results to manage consumer returns. From the CRC requirements, the IT requirement category leads to the most outcome categories, while the economic requirement category excludes any outcomes. Nevertheless, like emphasised above, the economic requirements can be important for the establishment of CRCs, and therefore, indirectly contribute to the outcomes of CRC practices.

From the outcomes of CRC practices, the operational, organisational and market-related outcome categories can be the most significant (associated with two practice categories), demonstrating that organisations that seek operational, organisational and market-related benefits in RL can consider

implementing CRC practices. Finally, the framework shows that the CRC outcome categories can be linked, for example, the CRC outcome of optimum capacity utilisation can link with the economic outcome of economies of scale, and the operational outcome of RL process speed, efficiency and effectiveness can link with the organisational outcome of facilitating RL disposition practices and the market-related outcome of improving consumer service.

Essentially, the links between the CRC strategies, requirements and outcomes demonstrate the importance of a holistic approach to the management of consumer returns, meaning that organisations must carefully consider and analyse the costs (strategies and requirements) and benefits (outcomes) of CRC practices for the effective management of consumer returns.

In the next section, a conceptual framework and summary of findings for facility/location practices (discussed in section 6.8) to manage consumer returns will be presented and described.

6.8.7 Conceptual framework and summary of findings for facility/location practices to manage consumer returns

This section provides a conceptual framework summary of findings for facility/location practices in RL to manage consumer returns. The findings presented in section 6.8 showed that all the facility/location practices, including general, separate, integrated, centralised, decentralised and CRC facility/location practices, can be important for the management of consumer returns.

Figure 6.26 provides a conceptual framework of facility/location RL practices to manage consumer returns. Specifically, the framework illustrates a summary of the findings related to the facility/location practices, general, separate, integrated, centralised, decentralised and CRCs, focussing on the combined strategies and requirements (costs) and outcomes (benefits). Furthermore, the framework shows the relationship between the costs (strategies and requirements), facility/location practice category and the benefits (outcomes) of implementing the facility/location practices. Additionally, the most significant (occurring the most often) strategies, requirements and outcomes associated with facility/location practice categories (at least four out of six) are emphasised through *italics*, while unique requirements and outcomes (only applicable to a single practice category) are emphasised through a coloured asterisk* (linked to the practice colour). The strategies, requirements and outcomes without italics and asterisks associate with two to three facility/location practice categories.

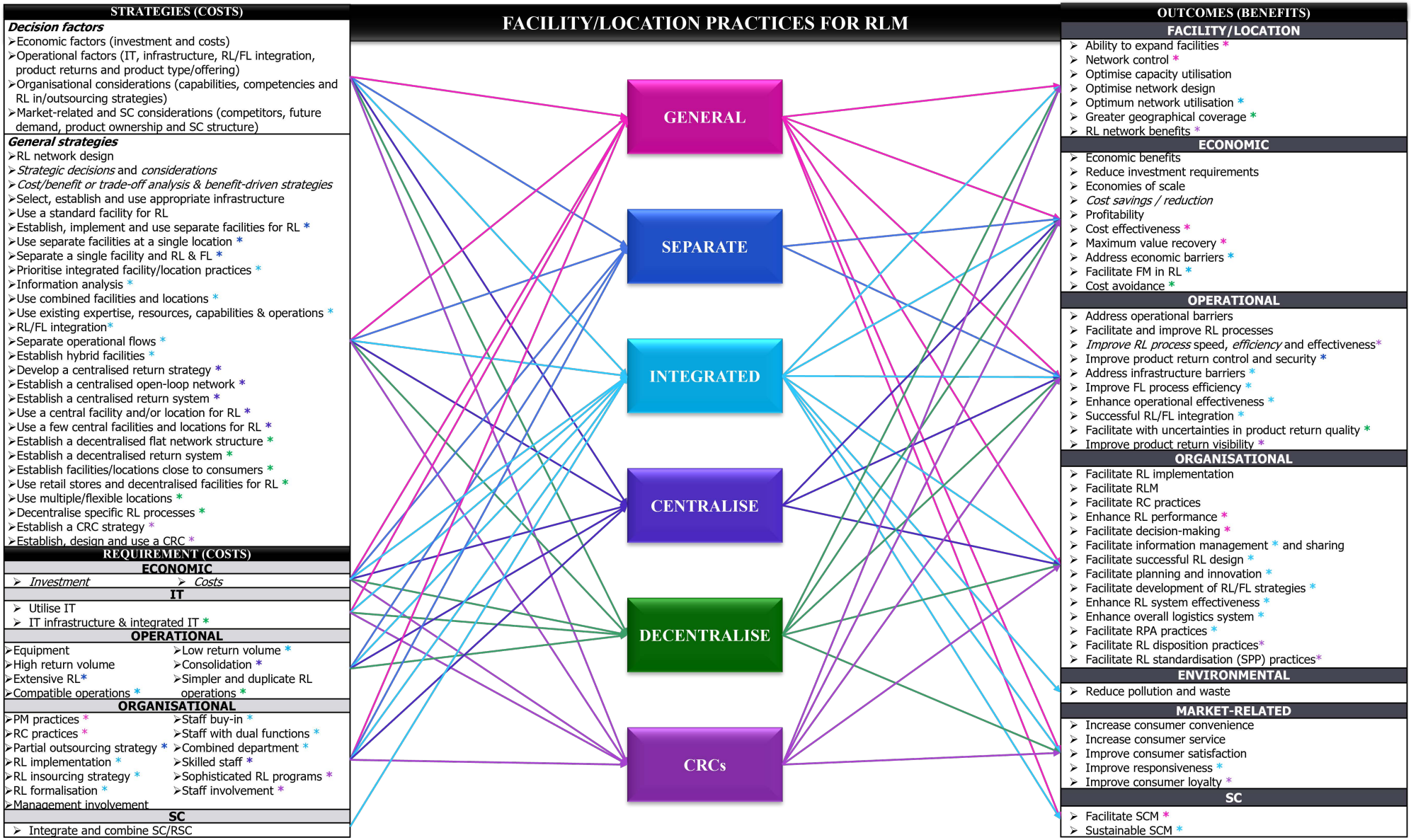


Figure 6.26 Conceptual framework of facility/location practices to manage consumer returns
Source: Compiled by the researcher

Based on Figure 6.26 and the discussions given in section 6.8, Table 6.33 provides a summary of the findings and managerial implications of facility/location practices to manage consumer returns.

Table 6.33 Summary of findings and managerial implications for facility/location practices

CATEGORY	KEY FINDINGS	MANAGERIAL IMPLICATIONS
Strategies	•Facility/location practices involve economic, operational, organisation, market and SC decision factors that can influence strategic facility/location decisions •All facility/location practice categories involve strategies, especially, strategic decisions •All facility/location practice categories (except decentralisation) involve a form of cost-benefit or trade-off analysis •Most facility/location practice categories (except separate and CRCs) involve strategic considerations •Most facility/location practice categories (except separate and integrated) involve benefit-driven strategies •General, separate and integrated facility/location practices involve RL network design and use of an appropriate infrastructure •CRC and integrated facility/location practices involve utilisation of a standard facility •Only separate facility/location practices involve strategies related to establishing and using separate facilities for RL, using separate facilities and a single location, separating a single facility and separate RL and FL •Only integrated facility/location practices involve strategies related to prioritisation, information analyses, using combined facilities/locations, existing expertise, resources, capabilities and operations, RL/FL integration, separate operational flows and establishing a hybrid facility •Only centralised facility/location practices involve strategies related to developing a centralised return strategy, establishing a centralised open-loop network structure, establishing a centralised returns system, using a central facility and/or location for RL, and using few central facilities and locations for RL •Only decentralised facility/location practices involve strategies related to establishing a decentralised flat network structure, establishing a decentralised returns system, establishing facilities/locations close to consumers, using retail shops and decentralised facilities for RL and using multiple/flexible locations for RL •Only CRC practices involve strategies related to establishing a CRC strategy and establishing, designing and using CRCs	•For effective facility/location decision-making organisations must consider economic, operational, organisation, market and SC decision factors •For successful facility/location practices in RL, organisations must focus on facilities/locations strategies, particularly, strategic decisions and considerations, cost-benefit or trade-off analysis and benefit-driven strategies •For effective general, separate and integrated facility/location strategies, organisations must focus on RL network design and using an appropriate infrastructure •Organisations can use standard facilities for integrated and CRC facility/location practices •For effective separate facility/location strategies, organisations must establish and use separate facilities, use separate facilities at a single location or separate a standard facility and RL and FL •For effective integrated facility/location strategies, organisations must prioritise integration, perform an information analysis, use combined facilities/locations or establish hybrid facilities, use existing expertise, resources, capabilities and operations, integrate RL and FL and separate operational flows •For effective centralised facility/location strategies, organisations must develop a centralised return strategy, establish a centralised open-loop network structure, establish a centralised returns system, and use a central facility/location or a few central facilities/locations for RL •For effective decentralisation strategies, organisations must establish a decentralised flat network structure, establish a decentralised returns system, establish facilities/locations close to consumers, use retail shops or decentralised facilities for RL and use multiple/flexible locations for RL •For effective CRC strategies, organisations must establish a CRC strategy and establish, design and use CRCs
Requirements	•All facility/location practice categories involve requirements, especially, the economic requirement of costs •Most facility/location practice categories (except integrated and CRCs) involve the *economic requirement* of investment •Most facility/location practice categories (except separate and centralised) involve the IT requirements related to IT use, but uniquely decentralised facility/location practices require an IT infrastructure and integrated IT •Most facility/location practice categories (except general and CRCs) involve *operational requirements*, but uniquely, separate facility/location practices require extensive RL operations, integrated facility/location practices require compatible operations and low return volume, centralised facility/location practices require consolidation, and decentralised facility/location practices require simpler and duplicate RL operations •Integrated, centralised and decentralised facility/location practices involve the operational requirement of equipment for RL •Separate and centralised facility/location practices involve the operational requirement of high return volume •All facility/location practices (except decentralised) involve *organisational requirements*, but uniquely, general facility/location practices require PM and RC practices, separate facility/location practices require a partial outsourcing strategy, integrated facility/location practices require RL implementation, insourcing strategy, formalisation, staff buy-in, RL/FL staff and a combined department, centralised facility/location practices require skilled staff and CRC	•For effective facility/location practices in RL, organisations must be willing to invest and incur costs •Organisations must use IT for effective general, integrated and CRC facility/location practices •For effective decentralised facility/location practices, organisations must use an IT infrastructure and integrated IT •For effective facility/location practices (except general and CRCs) in RL, organisations must focus on operational requirements •Organisations require extensive RL operations for effective separate facility/location practices •For effective integrated facility/location practices, organisations must receive low return volumes and establish compatible (RL and FL) operations •Organisations must consolidate product returns for effective centralised facility/location practices •For effective decentralised facility/location practices, organisations require simpler RL operations and must be willing to duplicate RL operations •Organisations must install RL equipment for effective integrated, centralised and decentralised facility/location practices •For effective separate and centralised facility/location practices, organisations must receive high return volumes •For effective facility/location practices (except decentralised), organisations must focus on organisational requirements •Organisations must implement PM and RC practices in RL for effective general facility/location practices •For effective integrated facility/location practices, organisations must implement RL, develop a RL insourcing strategy, formalise RL, attain staff buy-in, use staff with dual RL/FL functions and establish a combined department

	practices require sophisticated RL programs and staff involvement •Integrated and centralised facility/location practices involve the organisational requirement of management involvement •Only integrated facility/location practices involve the *SC requirement* of combining or and integrating SC and RSC	•Organisations must implement sophisticated RL programs and involve staff for effective CRC practices •Organisation must involve management for effective integrated and centralised facility/location practices •For effective integrated facility/location practices, organisations must integrate the SC and RSC
Outcomes	•All facility/location practices involve benefits to manage consumer returns •Integrated facility/location practices include all outcome categories, including facility/location, economic, operational, organisational, environmental, market-related and SC outcomes •Most facility/location practices (except separate and centralised) involve *facility/location outcomes*, but uniquely, general facility/location practices can expand facilities and enable network control, integrated facility/location practices can optimise network utilisation, decentralised facility/location practices can cover greater geographical areas, and CRC practices can bring RL network benefits •General and integrated facility/location practices involve the facility/location outcome of optimising network design •General and CRC facility/location practices involve the facility/location outcome of optimising capacity utilisation •All facility/location practices involve economic outcomes, but uniquely, general facility/location practices can bring cost effectiveness and maximise value recovery, integrated facility/location practices can address economic barriers and facilitate FM in RL, and decentralised facility/location practices can avoid RL costs •All facility/location practices (except decentralised) involve the *economic outcomes* of saving and reducing costs •Integrated and centralised facility/location practices involve the economic outcomes of economic benefits and reducing investment requirements •Separate, centralised and CRC facility/location practices involve the economic outcome of economies of scales •Integrated and CRC facility/location practices involve the economic outcome of profitability •All facility/location practices involve *operational outcomes*, but uniquely, separate facility/location practices can improve product return control and security, integrated facility/locations can address infrastructural barriers, enhance FL efficiency and operational effectiveness and successfully integrate RL and FL, decentralised facility/location practices can facilitate uncertainties in product return quality, and CRC practices can improve product return visibility and RL process effectiveness •Integrated and CRC facility/location practices involve the operational outcome of addressing operational barriers in RL •All facility/location practices (except decentralised) can improve RL process efficiency •Separate, centralised and CRC facility/location practices involve the operational outcomes of facilitating and improving RL processes •Decentralised and CRC facility/location practices involve the operational outcome of improving RL process speed •All facility/location practices (except separate) involve *organisational outcomes*, but uniquely, general facility/location practices can enhance RL performance and facilitate decision-making, integrated facility/location practices can facilitate RL information management, design, planning, innovation and development of RL/FL strategies, enhance RL system effectiveness and overall logistics system, and facilitate RPA practices, and CRC practices can facilitate disposition and standardisation practices •General and integrated facility/location practices involve the organisational outcome of facilitating RL implementation •General and CRC facility/location practices involve the organisational outcome of facilitating RLM •Integrated and centralised facility/location practices involve the organisational outcome of facilitating RC •Integrated and decentralised facility/location practices involve the organisational outcome of facilitating internal information sharing •Only integrated facility/location practices can provide the *environmental outcomes* of pollution and waste reduction •Most facility/location practices (except separate and centralised) involve *market-related outcomes*, but uniquely, integrated facility/location practices can improve consumer responsiveness and CRC practices can improve consumer loyalty	•Organisations that experience various facility/location, economic, operational, organisational, environmental, market-related and SC challenges in RL can consider implementing integrated facility/location practices •Organisations that seek facility/location benefits in RL can implement any facility/location practices (except separate and centralised) •To expand facilities and improve network control, organisations can consider general facility/location practices •Organisations that seek to optimise network utilisation can consider integrated facility/location practices •Organisations that seek greater geographical coverage can implement decentralisation practices for RL •For RL network benefits, organisations can implement CRC practices •For optimum network design, organisations can implement general and integrated facility/location practices •To optimise facility capacity utilisation, organisations can consider general and CRC facility/location practices •Organisations that seek economic advantages in RL can implement facility/location practices •For cost effectiveness and maximum value recovery, organisations can implement general facility/location practices •Organisations that experience economic barriers in RL can consider integrated facility/location practices •Organisations can implement integrated facility/location practices to facilitate FM in RL •For cost avoidance, organisations can implement decentralised facility/location practices •Organisations that experience high RL costs, can consider any facility/location (except decentralised) practices •Organisations that seek economic benefits and a reduction in investment requirements can implement centralised and integrated facility/location practices •For greater economies of scale in RL, organisations can implement separate, centralised and CRC facility/location practices •Organisations that seek higher profitability through RL can implement integrated and CRC facility/location practices •Organisations that seek operational benefits in RL can implement facility/location practices •For product return control and security, organisations can implement separate facility/location practices •Organisations that experience infrastructure barriers in RL can implement integrated facility/location practices •To enhance FL efficiency and operational effectiveness, organisations can implement integrated facility/location practices •For successful RL/FL integration, organisations can implement integrated facility/location practices •Organisations that experience uncertainties in product return qualities can implement decentralised facility/location practices •Organisations can implement CRC practices to improve product return visibility and RL process effectiveness •Organisations that experience operational barriers in RL can consider integrated and CRC facility/location practices •Organisations that experience inefficiencies in the RL process can consider implementing any facility/location (except decentralised) practices •Organisation can implement separate, centralised and CRC facility/location practices to facilitate and improve RL processes •For speedy RL processes, organisations must consider decentralised and CRC facility/location practices •Organisations that seek organisational benefits in RL can implement any facility/location (except separate) practices •Organisations can implement general facility/location practices to enhance RL performance and facilitate decision-making •For greater organisational benefits, including information management, RL design, planning and innovation, development of RL/FL strategies, RL system effectiveness, overall logistics system effectiveness and RPA, organisations can implement integrated facility/location practices •Organisations can implement CRC practices to facilitate RL disposition and standardisation (SPP) practices in RL •Organisations that experience RL implementation challenges can implement general and integrated facility/location practices •Organisations can implement general and CRC facility/location practices

	•General, decentralised and CRC facility/location practices involve the market-related outcome of increasing consumer convenience •General, integrated and CRC facility/location practices involve the market-related outcome of improving consumer satisfaction •Decentralised and CRC facility/location practices involve the market-related outcome of increasing consumer service •Only general and integrated facility/location practices involve the *SC outcomes* of effective and sustainable SCM	to facilitate RLM •Organisations that experience RC challenges in RL can consider implementing integrated and centralised facility/location practices •Organisations that seek to increase internal information sharing can consider implementing integrated and decentralised practices for RL •Organisations that seek environmental benefits, including pollution and waste reduction, can implement integrated facility/location practices •Organisations that seek to improve consumer responsiveness can implement integrated facility/location practices •To improve consumer loyalty, organisations can consider implementing CRC practices •Organisations can implement general, decentralised and CRC facility/location practices to increase consumer convenience •Organisations that seek to improve customer satisfaction must consider general, integrated and CRC facility/location practices •For greater customer service in RL, organisations can consider implementing decentralised and CRC facility/location practices •For effective and sustainable SCM, organisations can implement general or integrated facility/location practices •Organisations with specific RL problems and inefficiencies in consumer returns can implement the relevant facility/location practices to address the specific RL problems and inefficiencies

Source: Compiled by the researcher

Table 6.33 provides an in-depth understanding into the value of facility/location practices to manage consumer returns. Essentially, the findings show that general, separate, integrated, centralised, decentralised and CRC facility/location practices can be important for the management of consumer returns, but before implementing a specific facility/location practice a cost-benefit analysis must be performed. Facility/location practices in RL, will further be explored in the interviews with industry experts (chapter 8).

In the next section, other RLM practices to manage consumer returns will be explored, analysed and discussed.

6.9 OTHER RLM PRACTICES TO MANAGE CONSUMER RETURNS

Other RLM practices consist of smaller RL practice categories, which include (1) resource commitment (RC) practices, (2) financial management (FM) practices, (3) return prevention and avoidance (RPA) practices, (4) strategic planning and procedural (SPP) practices, and (5) management and staff practices in RL. Despite being included in a single section (due to limited findings) (see Figure 6.3), RC (section 6.9.1), FM (section 6.9.2), RPA (section 6.9.3), SPP (section 6.9.4), management and staff practices (section 6.9.5) will be discussed as separate practices, with distinct strategies, requirements, outcomes, descriptions, conceptual frameworks and summary of findings.

6.9.1 Resource commitment (RC) practices to manage consumer returns

Despite the limited focus on RC in the QCA of RL literature (see Figure 6.3), RC as a RL practice can be critical for the effective management of consumer returns. Accordingly, Sharif *et al.* (2012:2528) and Skinner *et al.* (2008:532) suggested that the lack of RC in RL can weaken RL performance, causing inefficiencies in the RL processes of organisations. Additionally, a lack of investment in RL

can result in capacity risks associated with the unavailability of financial resources needed to manage consumer returns effectively (Panjehfouladgaran & Lim, 2020:1461).

As with all other RL practices, the categories associated with RC practices, included RC strategies, requirements and outcomes, which will be presented and discussed in subsequent sections, and concluded with a description, conceptual framework and summary of findings to manage consumer returns.

6.9.1.1 Strategies and requirements of RC practices in RL

The strategies and requirements of RC practices in RL involve the strategic practices of RC, and requirements of RC, including, economic, operational, organisational, market-related and SC requirements, which can contribute to effective RC for the management of consumer returns. Table 6.34 provides an overview of the findings related to the *strategies and requirements of RC practices to manage consumer returns*, including the categories, subcategories, supporting sources for the subcategories and key quotations that support both the subcategories and the discussion of the findings.

Table 6.34 Findings related to strategies and requirements of RC to manage consumer returns

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
RC strategies	***Prioritise RC for RL***	None	• *"Resource commitments to reverse logistics thus should be a priority […] because of their potential for enhancing performance through new value creation and offering strategic means […]."* (Hsu *et al.* 2016:95)
	Strategic considerations for RC	Hsu *et al.* (2016:95) Tiwari (2013:241)	• *"[…] reverse lows are different from standard outbound operations and require special handling that usually requires additional resource allocation […]."* (Huang & Yang, 2014:619) • *"[…] a firm must take into account transportation, warehousing, information technology, and other resource-intensive considerations when determining if the logistical infrastructure exists to pursue the desired RL activity."* (Hazen *et al.* 2012:261)
	Strategic mapping RL	None	• *"Mapping of the reverse logistics process, especially in the dynamic consumer-driven environment […] should guide the allocation of resources."* (Morgan *et al.* 2016:307)
	Strategic classification and identification of resources for RL	Agrawal *et al.* (2016d:20)	• *"Property-based resources include everything that is legally owned by the company […] Knowledge-based resources such as skills and relevant knowledge […]."* (Ho *et al.* 2012:33) • *"The tangible resources include payment systems infrastructure, real-time data capture systems, […] The intangibles include trust and reputation among key stakeholders, e.g. customers, suppliers and key partners."* (Beh *et al.* 2016:12) • *"Resources include tangible physical assets, intangible information and knowledge, and capabilities […]."* (Lau & Wang, 2009:450)
	Strategic allocation of sufficient and appropriate resources for RL	Agrawal *et al.* (2016d:20) Agrawal *et al.* (2016a:936) Huang and Yang (2014:619) Huscroft *et al.* (2013b:315) Sarkis *et al.* (2010:348)	• *"[…] organisations have to allocate adequate resources to reverse logistics programmes."* (Badenhorst & Nel, 2012:85) • *"These reverse flows […] requiring additional resource allocations […] Allocating sufficient resources […] constitutes one of the principle antecedents of strong reverse logistics programs."* (Hsu *et al.* 2016:95) • *"Committing significant resources to a reverse logistics program may very well be the key to realizing [sic] superior performance."* (Skinner *et al.* 2008:533) • *"[…] developing a reverse logistics competency may require firms to commit specific resources to their efforts."* (Morgan *et al.* 2016:307)
	Financial RC	Ho *et al.* (2012:33) Khor and Udin (2013:78) Morgan *et al.* (2016:307) Sarkis *et al.* (2010:348)	• *"[…] resource commitments reflect the […] financial resources that are applied to reverse logistics processes."* (Jack *et al.* 2010:230) • *"[…] commitment in […] financial resources would help firms […]."* (Sharif *et al.* 2012:2523)
	IT and infrastructure RC	Agrawal *et al.* (2016d:20) Huang and Yang (2014:635) Huscroft *et al.* (2013a:238) Jack *et al.* (2010:232)	• *"The tangible resources include payment systems infrastructure, real-time data capture systems […] and marketing and promotion systems."* (Beh *et al.* 2016:12) • *"Technological resource commitment to reverse logistics […]."* (Khor & Udin, 2013:78) • *"[…] match resources to technologies and infrastructures that can support the*

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
		Li and Olorunniwo (2008:384)	*reverse-logistics operation (e.g. technological commitment).”* (Sharif *et al.* 2012:2519) • *“Property-based resources include […] physical facility, automated machines and equipment, […].”* (Ho *et al.* 2012:33)
	RL process RC	None	• *“[…] resource commitments reflect the […] technical […] resources that are applied to reverse logistics processes.”* (Jack *et al.* 2010:230) • *“[…] managers focus their attention on […] assigning additional resources for processing.”* (Genchev, 2009:145) • *“[…] resource commitment are associated with reverse logistics product disposition options […].”* (Khor & Udin, 2013:74)
	Human RC	Agrawal *et al.* (2016d:20) Ho *et al.* (2012:33) Jack *et al.* (2010:230) Li and Olorunniwo (2008:384) Sharif *et al.* (2012:2523)	• *“[…] committing management resources to the development and implementation of reverse logistics processes.”* (Bernon & Cullen, 2007:44) • *“Managerial resource commitment to reverse logistics […].”* (Khor & Udin, 2013:78) • *“Management skills refer to the knowledge and capabilities to manage […] the different reverse logistics systems.”* (Lau & Wang, 2009:461) • *“[…] human resource allocation because well-trained individuals are required […].”* (Morgan *et al.* 2016:307) • *“The key resources in the case organisations are people, such as product designers, buyers, store personnel and warehouse staff.”* (Beh *et al.* 2016:12) • *“Human resource […] Logistics and system department manager […] Reverse logistics supervisor […] Finance in charge […] Logistics staff […] Computer experts in charge […].”* (Hernández *et al.* 2011:84)
	External RC	None	• *“Human resource […] Transport supplier […] in charge of the transport management process.”* (Hernández *et al.* 2011:84) • *“The key resources in the case […] intangibles include trust and reputation among key stakeholders, e.g. customers, suppliers and key partners.”* (Beh *et al.* 2016:12)
	Strategic combination of resources for RL	None	• *“IT should be combined with additional, complimentary firm resources in order to reap maximum effectiveness […].”* (Huscroft *et al.* 2013a:238) • *“Resources committed to returns may also be combined […].”* (Morgan *et al.* 2016:307)
	Strategic utilisation of committed resources	Agrawal *et al.* (2016a:936)	• *“[…] managerial resources and technology are also critical for the success of RL. Availability and effective utilization [sic] of both types of resources is essential for exploring the true value potential of RL.”* (Agrawal *et al.* 2016d:20) • *“Resources […] that are built upon effective use of tangible and intangible resources […].”* (Lau & Wang, 2009:450)
	Strategic sharing of RC	None	• *“[…] engendering trust among supply-chain participants by allowing companies to share their committed resources […].”* (Sharif *et al.* 2012:2523)
Economic requirements	***Investment and financial support***	Ayvaz *et al.* (2014:105) Huang and Yang (2014:635) Li and Olorunniwo (2008:384) Morgan *et al.* (2016:307) Olorunniwo and Li (2011:3) Sarkis *et al.* (2010:348)	• *“Managers stated that it may require considerable investment in education and training of employees.”* (Agrawal *et al.* 2016d:25) • *“[…] capital investments focused upon increased returns processing speed […].”* (Griffis *et al.* 2012:291) • *“Investing in technology can improve reverse logistics capabilities […].”* (Jack *et al.* 2010:232) • *“Support is needed to commit the proper level of resources necessary for RL; this includes proper funding […].”* (Huscroft *et al.* 2013b:315) • *“Finance is needed to support the infrastructure and manpower requirements of reverse logistics processes.”* (Ravi *et al.* 2008:4857)
	Cost	None	• *“[…] adequate training […] to maximise its management and financial-resource commitment […] this may lead to the increasing of operational costs […].”* (Sharif *et al.* 2012:2528)
Operational requirement	***RC focus on RL process efficiency***	None	• *“[…] training, and capital investments focused upon increased returns processing speed should be rewarded in the marketplace […].”* (Griffis *et al.* 2012:291)
	Facility/location practices	Agrawal *et al.* (2016d:20)	• *“The integration of reverse logistics within a traditional logistics […] enables reusing […] resources already available […].”* (Keh *et al.* 2012:32) • *“Centralization [sic] avoids multiple investments in specialized [sic] resources.”* (Gobbi, 2011:785)
Organisational requirements	***RC focus on RL capabilities***	None	• *“Resource commitment consists of the financial, technical, and managerial resources that are committed to reverse logistics capabilities.”* (Jack *et al.* 2010:232)
	Management involvement, commitment and support	Agrawal *et al.* (2016d:25)	• *“[…] managers focus their attention on […] assigning additional resources […].”* (Genchev, 2009:145) • *“[…] management commitment in terms of […] financial and personnel resources […] in RL are important […].”* (Li & Olorunniwo, 2008:384) • *“Stronger senior management support for greater IT investments.”* (Genchev, 2009:145)
	Internal communication	None	• *“[…] managerial resource commitments evidenced through communication […] needs are seen to be very important for the RL operation […].”* (Sharif *et al.* 2012:2528)
	Efficient, trained and skilled human resources	Agrawal *et al.* (2016d:25) Griffis *et al.* (2012:291) Morgan *et al.* (2016:307) Sharif *et al.* (2012:2528)	• *“[…] reverse logistics were highly dependent upon the efficiency of human resources […].”* (Beh *et al.* 2016:12) • *“Support is needed to commit the proper level of resources necessary for RL; this includes […] employee training […].”* (Huscroft *et al.* 2013b:315) • *“[…] skilled human resources are also required for RL activities […].”* (Prakash &

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
			Barua, 2016a:67)
Market-related and SC requirements	***Relationship management with external RL parties***	None	• *"Support is needed to commit the proper level of resources necessary for RL; this includes […] effectively managing relationships with partners and customers."* (Huscroft *et al.* 2013b:315)

Source: Compiled by the researcher

Table 6.34 indicates the strategies and requirements of RC practices needed to manage consumer returns, which will be discussed in subsequent sections.

6.9.1.1.1 Strategies of RC practices in RL

RC strategies in RL include (1) prioritising RC for RL, (2) strategic considerations for RC, (3) strategic mapping RL, (4) strategic classification and identification of resources for RL, (5) strategic allocation of sufficient and appropriate resources for RL, (6) financial, IT and infrastructure, RL process, human and external RC, (7) strategic combination of resources for RL, (8) strategic utilisation of committed resources and (9) strategic sharing RC.

Before organisations can practise RC in RL effectively, RC in RL must be *prioritised,* meaning that organisations must focus on developing a RC strategy for RL. Additionally, organisations need to *strategically consider* certain aspects of *RC* in RL, including the characteristics of RL, being different from FL, requiring additional RL-specific resources and the infrastructure requirements in RL, including transport, facilities and IT or any other resources needed for effective RLM. Similarly, *strategic mapping* of *RL* may involve identifying RL processes, parties and networks, which can guide organisations with effective allocation of resources for RL.

After the considerations and mapping of RL for RC, organisations can start with the *strategic classification* and *identification* of *resources* for RL. Classifying the resources may help organisations to identify the type of resources needed for RL, for example, property-based and tangible RC (such as assets, human resources and IT) and knowledge-based and intangible RC (such as expertise, capabilities, trust and reputation). Accordingly, organisations must *strategically allocate sufficient* and *appropriate resources for RL,* which can be critical for effective and efficient RL processes and practices (see section 6.9.1.2).

The specific types of RC in RL can relate to some of the RL processes (e.g. processing, inspection and disposition) and RL practices, including finance, IT, network and facilities, disposition, staff and management, in/outsourcing, CI and SCI, identified from the QCA of RL literature. Particularly, *financial RC* associate with the willingness of the organisation to provide financial support for RL processes and practices, which can link with financial practices in RL (see section 6.9.2). Additionally, *IT* and *infrastructure RC* involves technological (such as IT for RL) and infrastructure (such as

facilities and equipment) RC needed to manage RL processes, linking with the IT (section 6.3) and facility/location (section 6.8) practices in RL.

RL process RC can involve technical (specialised) RC that can be applied to specific RL processes, for example, RC for inspection (e.g. specialised testing equipment) and disposition options (e.g. repair tools/equipment and facilities), which can link with RL processes (chapter 5) and facility/location and disposition practices (section 6.6) in RL. *Human RC* for RL involves (1) managerial RC, like management skills and allocating managers and supervisors for RL, which can relate to RL insourcing (section 6.5) and management and staff practices (section 6.9.5), and (2) staff RC, like trained/qualified staff (e.g. inspectors and repair technicians) and allocating staff directly/indirectly involved in RL (e.g. receiving clerks, creditors and finance, customer service, IT and warehouse staff), which links with various RL processes (see chapters 4 and 5) and practices (e.g. IT, facility/location, insourcing, CFI, CI and staff practices).

Lastly, *external RC* can include intangible RC that organisations can use for CI and SCI practices (sections 6.4.2 and 6.4.1), which focusses on relationships with key stakeholders, including consumers and SC partners. However, external RC can also involve external human resources (such as couriers or 3PRL providers) forming part of the RL outsourcing practices (section 6.5). Essentially, organisations must match their RL processes and practices to their RC strategy, ensuring effective RLM of consumer returns. Subsequently, organisations must *strategically combine* various *resources for RL,* demonstrating that individual RC for RL can be insufficient for effective and efficient RL processes and practices. Likewise, organisations must *strategically utilise committed resources* for RL, avoiding wastage of valuable resources and ensuring optimal outcomes of RC practices in RL (see section 6.9.1.2).

Finally, associating with SCI practices, organisations can *strategically share committed resources*, for example, sharing knowledge, expertise and capabilities (see section 6.4.1) with SC partners, which in return may grant them access to the committed resources of SC partners.

6.9.1.1.2 Requirements of RC practices in RL

The requirements of RC practices in RL include (1) economic, (2) operational, (3) organisational, and (4) market-related and SC requirements, which can relate to the RC types identified in the RC strategies (section 6.9.1.1.1). For instance, relating to financial, IT, infrastructure and human RC, the *economic requirements* for RC in RL can include *investment* in capital, training and IT, and *financial support* for committed resources (such as staff and infrastructure resources). Accordingly, RC can increase *costs,* meaning that organisations must be willing to incur additional expenses for RL operations.

The *operational requirements* of RC practices involve focus on RL process efficiency and facility/location practices. *Focusing on RC on RL process efficiency* means that organisations must ensure that resources for RL must be directed towards improving RL processes, emphasising the need to match RC to RL processes (see section 6.9.1.1.1). For example, an organisation that commits human resources must ensure that training focusses on helping staff to perform RL tasks efficiently (such as training staff to become product specialist to conduct efficient inspection activities). Since investment requirements for RC can be high, organisations can utilise *facility/location* practices to support RC in RL. Specifically, organisations can integrate RL/FL through integrated facility/location practices or utilise centralised facilities/locations, which can reduce the RC requirements for RL. For example, organisations can use the same facilities and human resources for RL and FL operations or use fewer RL facilities (in centralisation) that reduce physical infrastructure RC requirements.

RC in RL involves several *organisational requirements,* including (1) RC focus on RL capabilities, (2) management involvement, commitment and support, (3) internal communication, and (4) efficient, trained and skilled human resources. Like the need to focus RC on RL process efficiency, organisations must ensure that *RC focusses on RL capabilities,* meaning that financial, IT, infrastructure, technical and human RC must be aimed at developing RL capabilities, emphasising the importance of matching RL practices with RC to ensure effective RLM of consumer returns.

Similarly, *management involvement, commitment and support* can be critical for effective RC in RL. Particularly, like other RL practices (e.g. CI, in/outsourcing, PM and facility/location practices), managers must be involved in RC and responsible for assigning appropriate resources for RL. Moreover, managers must be committed to RC in RL and support other requirements (e.g. investments in resources) for effective RC in RL, which can address the organisational barrier of the lack of management support in RL (see section 2.3.3).

Internal communication can be an important requirement for human RC since staff/departments must be aware of the importance of RC for effective RL processes, pointing to the need for CFI practices (see section 6.4.3) for RC in RL. Additionally, effective RC requires *efficient, trained* and *skilled human resources*, which can be demonstrated through human RC of management and staff skills (RC strategy) and the economic requirement of investment in staff training and education for RC.

Finally, the *market-related* and *SC requirements* involve relationship management with consumers and SC partners, which can be important to support effective RC. Accordingly, SCI and CI practices (see sections 6.4.1 and 6.4.2) can be important requirements of RC, emphasising the external intangible RC of trust and reputation with key RL parties and strategic sharing of resources as part of the RC strategies (see section 6.9.1.1.1).

In the next section, the outcomes of RC practices in RL will be analysed and discussed.

6.9.1.2 Outcomes of RC practices in RL

The outcomes of RC practices involve the benefits associated with the effective implementation of RC strategies and requirements, which can be important for the effective management of consumer returns. The outcomes of RC practices in RL included (1) economic, (2) operational, (3) organisational, (4) environmental and social, (5) market-related, and (6) SC outcomes.

Table 6.35 provides an overview of the findings related to the *outcomes of RC practices to manage consumer returns*, including the categories, subcategories, supporting sources for the subcategories and key quotations that support both the subcategories and the discussion of the findings.

Table 6.35 Findings related to outcomes of RC practices to manage consumer returns

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
Economic outcomes	***Increase financial RC***	None	• *"[…] to provide adequate training […] to all members of its organisation to maximise […] financial-resource commitment."* (Sharif *et al.* 2012:2528)
	Increase RL funding	None	• *"Financial resources by definition are necessary to fund a strategic process such as reverse logistics."* (Jack *et al.* 2010:232)
	Financial management of RL	None	• *"Human resource […] Finance in charge […] economic counterpart, which is managed by that person […]."* (Hernández *et al.* 2011:84)
	Improve economic performance	None	• *"[…] resource commitment can improve a firm's economic […] performance."* (Skinner *et al.* 2008:533) • *"[…] firms should invest more resources […]; for instance, improving RL information systems and technology would lead to […] economic performance outcomes."* (Huang & Yang, 2014:635)
	Reduce costs	None	• *"While financial, technical and managerial resources are used to […] to reduce cost when these returns are handled in an efficient manner."* (Jack *et al.* 2010:242)
	Reduce investment requirements		• *"Centralization [sic] avoids multiple investments in specialized [sic] resources."* (Gobbi, 2011:785)
Operational outcomes	***Address operational barriers***	None	• *"[…] managerial resource commitments evidenced through communication and training needs are seen to be very important for the RL operation, since it helps the firm overcome the complexity of the reverse logistics processes […]."* (Sharif *et al.* 2012:2528)
	Facilitate IT implementation	None	• *"[…] human resource allocation because well-trained individuals are required to ensure that the technology is implemented appropriately."* (Morgan *et al.* 2016:307)
	Support RL infrastructure	None	• *"Finance is needed to support the infrastructure […] requirements of reverse logistics processes."* (Ravi *et al.* 2008:4857) • *"[…] allocations of capital and resources for the construction of reclamation and redistribution facilities […]."* (Sarkis *et al.* 2010:348)
	Facilitate and support RL processes	None	• *"With sufficient resources, processes can be put in place to provide immediate returns authorization [sic], credit processing, and charge-back handling."* (Skinner *et al.* 2008:534) • *"[…] manpower and tools are important in executing related operations of reverse logistics."* (Ho *et al.* 2012:33) • *"[…] match resources to technologies and infrastructures that can support the reverse-logistics operation (e.g. technological commitment)."* (Sharif *et al.* 2012:2519)
	Improve RL process efficiency and effectiveness	Sharma and Singh (2013:34)	• *"RC are indeed crucial factors that lead to the development of effective and efficient RL operations."* (Sharif *et al.* 2012:2527) *RC in general* • *"While financial, technical and managerial resources are used to […] to handle these returns, they also facilitate […]in an efficient manner."* (Jack *et al.* 2010:242) • *"[…] by investing in resources […] in RL processes can provide […] the capability of taking back returned items quickly and crediting them in a timely manner […]."* (Olorunniwo & Li, 2011:3)
	Improve RL operational performance	None	• *"[…] resource commitment can improve a firm's […] operational performance."* (Skinner *et al.* 2008:533) • *"RC can improve the performance of an RL process by eliminating parallel processes and work duplication […]."* (Sharif *et al.* 2012:2528)
Organisational outcomes	***Understand the value of RL***	Agrawal *et al.* (2016a:936)	• *"[…] managerial resources and technology are also critical for the success of RL. Availability and effective utilization [sic] of both types of resources is essential for exploring the true value potential of RL."* (Agrawal *et al.* 2016d:20)
	Increase and	None	• *"[…] to provide adequate training […] to all members of its organisation to maximise*

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
	support human RC		*its management and financial-resource commitment."* (Sharif *et al.* 2012:2528) • *"Finance is needed to support the […] manpower requirements of reverse logistics processes."* (Ravi *et al.* 2008:4857)
	Effective RC for RL	None	• *"Mapping of the reverse logistics process […] should guide the allocation of resources."* (Morgan *et al.* 2016:307) • *"Support is needed to commit the proper level of resources necessary for RL; this includes proper funding, personnel allocation, employee training, and effectively managing relationships with partners and customers."* (Huscroft *et al.* 2013b:315)
	Facilitate RL implementation	Bernon and Cullen (2007:44) Khor and Udin (2013:72)	• *"The implementation of internal RL programs often involves significant allocations of capital and resources […]."* (Sarkis *et al.* 2010:348) • *"[…] financial, technical and managerial resources are used to implement the reverse logistics […]."* (Jack *et al.* 2010:242) • *"Human resource is crucial for RL implementation."* (Agrawal *et al.* 2016d:20)
	RL innovation and development of RL capabilities	Bernon and Cullen (2007:44) Skinner *et al.* (2008:534)	• *"Resource commitments to reverse logistics thus should be a priority […] through new value creation […]."* (Hsu *et al.* 2016:95) • *"[…] developing a reverse logistics competency may require firms to commit specific resources to their efforts."* (Morgan *et al.* 2016:307) • *"Resource commitment consists of the financial, technical, and managerial resources that are committed […] Each of these resources are necessary for reverse logistics capabilities […]."* (Jack *et al.* 2010:232) • *"[…] capabilities that are built upon effective use of tangible and intangible resources […]."* (Lau & Wang, 2009:450) • *"[…] adequate training […] to maximise its management and financial-resource commitment […] this may lead to the increasing of operational costs in order to develop RL capability within the organisation […]."* (Sharif *et al.* 2012:2528)
	Improve RL performance and effectiveness	Sharma and Singh (2013:34)	• *"Resource commitments to reverse logistics thus should be a priority […] because of their potential for enhancing performance […]."* (Hsu *et al.* 2016:95) • *"Since the reverse logistics is different from conventional logistics and will require some additional resources to improve […] performance of the firm."* (Tiwari, 2013:241) • *"Committing significant resources to a reverse logistics program may very well be the key to realizing [sic] superior performance."* (Skinner *et al.* 2008:533) • *"[…] commitment in technological, managerial, and financial resources would help firms to enhance RL performance."* (Sharif *et al.* 2012:2523) • *"IT should be combined with additional, complimentary firm resources in order to reap maximum effectiveness […]."* (Huscroft *et al.* 2013a:238)
	Facilitate RLM and decision-making	None	• *"Human resource […] Reverse logistics supervisor […] manages the boxes/products to follow their movements, requests more and knows their current state […] Logistics staff […] relating to management of transport, boxes and the order requests […] Transport supplier […] in charge of the transport management process."* (Hernández *et al.* 2011:84) • *"Management skills refer to the knowledge and capabilities to manage the facilities, equipment, people, and information involved in the different reverse logistics systems."* (Lau & Wang, 2009:461) • *"[…] resource commitment would also help managers make appropriate decisions in procurement, inventory level […] and sales and marketing plans (e.g. recognising brand loyalty and customer satisfaction)."* (Sharif *et al.* 2012:2528)
	Facilitate internal information sharing	None	• *"Human resource […] Logistics and system department manager […] this manager transmits […] information to the personnel […]."* (Hernández *et al.* 2011:84)
	Successful RL function	None	• *"These reverse flows differ from standard, outbound operations and need special handling, likely requiring additional resource allocations […] Allocating sufficient resources […] constitutes one of the principle antecedents of strong reverse logistics programs."* (Hsu *et al.* 2016:95) • *"Knowledge-based resources including managerial resources and technology are also critical for the success of RL."* (Agrawal *et al.* 2016d:20) • *"[…] management commitment in terms of […] financial and personnel resources […] in RL are important to the success of the firm […]."* (Li & Olorunniwo, 2008:384) • *"[…] commitments evidenced through communication and training needs are seen to be very important […] upholding the fact that resource commitment is one of the crucial elements that contribute to the success and performance of RL programmes […]."* (Sharif *et al.* 2012:2528)
Environmental and social outcomes	***Environmental protection***	None	• *"[…] firms should invest more resources […]; for instance, improving RL information systems and technology would lead to more sustainable environmental protection […]."* (Huang & Yang, 2014:635)
	Improve corporate image	None	• *"Resource commitments to reverse logistics thus should be a priority […] offering strategic means to develop […] positive firm images."* (Hsu *et al.* 2016:95)
Market-related outcomes	***Competitive advantage***	None	• *"IT should be combined with additional, complimentary firm resources in order to reap maximum effectiveness and set the stage for achieving competitive advantage […]."* (Huscroft *et al.* 2013a:238)
	Improve customer service and responsiveness	None	• *"Since the reverse logistics is different from conventional logistics and will require some additional resources to improve the service quality and performance of the firm."* (Tiwari, 2013:241) • *"[…] managers focus their attention on prompt and accurate service to customers by assigning additional resources for processing."* (Genchev, 2009:145) • *"[…] adequate training […] to maximise its management and financial-resource*

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
			commitment. Although this may lead to the increasing of operational costs […] this indeed indirectly provides a better and longer running responsiveness back to customers […].” (Sharif *et al.* 2012:2528)
	Improve consumer satisfaction and loyalty	None	• *“[…] by investing in resources to build customer loyalty and satisfaction.”* (Olorunniwo & Li, 2011:3) • *“[…] training, and capital investments focused upon increased returns processing speed should be rewarded in the marketplace with more loyal customers who purchase more, and with greater frequency.”* (Griffis *et al.* 2012:291)
	Facilitate CI	None	• *“Resource commitments to reverse logistics thus should be a priority […] offering strategic means to develop lasting linkages with customers […].”* (Hsu *et al.* 2016:95)
SC outcomes	***SC sustainability***	None	• *“These reverse flows differ from standard, outbound operations and need special handling, likely requiring additional resource allocations […] Allocating sufficient resources to support sustainable supply chain initiatives […].”* (Hsu *et al.* 2016:95)
	Facilitate SCI	None	• *“Human resource […] Computer experts in charge […] support the interoperability between the main customer and […] supplier by attending the related ERP systems […].”* (Hernández *et al.* 2011:84)
	Enhance SC trust and transparency	None	• *“Resources committed to returns may also be combined with efforts to improve other supply chain concepts such transparency.”* (Morgan *et al.* 2016:307) • *“[…] engendering trust among supply-chain participants by allowing companies to share their committed resources and information in order to achieve supply chain goals and objectives.”* (Sharif *et al.* 2012:2523)
	Improve SC efficiency	None	• *“Investing in technology can improve reverse logistics capabilities allowing for more efficiency between the retailer and the supplier.”* (Jack *et al.* 2010:232)

Source: Compiled by the researcher

Table 6.35 presents numerous outcomes of RC practices in RL, including economic, operational, organisational, environmental and social, market-related and SC outcomes, which will be discussed in subsequent sections.

6.9.1.2.1 Economic outcomes of RC practices in RL

The *economic outcomes* of RC practices in RL can include (1) increasing financial RC in RL, (2) increasing RL funding, (3) financial management (FM) in RL, (4) enhancing economic performance, (5) reducing cost, and (6) reducing investment requirements. Specifically, through the organisational requirement of trained human resources, *financial RC in RL* (RC strategy) can be *increased*, which in turn can *increase RL funding.*

Human RC in terms of specific staff for RL, like financial staff, can be important for *FM in RL*, and subsequently can be important for FM practices in RL (section 6.9.2). Additionally, RC practices in RL can *enhance economic performance* in RL, especially if organisations invest in resources (such as IT) (economic requirement), implying that a cost-benefit analysis can be important in RC. Similarly, organisations can *reduce costs* through RC of financial, RL process (technical) and human (managerial) resources, which associates with improvements in RL efficiency. Lastly, organisations can *reduce investment requirements* in RC through the operational requirement of facility/location practices (centralisation), demonstrating an important link between RC and facility/location practices in RL.

6.9.1.2.2 Operational outcomes of RC practices in RL

The operational outcomes of RC in RL include (1) addressing operational barriers, (2) facilitating IT implementation, (3) supporting infrastructure, (4) facilitating and supporting RL processes, (5) improving RL process efficiency and effectiveness, and (6) improving operational performance. Through managerial (human) RC and the organisational requirements of internal communication and trained human resources, organisations can address the *operational barriers in RL*, which associates with the complexities of product returns (uncertainties in timing, quality and quantity) (see section 2.3.2).

Moreover, part of the operational barriers in RL can be a lack of IT and infrastructure barriers (section 2.3.2), which can be addressed through RC practices. Particularly, organisations can *facilitate IT implementation* through human RC (strategy) and trained staff (organisational requirement), showing the importance of combining resources for effective RLM (see section 6.9.1.1.1). Additionally, allocating sufficient and appropriate resources for RL, financial RC (RC strategies) and financial support (economic requirement) can *support RL infrastructure,* which can be essential for efficient and effective RL processes (also see section 6.8).

Furthermore, allocating sufficient and appropriate resources and committing IT, infrastructure and human resources for RL (RC strategies) can *facilitate* and *support RL processes.* Similarly, RC in RL can *improve RL process efficiency* and *effectiveness,* especially through financial RC and investment (economic requirement), RL process RC and managerial (human) RC (strategies). Essentially, RC in RL can *improve RL operational performance* by eliminating inefficient and duplicate RL activities.

6.9.1.2.3 Organisational outcomes of RC practices in RL

Several organisational outcomes associate with RC in RL, which include (1) understanding RL value, (2) increasing and supporting human RC, (3) effective RC in RL, (4) facilitating RL implementation, (5) RL innovation and developing RL capabilities, (6) improving RL performance and effectiveness, (7) facilitating RLM and decision-making, (8) facilitating internal information sharing (CFI), and (9) successful RL function.

Allocating appropriate and sufficient resources for RL, IT and managerial RC and strategic utilisation of committed resources can help organisations to *understand* the true *value of RL,* which can address the organisational barriers of a lack of awareness and understanding of RL (see section 2.3.3). Similarly, through financial RC and training and education efforts (organisational requirement) organisations can bring awareness to RL and *increase* and *support human RC,* meaning that sufficient staff and managerial resources will be available for RL.

Organisations can ensure *effective RC* for *RL* by mapping RL (RC strategy) and through the requirements of financial support (economic), efficient and trained human resources (organisational) and managing relationships with consumers and SC parties (market-related and SC requirements). Additionally, allocating appropriate and sufficient resources, and committing financial, technical and human resources (RC strategies) can *facilitate RL implementation,* which can be critical for effective RLM.

Moreover, organisations can achieve *RL innovation* and *develop RL capabilities* through prioritising RC, allocating appropriate and sufficient resources, financial, technical and human RC, strategic utilisation of committed resources (RC strategies), cost (economic requirement), and trained human resources (organisational requirement). Similarly, prioritising RC, considering the requirements of RL for RC, allocating appropriate and sufficient resources, committing financial, technical, IT and human resources, and strategic combination of committed resources (RC strategies), can *improve RL performance* and *effectiveness*, emphasising economic and operational performance improvements of RC in RL (see sections 6.9.1.2.1 and 6.9.1.2.2).

Additionally, human RC (management skills, managerial staff and operational staff), and external RC (utilising 3PLs) can enable organisations to manage facilities, staff, information and RL processes, which in turn, *facilitate RLM* and managerial *decision-making*. Likewise, human RC (allocating managers for RL) can *facilitate internal information sharing*, contributing to effective CFI (see section 6.4.3) needed to manage consumer returns.

Essentially, organisations can expect a *successful RL function* through the RC strategies, like considerations for RC, classifying, identifying and allocating sufficient resources for RL, and committing IT, infrastructure and human resources for RL, and through management commitment (organisational requirement).

6.9.1.2.4 Environmental and social outcomes of RC practices in RL

Although RC in RL mostly provide financial, operational and organisational benefits, organisations may realise environmental and social benefits through RC. Specifically, organisations facilitate *environmental protection* with investment and commitment of IT resources, which reemphasise the importance of IT for RL.

Additionally, the *social outcome* of RC involves improvements in *corporate image*, which organisations can realise through prioritising RC as a RL practice. Consequently, RC in RL may contribute to the environmental and corporate responsibility drivers of RLM (see section 2.3.1), which can be important for sustainable business practices.

6.9.1.2.5 Market-related outcomes of RC practices in RL

RC in RL involves several market-related outcomes, including (1) a competitive advantage, (2) customer service and responsiveness, (3) consumer satisfaction and loyalty, and (4) CI. Particularly, organisations can obtain a *competitive advantage* by combining committed resources in RL (RC strategy), showing the importance of identifying and allocating various and sufficient resources for RL (see section 6.9.1.1.1). Additionally, organisations can *improve consumer satisfaction* and *loyalty* through the RC requirements of investing in resources (economic) and focussing RC on RL process efficiency (operational).

Moreover, organisations can *improve customer service* and *responsiveness* by considering the difference between RL and FL (RC consideration), allocating appropriate and sufficient resources in RL, committing financial, RL process and human (managerial) resources (RC strategies), incurring cost (e.g. operational costs) (economic requirement), involving management, and training human resources (organisational requirements). Finally, despite the RC requirement of managing external relationships with consumers (see section 6.9.1.1.2), prioritising RC in RL (strategy) can *facilitate* with *CI* and consumer relationship development, emphasising the importance of RC for customer service, satisfaction and loyalty.

6.9.1.2.6 SC outcomes of RC practices in RL

The SC outcomes of RC practices in RL involve SC sustainability, SCI, SC trust and transparency and SC efficiency. Particularly, through the RC strategies of considerations for RC (e.g. recognising that RL needs other resources) and allocating appropriate and sufficient resources for RL, organisations can promote *SC sustainability*, which can be important for all the parties in the SC.

Additionally, organisations can *facilitate SCI* through human RC (such as allocating IT staff for RL), for example, IT staff can help manage the IT systems (e.g. ERP) needed for SC information sharing. Moreover, organisations can *enhance SC trust* by sharing committed resources, improve *SC transparency* by combining resources (such as IT and human RC) and *improve SC efficiency* by utilising and investing in IT resources (economic requirement). Consequently, RC in RL can be critical for effective SCI practices in RL, reemphasising the relationship between RC and integration practices in RL (also see sections 6.9.1.2.3 and 6.9.1.2.5).

Essentially, RC strategies and requirements in RL can be important for economic, operational, organisational, environmental and social, market-related and SC outcomes, contributing to the effective RLM of consumer returns. In the next section, RC practices in RL will be concluded with a description, conceptual framework and summary of findings for RC practices to manage consumer returns.

6.9.1.3 Description, conceptual framework and summary of findings for RC practices to manage consumer returns

This section concludes RC practices in RL with a description, conceptual framework and summary of the findings related to RC practices in RL. Based on the findings presented in section 6.9.1, RC practices in RL can be important for the management of consumer returns, and will be described as follows:

> RC practices for the management of consumer returns involve (1) RC strategies, including prioritise RC for RL, strategic considerations, mapping RL, classification and identification of resources for RL, allocation of sufficient and appropriate resources for RL, financial, IT, infrastructure, RL process, human and external RC, strategic combination of resources for RL, strategic utilisation of committed resources and strategic sharing RC, and (2) RC requirements, including economic requirements (investment, financial support and cost), operational requirements (RC focus on RL process efficiency and facility/location practices), organisational requirements (RC focus on RL capabilities, management involvement, commitment and support, internal communication, and efficient, trained and skilled human resources), and market-related and SC requirements (relationship management with external parties).
>
> The RC strategies and requirements can result in several outcomes, including (1) economic outcomes (increasing financial RC in RL, increasing RL funding, FM in RL, enhancing economic performance, and reducing cost and investment requirements), (2) operational outcomes (address operational barriers, facilitate IT implementation, infrastructure support, facilitate and support RL processes, improve RL process efficiency and effectiveness, and improve operational performance), (3) organisational outcomes (understand RL value, increase and support human RC, effective RC in RL, facilitate RL implementation, RL innovation, develop RL capabilities, improve RL performance and effectiveness, facilitate RLM and decision-making, facilitate internal information sharing (CFI), and successful RL function), (4) environmental and social outcomes (environmental protection and corporate image), (5) market-related outcomes (competitive advantage, increase consumer service, responsiveness, satisfaction and loyalty, and facilitate CI), and (6) SC outcomes (SC sustainability, SCI, SC transparency and trust and improve SC efficiency).

Figure 6.27 provides a conceptual framework of RC practices, including RC strategies, requirements and related outcomes to manage consumer returns. Particularly, the framework illustrates the links between RC strategies, requirements and outcomes, demonstrating a cost and benefit relationship. The links between the strategies and requirements can be demonstrated by the economic requirement of investment, which links with the RC strategy of allocating sufficient resources for RL, the types of RC (such as IT, infrastructure and human RC), operational requirement of facility/location practices and the organisational requirement of skilled/trained staff. Additionally, the RC strategy of strategic sharing of resources can link with the market-related and SC requirements of relationship management with external parties.

Nonetheless, the main aim of the framework involves the links between the RC strategies, requirements and outcomes, which can be important for the effective management of consumer returns. Subsequently, the most significant RC strategies and requirements (associated with the most outcomes) and RC outcomes (associated with the most RC practices) are emphasised by *italics*, which will be elaborated upon in Table 6.36. Like disposition and PM practices, RC practices represent one concept, which means that the summary of findings will be presented differently from the practice categories that consist of subcategories (e.g. IT, integration and facility/location). Consequently, the summary of

findings and managerial implications will focus on the most significant strategies, requirements and outcomes in RC.

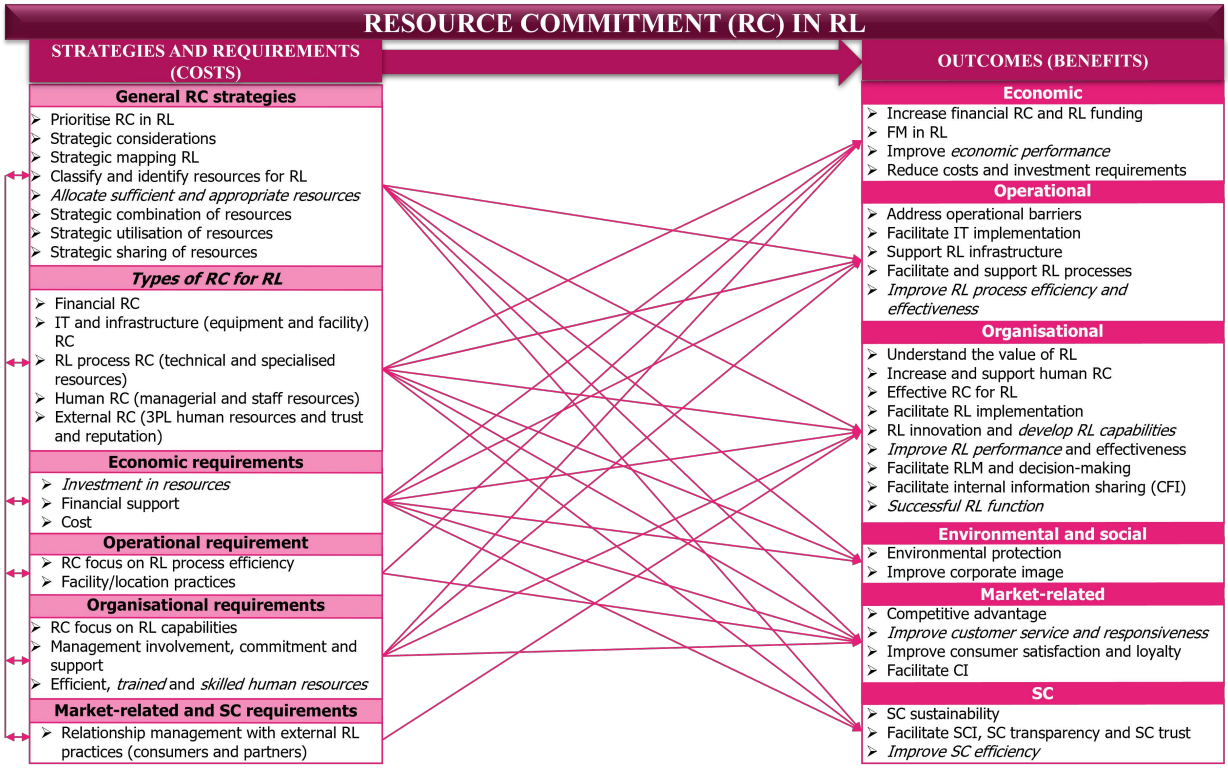


Figure 6.27 Conceptual framework of RC practices to manage consumer returns
Source: Compiled by the researcher

Based on Figure 6.27 and the discussions given in section 6.9.1, Table 6.36 provides a summary of the findings and managerial implications for RC practices to manage consumer returns.

Table 6.36 Summary of findings and managerial implications for RC practices to manage consumer returns

CATEGORY	KEY FINDINGS	MANAGERIAL IMPLICATIONS
Strategies and requirements	•RC in RL involves several strategies, including prioritising RC, strategic considerations, mapping RL, classification and identification of resources for RL, allocation of sufficient and appropriate resource for RL, financial RC, IT and infrastructure RC, RL process RC, human RC, external RC, and strategic utilisation, combination and sharing of committed resources •The RC strategies, especially types of committed resources, associate with all the RC outcomes, including economic, operational, organisational, environmental, social, market-related and SC outcomes. •The RC strategies of allocating sufficient and appropriate resources, financial RC and human RC can be the most beneficial for RL •The least significant RC strategies, with limited impact on the outcomes, include, mapping RL, classifying resources for RL, external RC and sharing committed resources •RC practices in RL involves several requirements, including economic, operational, organisational, market-related and SC requirements •The economic requirements of RC in RL associate with all the outcomes, including economic, operational, organisational, environmental and social, market-related and SC outcomes. •From the economic requirements of RC practices, investment in resources can lead to the most benefits •The organisational requirements of RC practices associate with most outcome categories, including economic, operational, organisational and market-related outcomes •From the organisational requirements of RC practices, trained and skilled human resources lead to the most benefits	•Organisations must prioritise RC for RL and develop a RC strategy that involves strategic considerations, RL mapping, classifying, identifying and allocating sufficient and appropriate resources for RL, including financial, IT, infrastructure, RL process, human and external RC, and utilising, combining and sharing committed resources •Organisations that seek various economic, operational, organisational, environmental, social, market-related and SC benefits in RL must focus on allocating sufficient and appropriate resources, financial RC and human RC for RL •Organisations must focus on investment in resources to achieve optimum RC benefits in RL •For effective RC in RL, organisations must focus on training and educating staff (human resources)

	•The least significant requirements, with limited impact on the RC outcomes, include the market-related and SC requirements of relationship management with external RL parties	
Outcomes	•RC practices in RL involve economic, operational, organisational, environmental, social, market-related and SC outcomes •The most significant outcomes of RC practices in RL involves organisational and market-related, followed by economic outcomes •The least significant outcomes of RC practices in RL involves environmental and social outcomes •The most significant economic outcome of RC practices includes improving economic performance •The most significant operational outcome of RC practices in RL includes improving RL process efficiency and effectiveness •The most significant organisational outcomes of RC practices in RL include, developing RL capabilities, improving RL performance and successful RL function •The most significant market-related outcome of RC practices in RL includes improving customer service and responsiveness •The most significant SC outcome of RC practices in RL includes SC efficiency	•Organisations that seek economic, operational, organisational, environmental, social, market-related and SC benefits in RL can implement RC practices in RL •Organisations that seek to improve economic performance can consider RC practices in RL •Organisations that experience inefficiencies in the RL process can consider RC practices in RL •Organisations that seek to develop RL capabilities and improve RL performance must consider RC practices in RL •For a successful RL function, organisations must consider RC practices in RL •Organisations that seek to increase consumer service and responsiveness can consider RC practices in RL •Organisations that experience inefficiencies in the SC can consider RC practices in RL •For the effective management of consumer returns, organisations must identify/implement/consider RC strategies, requirements, and outcomes.

Source: Compiled by the researcher

Table 6.36 provides an in-depth understanding into the value of RC practices as part of the RL practices for consumer returns. Organisations can use the RC strategies, requirements and related outcomes for effective RC in RL, which can contribute to the effective RLM of consumer returns. RC in RL will further be explored in the interviews with industry experts (chapter 8).

In the next section, final management (FM) practices in RL will be presented, discussed and analysed.

6.9.2 Financial management (FM) practices to manage consumer returns

FM practices in RL focusses on understanding and managing RL costs and profits, which can be critical to manage consumer returns. Accordingly, Huscroft *et al.* (2013b:317) asserted that RL cost can significantly impact organisational performance and return on investment (ROI), making FM in RL an integral part of RLM. Additionally, FM in RL can be important for managing consumer returns since retailers must absorb consumer return cost (Ahsan & Rahman, 2016:611). Despite this importance, Figure 6.3 showed that limited RL literature (in the QCA) focusses on FM practices in RL, demonstrating a gap in this area of RL research and implying that FM associate with RL might be less popular in practice.

Although RL cost can mirror forward logistics (FL) cost (e.g. operational cost, inventory cost, infrastructure cost and transportation cost) (Kumar *et al.* 2016:3), RL involves additional cost that associates with product returns and the loss of income (e.g. refund the consumer and pay for return cost), which not only explain the economic barriers in RL but also the lack of management commitment and attention to RL (see section 2.3).

The aim of the subsequent sections is to identify and discuss FM strategies, requirements and outcomes and to provide a description, conceptual framework and summary of the findings for FM practices in

RL, which can help organisations to understand and manage RL costs for the management consumer returns.

6.9.2.1 Strategies and requirements of FM practices in RL

The FM strategies in RL involve general FM strategies and FM strategies for RL cost. The FM requirements in RL involve economic, organisational and SC requirements, which, in combination with the FM strategies, can contribute to effective FM in RL needed to manage consumer returns. Table 6.37 provides an overview of the findings related to the *strategies and requirements of FM practices to manage consumer returns*, including the categories, subcategories, supporting sources for the subcategories and key quotations that support both the subcategories and the discussion of the findings.

Table 6.37 Findings related to strategies and requirements of FM to manage consumer returns

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
General FM strategies	***Strategic considerations for FM***	Ahsan and Rahman (2016:611) Badenhorst and van Zyl, (2015:149) Dowlatshahi (2010a:1370) Janse *et al.* (2010:508) Lambert *et al.* (2011:565)	• *"Financial considerations comprise investment, profitability, and cost […]."* (Lau & Wang, 2009:460) • *"[…] the fundamental questions may be 'Will pure maximisation of pecuniary profit distort the RLM processes […]' or 'If the recovery revenue cannot cover the cost of RLM operations, what should RLM do?'."* (Tsai & Hung, 2009:5392) • *"[…] managers must consider […] possible measurements concerning reverse logistics […]."* (Hsueh & Lin, 2015:164)
	Develop and use of financial and accounting statements for RL	None	• *"The company also introduced a financial statement that recorded the cost of the returns process, the value of returned goods and the cash recovered through the recovery process."* (Bernon & Cullen, 2007:50) • *"[…] use of an accounting document […] to promote the recovery of cash through the refurbishment process."* (Bernon & Cullen, 2007:52)
	Strategic application of accounting techniques and systems for RL	Škapa and Klapalová (2012:680)	• *"The application of management accounting techniques are necessary […]."* (Bernon *et al.* 2011:497) • *"To evaluate their performance, companies need to incorporate accounting systems that identify and record the full cost of managing returns."* (Bernon & Cullen, 2007:55)
	Strategic utilisation of costing techniques and models for RL	Dhib *et al.* (2016:373) Dowlatshahi (2010a:1374) Kumar *et al.* (2016:4) Srivastava (2008:542) Tsai and Hung (2009:5392)	• *"[…] costing techniques […] had been successfully utilised […], including life cycle costing; activity-based costing; and quality costing."* (Bernon *et al.* 2011:497) • *"Activity-based costing related to reverse logistics activities […] came out as the widely used practice in most of the organizations [sic]."* (Ravi & Shankar, 2015:881) • *"Quality costing has been expressed as the sum of prevention costs, appraisal costs, internal failure costs and external failure costs […] quality costing was explored where the costs of preventing a return are compared to the cost of handling a return."* (Bernon *et al.* 2011:499) • *"The total cost of ownership (TCO) is […] more contemporary […]."* (García-Rodríguez *et al.* 2013:586) • *"Total cost of ownership […] Importance, in cost terms of activities in purchasing management (supplier information, materials transport, damaged material, quality problems in materials during the process, suppliers' post-sales service) and reverse logistics (collection, inspection, classification, disassembly, processing, reassembly and repackaging)."* (García-Rodríguez *et al.* 2013:589) • *"The objective […] of the model is to minimise the total cost."* (Piplani & Saraswat, 2012:1428
	Strategic understanding of RL profits and earnings	Lau and Wang (2009:460)	• *"[…] define profit from RL as any profit realized [sic] via the employment of RL activities.* (Hazen *et al.* 2012:254) • *"Revenues, which are derived solely from the treatment or processing activity, must also be considered."* (Lambert *et al.* 2011:567) • *"The separation of nonprofit and for-profit processes makes decision objectives more flexible and applicable in RLM […]."* (Tsai & Hung, 2009:5393)
	Perform cost and value estimations	None	• *"[…] costs and the estimation the estimation of the value of the returned should be comprehensive, detailed and as accurate as possible."* (Dowlatshahi, 2010a:1374) • *"Estimate the value of all returned items. The value of the returned items constitutes the benefits derived from the use of parts and materials in returned items."* (Dowlatshahi, 2010a:1370) • *"[…] use cost estimation to find out the most profitable or economic way of reverse logistics management."* (Tsai & Hung, 2009:5393) • *"Estimating transportation cost is also important for determining the overall cost associated with RL operations."* (Dowlatshahi, 2010b:4207)

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
	Perform a cost-benefit analysis	Tiwari (2013:240)	• *"[…] manager must know the costs of the RL activities and compare those costs with other options in order to determine the best course of action."* (Lambert *et al.* 2011:567) • *"[…] organizations [sic] are recommended to conduct a cost and benefit analysis for a long time horizon. […] some of the costs are sunk costs at the beginning stage of implementation. However, the benefits brought by the new solutions can only be realized [sic] at a later stage."* (Lee & Lam, 2012:596)
	Benefit-driven FM strategy	Piplani and Saraswat (2012:1428)	• *"If the transportation cost is prohibitive, the viability and profitability of RL systems will be severely curtailed."* (Dowlatshahi, 2010b:4199) • *"[…] being able to […] minimize [sic] costs is essential to an effective RL process."* (Hall *et al.* 2013:775)
FM strategies for RL costs	***Develop a cost perspective and approach for RL***	Rogers *et al.* (2013:47)	• *"In devising their costs perspective […] managers must consider […] possible measurements concerning reverse logistics […]."* (Hsueh & Lin, 2015:164) • *"A total cost approach should therefore be adopted by organisations to determine the true cost of returns and therefore improve decision-making."* (Bernon & Cullen, 2007:54)
	Strategic consideration of factors that influence RL cost	None	• *"Additional expenses occur if the merchandise is received in a deteriorated condition. In these cases, retailers must bear the costs of new packaging, reconditioning, value depreciation, and waste disposal."* (Asdecker, 2015:2) • *"Variable costs depending on the quality of returns […] depending on the time of storage […]."* (Tan & Kumar, 2006:335) • *"[…] reverse logistics costs […] provided by the online retailer, is specific to the product category […]."* (Minnema *et al.* 2016:263) • *"[…] costs depend on the volume of returned products, the transportation mode, and the desired service level."* (Lambert *et al.* 2011:568) • *"[…] full costs for managing returns were not known […] there is no visibility of the total costs as it is hidden in different parts of the business."* (Bernon *et al.* 2011:498) • *"As a part of this estimation, it has to be determined which party (the company or its RL customers) is responsible for […] costs."* (Dowlatshahi, 2010b:4207) • *"Companies that pay for return shipment of products face increasing costs […]."* (Hall *et al.* 2013:775) • *"[…] incur significant collection costs […] and retailers send returned products back to suppliers and distributors for credit."* (Jayaraman *et al.* 2008:415) • *"Depending on whether the firm prefers to have its own vehicle fleet or rent such a fleet for collection operations, the operating cost of a vehicle can either be its rent or its initial purchasing cost discounted on a periodic basis".* (Aras *et al.* 2008:1226)
	Strategic understanding and identification of RL cost	Lambert *et al.* (2011:565) Lau and Wang (2009:460) Partida (2011:63) Srivastava (2008:538)	• *"Understanding the total costs […] and the breakdown of the costs associated with […] RL operations is important."* (Dowlatshahi, 2012:1270) • *"[…] impact […] of the reverse process, identifying […] such costs is a critical area."* (Huscroft *et al.* 2013b:317) • *"[…] define cost of RL as the costs incurred to facilitate effective RL activities."* (Hazen *et al.* 2012:254)
	Identify investment, assets and infrastructure cost	Du and Evans (2008:2619) Hsueh and Lin (2015:164) Kumar *et al.* (2016:4) Lambert *et al.* (2011:567) Min *et al.* (2006a:63) Srivastava and Srivastava (2006:532) Tan and Kumar (2006:335)	• *"Initial investment includes fixed and set-up cost for facility centers [sic] and the other infrastructure."* (Jindal & Sangwan, 2015:396) • *"The costs are the fixed costs of establishing facilities […]."* (Alumur *et al.* 2012:72) • *"[…] costs for adopting IT solutions There are two types of costs involved with any IT-based solution – an initial capital cost and an operating cost."* (Jayaraman *et al.* 2008:414) • *"[…] operating cost of a vehicle […] to have its own vehicle fleet […] the operating cost of a vehicle can […] be its […] initial purchasing cost discounted on a periodic basis. This cost component may also include driver wages and other overhead costs such as insurance and tax."* (Aras *et al.* 2008:1226)
	Identify rental cost	Min *et al.* (2006a:63)	• *"[…] reverse logistics process affects various costs, which are mainly […] space rental costs […]."* (Banomyong *et al.* 2008:39) • *"Depending on whether the firm prefers to […] rent such a fleet for collection operations, the operating cost of a vehicle can […] be its rent […]."* (Aras *et al.* 2008:1226)
	Identify administrative cost	Hazen *et al.* (2012:254)	• *"[…] administrative costs in managing the complex return policies among several retailers, distributors and manufacturers."* (Jayaraman *et al.* 2008:415)
	Identify staff-related cost	Hall *et al.* (2013:775) Hazen *et al.* (2012:254) Hsueh and Lin (2015:164) Jindal and Sangwan (2015:396) Lambert *et al.* (2011:567) Min *et al.* (2006a:63) Piplani and Saraswat (2012:1428) Selvi and Kayar (2016:26) Shi *et al.* (2012:219)	• *"[…] labour costs will form an important part of the reverse logistics process."* (Badenhorst, 2013:3) • *"The customer returns handling cost includes the cost of staffing […]."* (Chen & Chen, 2015:3) • *"[…] the costs for qualified workers […]."* (Du & Evans, 2008:2619)
	Identify operational cost	Alumur *et al.* (2012:72) Shi *et al.* (2012:220)	• *"[…] reverse logistics process affects various costs, which are mainly […] operation costs […]."* (Banomyong *et al.* 2008:39)

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
		Subhashini (2016:10)	• *"[…] general, administrative, and selling costs […] must be included and calculated as a part of the operating costs."* (Dowlatshahi, 2010a:1370) • *"Facility cost includes the operating cost of facilities."* (Piplani & Saraswat, 2012:1428)
	Identify inventory-related cost	Alumur *et al.* (2012:72) Dowlatshahi (2012:1270) Jindal and Sangwan, (2015:396) Kumar *et al.* (2016:4) Lambert *et al.* (2011:567) Mafakheri and Nasiri (2013:193) Min *et al.* (2006a:63) Shi *et al.* (2012:219) Srivastava and Srivastava (2006:532) Srivastava (2008:542) Subhashini (2016:10) Tan and Kumar (2006:335)	• *"[…] retailers must bear the costs of […] value depreciation […]."* (Asdecker, 2015:2) • *"[…] reverse logistics process affects various costs, which are mainly […] inventory holding costs."* (Banomyong *et al.* 2008:39) • *"Storage, handling and shrinkage costs increase at every step of the way as the product becomes outdated."* (Jayaraman *et al.* 2008:415) • *"[…] reverse logistics costs consist of […] inventory loss cost […]."* (Selvi & Kayar, 2016:26)
	Identify collection cost	García-Rodríguez *et al.* (2013:589) Jayaraman *et al.* (2008:415) Mafakheri and Nasiri (2013:193) Shi *et al.* (2012:219) Subhashini (2016:10)	• *"RL include many costs like collection cost […]."* (Jindal & Sangwan, 2015:396) • *"Acquisition cost – cost incurred to acquire each product return."* (Tan & Kumar, 2006:335)
	Identify transport cost	Alumur *et al.* (2012:72) Bogataj and Grubbström (2013:396) Du and Evans (2008:2619) Hall *et al.* (2013:775) Hsueh and Lin (2015:164) Jindal and Sangwan (2015:396) Lambert *et al.* (2011:568) Mafakheri and Nasiri (2013:193) Min *et al.* (2006a:63) Selvi and Kayar (2016:26) Shi *et al.* (2012:219) Srivastava and Srivastava (2006:532) Srivastava (2008:542)	• *"[…] reverse logistics process affects various costs, which are mainly transportation costs […]."* (Banomyong *et al.* 2008:39) • *"[…] transportation costs play an important role in the viability of the entire RL system."* (Dowlatshahi, 2010b:4199) • *"The transportation cost is incurred due to the product-module movement between the facilities."* (Piplani & Saraswat, 2012:1428) • *"Transport cost – cost incurred in local transport for each product return from customer […]."* (Tan & Kumar, 2006:335) • *"Redistribution […] include costs for transportation."* (Kumar *et al.* 2016:4)
	Identify receiving cost	None	• *"[…] costs involved in the loading, unloading, and handling processes […]."* (Shi *et al.* 2012:219)
	Identify processing cost	García-Rodríguez *et al.* (2013:589) Petersen and Kumar, (2009:47) Piplani and Saraswat (2012:1428) Srivastava and Srivastava (2006:532)	• *"[…] various costs including […] processing […] costs."* (Mafakheri & Nasiri, 2013:193) • *"The processing cost involves the cost incurred while processing and handling returns […]."* (Subhashini, 2016:10) • *"[…] resolution price is the money paid to the customers for returns."* (Srivastava, 2008:542)
	Identify inspection and sorting cost	García-Rodríguez *et al.* (2013:589) Mafakheri and Nasiri (2013:193) Shi *et al.* (2012:220)	• *"[…] these include […] inspection and sorting costs […]."* (Kumar *et al.* 2016:4) • *"[…] faulty products, […] cost to identify faulty modules at service centres."* (Piplani & Saraswat, 2012:1428)
	Identify disposition and recovery cost	García-Rodríguez *et al.* (2013:589) Kumar *et al.* (2016:4) Piplani and Saraswat (2012:1428)	• *"Reuse costs – cost incurred to repackage each product return before it is sold."* (Tan & Kumar, 2006:335) • *"[…] retailers must bear the costs of new packaging, reconditioning […] and waste disposal."* (Asdecker, 2015:2) • *"RL include many costs like […] disassembly cost […]."* (Jindal & Sangwan, 2015:396) • *Repair cost – cost incurred to repair each product return before it is sold.* (Tan & Kumar, 2006:335)
	Identify RLM cost	Hong *et al.* (2008:179) Jayaraman *et al.* (2008:415)	• *"[…] costs for managing returns across the supply chain […]."* (Bernon *et al.* 2011:497) • *"Total RLM cost includes transportation cost, operating cost, fixed cost for new facilities, final disposal cost and landfill cost."* (Tsai & Hung, 2009:5395)
	Identify hidden RL costs	Hong *et al.* (2008:179)	• *"[…] concerning reverse logistics […] activity: […] maintenance cost (MAC), opportunity cost (OPC), social responsibility (SOR), and recycle education and promotion cost (REPC)."* (Hsueh & Lin, 2015:164) • *"Extending the profit and loss account with "hidden" cost, e.g. opportunity tied up in returns, cost of tax compliance, and control […]."* (Janse *et al.* 2010:508) • *"[…] some environmental costs (including environmental taxes), especially when reverse logistics activities have to find their best location."* (Bogataj & Grubbström,

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
			2013:396) • *"[…] certain costs cannot easily be quantified, as would be the case for loss of reputation or environmental impact."* (Lambert *et al.* 2011:565)
	Implement cost policies, controls and measurements	Hsueh and Lin (2015:164) Huscroft *et al.* (2013b:317) Lambert *et al.* (2011:568)	• *"Implementing policies that take into account the true costs […]."* (Matar *et al.* 2014:329) • *"Controlling costs associated with returned products is very important, and equally difficult to manage."* (Hall *et al.* 2013:775) • *"[…] the financial costs associated with returns should be measured […]."* (Bernon *et al.* 2011:498)
Economic requirements	***Cost visibility***	None	• *"Having visibility of the total costs for managing returns across the supply chain facilitates the engagement of senior managers and creates need for change."* (Bernon *et al.* 2011:497)
	Timely access to cost data	None	• *"[…] transportation costs generally account for a large percentage of overall RL costs, it is important to have timely, accurate, and relevant transportation cost data."* (Dowlatshahi, 2010b:4207)
	Accept initial losses	Srivastava (2008:538)	• *"[…] some of the costs are sunk costs at the beginning stage of implementation. However, the benefits brought by the new solutions can only be realized at a later stage. This means […] organizations [sic] […] may have to bear losses in the short run.* (Lee & Lam, 2012:596)
Operational requirements	***Integrated facilities/location practices***	None	• *"[…] to integrate the existing forward logistics network with the backward logistics network for product returns and therefore help the firm […] estimate the true cost of managing product returns from the holistic perspective."* (Min & Ko, 2008:191)
Organisational requirements	***Management involvement***	None	• *"In devising their costs perspective […] managers must consider […] possible measurements concerning reverse logistics […]."* (Hsueh & Lin, 2015:164) • *"[…] manager must know the costs of the RL activities […]."* (Lambert *et al.* 2011:567) • *"Reverse logistics managers need to strike a balance between Reverse Logistics performance and cost of providing it."* (Tiwari, 2013:240)
	CFI practices	None	• *"[…] the problem of control and managing financial aspects of aftermarket logistics. Frequent communication, co-operation and collaboration between logistics and financial department can resolve the problem […]."* (Lee & Lam, 2012:596)
SC requirements	***Collaboration with SC partners***	None	• *"The total cost of ownership (TCO) is […] based on collaboration with suppliers."* (García-Rodríguez *et al.* 2013:586)

Source: Compiled by the researcher

Table 6.37 indicates the FM strategies, including general FM strategies and FM strategies for RL costs, and requirements of FM practices to manage consumer returns, which will be discussed in subsequent sections.

6.9.2.1.1 General strategies of FM practices in RL

The general FM strategies in RL include (1) strategic considerations for FM, (2) developing and using financial and accounting statements for RL, (3) strategic application of accounting techniques (4) strategic utilisation of costing techniques and models, (5) strategic understanding of RL profits and earnings, (6) performing cost and value estimations, (7) performing a cost-benefit analysis, and (8) a benefit-driven strategy.

Certain *strategic considerations for FM* in RL can be important, including investment, profits, costs, the party responsible for paying RL costs and performance measures (PM elements). Particularly, organisations need to consider the investment and cost of RL versus the profits obtained through RL disposition (recovery). Additionally, organisations must consider situations where investment and RL cost exceeds RL profits and the impact this may have on RLM. Lastly, PM (performance measurement)

in RL can play a role in the FM of RL and, accordingly, must be considered in the FM strategy of an organisation.

Accounting can play an important role in the FM of RL (see section 6.9.2.2), which necessitates (1) the *development and use financial and accounting statements* and (2) the *strategic application of accounting techniques and systems for RL*. Furthermore, *strategic utilisation of cost techniques for RL*, including activity-based costing (ABC), quality costing and lifecycle costing or total cost of ownership (TCO), can facilitate FM in RL. The most common technique, ABC involves the costs for each RL process and activity. Quality costing can be less direct and entails comparing return gatekeeping/avoidance costs with return costs (such as return prevention cost, inspection costs and internal and external failure costs), which can be used for trade-offs in RL.

Lifecycle costing or TCO involves the cost related to the purchasing a product from the supplier, cost related to holding the product, cost related to selling the product, the cost related to receiving a product return and the cost related to product reuse, recovery and disposal. TCO also form an important part of PM in RL, emphasising the importance of considering PM for FM in RL. Complementing the costing techniques, organisations can utilise *cost models*, which involves RL cost simulations and estimations to manage and minimise RL costs.

For successful application of financial and accounting statements and techniques organisations need a *strategic understanding of RL profits and earnings*, emphasising the importance of considering RL profits for FM. Organisations can gain a better understanding of RL profits and earnings by defining RL profits (e.g. any profits from RL processes) and separating non-profit and for-profit RL processes and activities. Furthermore, by *performing* accurate and detailed *costs* and *value estimations*, organisations can identify RL costs, the economic benefits of RL activities (such as disposition and recovery activities) and potential profits and earnings.

Similarly, organisations can *perform a cost-benefit analysis* for FM in RL, using the quality costing technique or comparing the cost of established RL processes and practices with the costs of new/alternative RL processes and practices. Additionally, organisations can perform a long-term cost-benefit analysis, which includes the initial set-up cost of RL (e.g. investment and infrastructure) (short-term expenses) and the long-term outcomes/benefits of effective RL processes and practices.

Finally, like disposition, outsourcing and facility/location practices (see sections 6.5.1, 6.6.1 and 6.8) organisations can focus on cost minimisation as part of a *benefit-driven FM strategy*, which can be important for the effective management of consumer returns.

6.9.2.1.2 FM strategies for RL costs

The FM strategies for RL costs involve (1) developing a cost perspective, (2) strategically consider the factors that influence RL costs, (3) strategic understanding and identification of RL cost, including investment, assets, infrastructure, rental, administrative, staff, operational, inventory, RL process, RLM and hidden costs, and (4) implementing cost policies, controls and measurements. FM strategies for RL costs can start with *developing a cost perspective and approach for RL,* for example, viewing RL costs as a part of overall cost (such as a total cost approach), viewing RL costs as an opportunity for profits or viewing RL costs as an expense or loss. Regardless of the cost perspective and approach for RL, organisations need to consider PM in RL and other RL practices that can shape the cost perspective (such as disposition practices and RC).

Apart from the general strategic considerations for FM in RL (section 6.9.2.1.1), organisations must *strategically consider the factors that influence RL costs,* including product condition, quality, type and volume, transport mode, service levels, hidden costs, the party responsible for costs and owning versus renting. Specifically, products that arrive in poor *condition* can be costlier since additional expenses must be incurred (such as costs for new packaging, disposition activities and value depreciation). Similarly, poor *quality* products that may be defective can result in costlier disposition activities (e.g. repair and refurbishment) and additional holding and handling cost.

Furthermore, the *type* of the returned *product* can influence RL costs, for example, larger furniture or appliances requires larger vehicles and special handling equipment that can increase RL costs. Product return *volume* can influence economies of scale, which means that lower return volumes can be costlier than higher return volumes. Similarly, different costs associate with different *transportation modes*, for example, air transport can be costlier than road transport, influencing RL cost. Furthermore, the consumer *service level* can impact RL cost, for example, a consumer-focussed strategy can involve higher RL cost since the retailer may incur expenses related to consumer returns (e.g. free return shipping cost).

RL can involve many *hidden costs* that organisations must consider to accurately calculate RL costs for effective FM in RL. Additionally, the party responsible for RL cost must be considered, for example, a retailer may be responsible for the RL costs for consumer product returns (e.g. collection, transport, processing, inspection and redistribution) and the supplier may give credit for the returned product, which can be important for accurate calculation of RL cost. Finally, organisations must consider rental versus ownership cost, for example, owning a vehicle involves purchasing cost, depreciation cost and other variable cost, and renting a vehicle involves operational and variable costs.

Strategic understanding and identification of RL cost can be critical for the effective management of consumer returns, and like the strategic understanding of profits and earnings can be important for accurate financial statements and techniques (see section 6.9.2.1.1). Organisations can define RL cost, identify RL processes, activities and practices and use the cost perspective/approach and costing techniques as guidelines. RL cost can relate to financial, IT and infrastructure, and human resources, operations, inventory, RL processes, hidden cost and RLM, which will be described in subsequent paragraphs.

Organisations can start by *identifying investment, asset and infrastructure costs,* which can include initial investment in infrastructure (such as fixed and set-up costs for facilities), investment in and use of IT (such as initial capital and operating costs), and investment in fixed assets (such as vehicles that require purchasing costs, operating costs and overhead costs), demonstrating the importance of investment considerations in FM strategies (section 6.9.2.1.1). However, if organisations decide to rent infrastructure and assets (such as facilities, equipment and vehicles), *identifying rental costs* can be important. Rental costs can exclude capital and set-up costs but include rental fees and operating costs, showing the importance of considering ownership versus renting as factors that influence RL costs.

Furthermore, organisation can *identify* any *administrative costs* associated with RL, for example, administrative costs for managing return policies. Relating to human resources in RL, organisation can *identify staff-related costs,* which include the labour or staffing costs for handling consumer returns and the costs of qualified workers (such as inspectors). Organisations may need to *identify operational costs* for RL, which includes the operating costs of facilities and administrative, general and selling costs. Additionally, organisations can *identify inventory-related costs,* which range from inventory-holding costs, depreciation and shrinkage costs, storage costs to inventory loss costs.

In terms of the costs associated with RL processes, organisations can *identify* pre-receipt RL process costs, including *collection costs* (any costs associated with return pickup) and *transportation costs* (costs of moving the returned products from consumer to facility and between facilities). However, transportation costs can also be part of the post-receipt RL processes and include *redistribution costs* of transporting recovered/returned products to consumers or markets.

Other post-receipt RL process costs that organisations can *identify* includes *receiving costs* (cost of loading, unloading and handing at the receiving dock), *processing costs* (e.g. costs of issuing refunds and credits), *inspection and sorting costs* (e.g. costs of testing and classification of product returns), and *disposition/recovery costs,* which includes costs of disposition options and recovery activities (such as reuse costs, repackaging costs, disassembly costs, repair costs and refurbishment costs).

Furthermore, organisations can *identify* any *costs* related to *RLM,* which involves the costs of managing consumer returns and the total costs of investment, infrastructure, operations and RL processes, emphasising a total cost approach for FM in RL. Consequently, understanding the different RL processes (chapters 4 and 5) and RL practices can help organisations to identify total RL costs, which emphasise the importance of a holistic approach for the effective management of consumer returns.

Nevertheless, organisations must *identify* the *potential hidden costs* of *RL,* which can include maintenance costs, opportunity costs (e.g. poor investment decisions or inefficient practices in RL), social responsibility costs (e.g. loss of reputation and corporate image), promotion costs, environmental costs, and taxes (e.g. cost of tax compliance), emphasising the importance of strategically consider hidden RL cost. These mentioned hidden costs can form part of the financial PM elements (see section 6.7.2), which demonstrates the importance of considering PM for effective FM strategies (section 6.9.2.1.1).

Finally, organisations can *implement cost policies, controls* and *measurements* to manage RL costs, which reemphasises the link between PM and FM practices in RL. Essentially, FM strategies can be important for the management of consumer returns, enabling organisations to manage the RL costs of consumer returns and realise the benefits (profits) of effective RLM.

6.9.2.1.3 Requirements of FM practices in RL

Due to the strategic nature of FM practices in RL, fewer requirements, including economic, operational, organisational and SC, associate with FM practices.

The *economic requirements* of FM practices in RL include cost visibility, timely access to cost data and acceptance of initial losses. To support the FM strategies in RL, especially for identifying various costs in RL, *cost visibility* can be critical. Therefore, organisations must identify and implement mechanisms (such as the ABC technique) to achieve visibility of all the RL costs needed for effective FM in RL (see section 6.9.2.2).

Similarly, organisations need *timely access to cost data* of RL processes (such as transportation), which can be important to monitor, measure and control costs as part of FM strategies for RL costs (section 6.9.2.1.2). Furthermore, organisations must *accept initial losses* associated with RL processes and practices, emphasising the importance of considering investment, costs and profits for FM strategies and performing a cost-benefit analysis, which can assist organisations with realising the long-term benefits (e.g. effective RLM) of short-term investments and expenses (see section 6.9.2.1.1).

The *operational requirement* of FM practices involves facility/location practices, which includes integrated facility/location practices. Particularly, organisations can integrate RL and FL networks to identify true RL costs, demonstrating an important link between FM and facility/location practices.

The *organisational requirements* of FM practices in RL entails management involvement and CFI practices. Specifically, *managers* must be *involved* in the strategic considerations for FM, performing a cost-benefit analysis, developing a cost perspective/approach, identifying and understanding RL costs and implementing cost policies, controls and measures to manage RL cost (see sections 6.9.2.1.1 and 6.9.2.1.2). Furthermore, *CFI practices* (functional integration) that involve collaboration, cooperation and communication between functional departments (like logistics and finance) can be important for effective FM in RL.

Similarly, the SC requirement of FM in RL involves *collaboration with SC partners*, which demonstrates that SCI practices can be important for FM practices (e.g. the costing technique of TCO) (section 6.9.2.1.1). Consequently, organisations must focus on internal and external integration practices for effective FM in RL.

In the next section, the outcomes of FM practices in RL will be analysed and discussed.

6.9.2.2 Outcomes of FM practices in RL

Although limited outcome categories associate with the FM strategies and requirements, the outcomes of FM practices provide benefits that can be important for the effective management of consumer returns. The outcomes of FM practices in RL included (1) economic, (2) operational, (3) organisational and (4) market-related outcomes. Table 6.38 provides an overview of the findings related to the *outcomes of FM practices to manage consumer returns*, including the categories, subcategories, supporting sources for the subcategories and key quotations that support both the subcategories and the discussion of the findings.

Table 6.38 Findings related to outcomes of FM practices to manage consumer returns

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
Economic outcomes	***Improve FM and control in RL***		• *"[…] the problem of control and managing financial aspects of aftermarket logistics. Frequent communication, co-operation and collaboration between logistics and financial department can resolve the problem […]."* (Lee & Lam, 2012:596)
	Identify true RL costs	None	• *"The company also introduced a financial statement […] This enabled it to identify the costs […] associated with its reverse logistics operations."* (Bernon & Cullen, 2007:50) • *"[…] companies need to incorporate accounting systems that identify […] full cost of managing returns."* (Bernon & Cullen, 2007:55) • *"[…] activity-based costing was a useful tool to identify the cost of reverse logistics processes […]."* (Bernon *et al.* 2011:498) • *"Estimate […] RL operating costs […] to have a realistic and comprehensive picture of the operating costs […]."* (Dowlatshahi, 2010a:1370) • *"Estimating transportation cost is also important for determining the overall cost associated with RL operations. […] As a part of this estimation, it has to be determined which party (the company or its RL customers) is responsible for inbound*

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
			transportation costs." (Dowlatshahi, 2010b:4207) • *"A total cost approach […] to determine the true cost of returns […]."* (Bernon & Cullen, 2007:54) • *"Implementing policies that take into account the true costs […]."* (Matar *et al.* 2014:329) • *"[…] to integrate the existing forward logistics network with the backward logistics network for product returns and therefore help the firm […] estimate the true cost of managing product returns from the holistic perspective."* (Min & Ko, 2008:191)
	Enhance cost visibility	None	• *"Appropriate accounting instruments are necessary to get a real picture of the extent and allocation of RL' costs and potential value."* (Škapa & Klapalová, 2012:680) • *"[…] activity based costing […] gives us visibility around every part of our returns process. This gives the real costs of our activities and allows us to set targets for reducing costs […]."* (Bernon *et al.* 2011:498)
	Accurate RL cost and profit calculations	Dowlatshahi (2010a:1370) Minnema *et al.* (2016:263)	• *"Cost of product return = the total profit lost from product returns from customers […] e.g., loss of sales revenue and cost of reverse logistics […]."* (Petersen & Kumar, 2009:47) • *"The reverse logistics profitability is calculated by subtracting the revenue earned through reselling the recovered parts from the total cost of reverse logistics."* (Tan & Kumar, 2006:339)
	Record and manage RL cost	None	• *"The company also introduced a financial statement that recorded the cost of the returns process, the value of returned goods and the cash recovered through the recovery process."* (Bernon & Cullen, 2007:50) • *"[…] companies need to incorporate accounting systems that identify and record the full cost of managing returns."* (Bernon & Cullen, 2007:55)
	Understand RL expenditures	None	• *"Extending the profit and loss account with "hidden" cost, e.g. opportunity tied up in returns, cost of tax compliance, and control, advances the insight in expenditures."* (Janse *et al.* 2010:508)
	Facilitate RL cost allocation	None	• *"Understanding the total costs […] and the breakdown of the costs associated with […] RL operations is important. This […] determines the proper allocation of costs […]."* (Dowlatshahi, 2012:1270)
	Record and enhance value/cost recovery	None	• *"The company also introduced a financial statement that recorded […] the value of returned goods and the cash recovered through the recovery process."* (Bernon & Cullen, 2007:50) • *"[…] use of an accounting document […] to promote the recovery of cash through the refurbishment process."* (Bernon & Cullen, 2007:52) • *"Estimate the value of all returned items. […] these values (benefits) cover total operating costs and the appropriate logistical costs […]."* (Dowlatshahi, 2010a:1370)
	Cost effectiveness	None	• *"Identifying where costs lie […] enables […] an efficient and cost-effective flow of returns."* (Partida, 2011:63)
	Cost reductions and long-term cost savings	Bernon *et al.* (2011:498)	• *"Activity-Based Costing (ABC) can reduce costs […]."* (Dhib *et al.* 2016:373) • *"The objective […] of the model is to minimise the total cost."* (Piplani & Saraswat, 2012:1428) • *"[…] organizations [sic] are recommended to conduct a cost and benefit analysis for a long time horizon. […] sunk costs at the beginning stage of implementation. […] benefits brought by the new solutions can only be realized at a later stage. This means that even the organizations [sic] can achieve […] cost savings […] in the long run, they may have to bear losses in the short run."* (Lee & Lam, 2012:596)
	Profitability	Hazen *et al.* (2012:254)	• *"[…] use cost estimation to find out the most profitable or economic way of RLM."* (Tsai & Hung, 2009:5393) • *"Estimate the value of all returned items. […] these values (benefits) […] provide for a reasonable profit margin."* (Dowlatshahi, 2010a:1370) • *"If the transportation cost is prohibitive, the viability and profitability of RL […] will be severely curtailed."* (Dowlatshahi, 2010b:4199)
Operational outcomes	***Identify operational benefits of RL***	None	• *"[…] a financial statement that recorded the cost of the returns process, the value of returned goods and the cash recovered […] This enabled it to identify the […] benefits associated with its reverse logistics operations."* (Bernon & Cullen, 2007:50)
	Determine operational effectiveness	None	• *"Understanding the total costs […] and the breakdown of the costs associated with […] RL operations is important. This […] determines the effectiveness of the warehousing operations."* (Dowlatshahi, 2012:1270)
	Facilitate and support RL processes	Chen and Chen (2015:3)	• *"[…] labour costs will form an important part of the reverse logistics process."* (Badenhorst, 2013:3) • *"[…] manpower costs to properly handle returns […]."* (Hall *et al.* 2013:775)
	Improve RL process effectiveness and efficiency	None	• *"[…] being able to control and minimize [sic] costs is essential to an effective RL process."* (Hall *et al.* 2013:775) • *"[…] define cost of RL as the costs incurred to facilitate effective RL activities."* (Hazen *et al.* 2012:254) • *"Identifying where costs lie […] enables […] an efficient […] flow of returns."* (Partida, 2011:63)
Organisational outcomes	***Address organisational barriers in RL***	None	• *"Having visibility of the total costs for managing returns across the supply chain facilitates the engagement of senior managers and creates need for change."* (Bernon *et al.* 2011:497)
	Facilitate RL implementation	None	• *"Initial investment is as an important criterion for RL implementation. Initial investment includes fixed and set-up cost for facility centers [sic] and the other infrastructure."* (Jindal & Sangwan, 2015:396)

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
	Sustainable RL function	None	• *"[…] transportation costs play an important role in the viability of the entire RL system. If the transportation cost is prohibitive, the viability […] of RL systems will be severely curtailed."* (Dowlatshahi, 2010b:4199)
	Facilitate RLM and decision-making	Dhib *et al.* (2016:373)	• *"The application of management accounting techniques are necessary and several costing techniques […] had been successfully utilised in support decision making, including life cycle costing; activity-based costing; and quality costing."* (Bernon *et al.* 2011:497) • *"Activity-Based Costing (ABC) […] improves the resource allocation, which contribute managing various operations […]."* (Dhib *et al.* 2016:373) • *"[…] the "cost of quality" concept was identified as a method for exploring the trade off's that exist in managing retail returns."* (Bernon *et al.* 2011:499) • *"The separation of nonprofit and for-profit processes makes decision objectives more flexible and applicable in RLM […]."* (Tsai & Hung, 2009:5393) • *"A total cost approach […] to determine the true cost of returns and therefore improve decision-making."* (Bernon & Cullen, 2007:54) • *"[…] manager must know the costs of the RL activities and compare those costs with other options in order to determine the best course of action."* (Lambert *et al.* 2011:567)
	Facilitate PM in RL	None	• *"To evaluate their performance, companies need to incorporate accounting systems […]."* (Bernon & Cullen, 2007:55)
	Facilitate facility/ location strategies	None	• *"Identifying where costs lie […] enables organizations [sic] to determine the best physical network for […] flow of returns."* (Partida, 2011:63)
	Facilitate RC in RL	None	• *"Activity-Based Costing (ABC) […] improves the resource allocation […]."* (Dhib *et al.* 2016:373)
Market-related outcomes	***Facilitate CRM***	None	• *"[…] organizations [sic] are recommended to conduct a cost and benefit analysis for a long time horizon. […] sunk costs at the beginning stage of implementation. […] benefits brought by the new solutions can only be realized at a later stage. This means that even the organizations [sic] can achieve […] customer acquisition in the long run, they may have to bear losses in the short run."* (Lee & Lam, 2012:596)

Source: Compiled by the researcher

Table 6.38 presents the outcomes of FM practices in RL, including economic, operational, organisational and market-related outcomes, which will be discussed in subsequent paragraphs.

6.9.2.2.1 Economic outcomes of FM practices in RL

Various economic outcomes associate with FM practices in RL, which include (1) improving FM and control in RL, (2) identifying true RL costs, (3) enhancing cost visibility, (4) accurate RL cost and profit calculations, (5) recording and managing RL costs, (6) understanding RL expenditure, (7) facilitating RL cost allocation, (8) recording and enhancing value/cost recovery, (9) cost effectiveness, (10) cost reduction and long-term cost savings, and (11) profitability. Particularly, CFI practices in RL, for example, integration between the logistics and finance department, can *improve FM* and *control in RL*, demonstrating the importance of implementing various RL practices for the efficient RLM of consumer returns.

Several FM strategies can be implemented to *identify true RL costs*, including the (1) general FM strategies of developing and using financial and accounting statements, strategic application of accounting techniques and systems, strategic application of cost techniques (e.g. ABC technique), performing cost estimations, (2) FM strategies for RL costs, which include, developing a cost perspective/approach (e.g. total cost approach), strategic considerations of factors that influence RL costs (such as parties responsible for costs) and implementing cost policies, and (3) operational requirement of integrated facility/location practices. Consequently, FM strategies, especially strategic

application of accounting techniques and cost techniques (such as ABC), can *enhance cost visibility* and thereby achieve the economic requirement of cost visibility needed for the effective FM of consumer returns (see section 6.9.2.1.3).

FM strategies, including understanding and identifying costs and profits (sections 6.9.2.1.1 and 6.9.2.1.2), enables *accurate RL cost and profit calculations*. Subsequently, formulas can be used to calculate RL costs and profits, for example, subtracting revenue earned from reselling recovered/reused products from total RL costs, which can be recorded on the financial statement. Furthermore, developing and using financial and accounting statements, strategic application of accounting techniques and systems and strategic application of cost techniques (e.g. ABC) enable *recording* and *managing of RL costs,* which provides and in-depth understanding into the financial requirements and outcomes of RLM.

Developing and using financial statements and considering and identifying hidden costs in RL enables an *understanding of RL expenditures*, which in combination with understanding and identifying RL costs (including all individual RL costs) (see section 6.9.2.1.2) can *facilitate RL cost allocation.* Furthermore, the FM strategies of developing and using financial statements and performing cost and value estimations can facilitate with the *recording* and *enhancing of cost/value recovery* in RL. Additionally, *cost effectiveness* in the RL process can be enhanced through the strategic understanding and identification of RL costs, which emphasises the importance of cost visibility (economic requirement) for effective FM in RL (see section 6.9.2.1.3).

Moreover, organisations can *reduce costs* through the strategic utilisation of costing techniques (e.g. ABC) and models, as well as realise *long-term cost savings* by performing a cost-benefit analysis (FM strategy) and accepting initial losses associated with RL implementation (economic requirement). Similarly, *profitability* can be realised by performing accurate and comprehensive cost and value estimations and implementing benefit-driven FM strategies that focus on cost minimisation, emphasising the importance of understanding RL profits (see section 6.9.2.1.1).

6.9.2.2.2 Operational outcomes of FM practices in RL

The operational outcomes of FM practices in RL involve (1) identifying operational benefits of RL, (2) determining operational effectiveness, (3) facilitating and supporting RL processes, and (4) improving RL process efficiency and effectiveness.

Organisations can *identify the operational benefits of RL* through the development and use of financial statements to manage consumer returns, which can facilitate with identifying the outcomes of the cost-benefit analysis for FM in RL (see section 6.9.2.1.1). Furthermore, through the strategic understanding

and identification of RL costs (including individual costs in RL) (section 6.9.2.1.2), organisations can *determine* the *operational effectiveness* of their RL processes. In terms of individual RL costs, understanding and identifying labour costs in RL can *facilitate* and *support RL processes*, emphasising the importance of human RC in RL (see section 6.9.1.1).

Finally, the FM strategies of (1) benefit-driven FM strategies, (2) understanding and identifying RL costs, and (3) implementing RL cost policies can improve the *efficiency* and *effectiveness* of *RL processes,* which emphasise the importance of FM practices to manage consumer returns.

6.9.2.2.3 Organisational and market-related outcomes of FM practices in RL

The *organisational outcomes* of FM practices in RL involve (1) addressing organisational barriers in RL, (2) facilitating RL implementation, (3) a sustainable RL function, (4) facilitating PM, facility/location and RC practices in RL, and (5) facilitating RLM and decision-making.

Organisations can *address organisational barriers in RL,* including a lack of top management support, lack of internal communication and a resistance to change (see section 2.3.3), through the economic requirement of cost visibility. Moreover, considering investments in FM (see section 6.9.2.1.1) and identifying investment and infrastructure costs for RL can *facilitate RL implementation,* emphasising the importance of accepting initial losses in RL (economic requirement) (section 6.9.2.1.3). Additionally, organisations can ensure a *sustainable RL function* by developing a benefit-driven FM strategy (focusing on cost minimisation) and identifying transport costs in RL as a part of the strategic identification of RL costs (section 6.9.2.1.2).

Several, FM practices in RL can *facilitate RLM* and *decision-making,* especially through the (1) strategic application of accounting techniques and systems, (2) strategic use of costing techniques (ABC, quality and TCO), (3) strategic understanding of RL profits, (4) performing a cost-benefit analysis for FM in RL, (5) developing a cost perspective, (6) strategic understanding and identification of RL costs, and (7) management involvement (organisational requirement), demonstrating the importance of FM practices in the RLM of consumer returns.

Moreover, FM practices in RL can *facilitate* other RL practices, including *PM in RL* through the strategic application of accounting systems for RL, which emphasises the importance of considering PM in the FM strategies of RL (section 6.9.2.1.1). Additionally, through the strategic understanding and identification of RL costs, organisations can improve *facility/location practices* in terms of network design decisions (see section 6.8), reemphasising the important link between FM and facility/location practices (see section 6.9.2.1.3). Lastly, through the strategic use of cost techniques (namely ABC) for

RL, organisations can improve *RC in RL*, which can be essential to manage consumer returns (see section 6.9.1).

The *market-related outcome* of FM practices in RL involves *customer relationship management (CRM)*, which can be facilitated by performing a cost-benefit analysis and accepting initial losses associated with RL investment and start-up costs. Therefore, FM practices may facilitate with the relationship management strategy of consumer integration (CI) (see section 6.4.2).

Essentially, FM practices clearly contribute to the effective and efficient RLM of consumer returns, and organisations can greatly benefit from implementing and following FM strategies and requirements in RL. In the next section, FM practices in RL will be concluded with a description, conceptual framework and summary of findings for FM practices to manage consumer returns.

6.9.2.3 Description, conceptual framework and summary of findings for FM practices to manage consumer returns

This section concludes FM practices in RL with a description, conceptual framework and summary of the findings. Based on the findings presented in section 6.9.2, FM practices in RL can be important for the management of consumer returns, and will be described as follows:

> FM practices for the management of consumer returns involve (1) general FM strategies, including strategic considerations for FM, developing and using financial and accounting statements for RL, strategic application of accounting techniques, strategic utilisation of costing techniques and models, strategic understanding of RL profits and earnings, performing cost and value estimations, performing a cost-benefit analysis, and a benefit-driven strategy for FM, (2) FM strategies for RL costs, including developing a cost perspective and approach, strategically consider the factors that influence RL costs, strategic understanding and identification of RL cost, including investment, assets, infrastructure, rental, administrative, staff, operational, inventory, RL process, RLM and hidden costs, and implementing cost policies, controls and measurements, and (3) FM requirements, including economic requirements (cost visibility, time and accurate cost data and acceptance of initial losses), an operational requirement (integrate facility/location practices), organisational requirements (management involvement and CFI), and (3) a SC requirement (collaboration with SC partners).
>
> The FM strategies and requirements can result in several outcomes, including (1) economic outcomes (improve FM and control, identify true RL costs, enhance cost visibility, accurate RL cost and profit calculations, record and managing RL costs, understand RL expenditure, facilitate RL cost allocation, record and enhance value/cost recovery, cost effectiveness, cost reduction and long-term cost savings, and profitability), (2) operational outcomes (identify operational benefits of RL, determine operational effectiveness, facilitate and support RL processes, and improve RL process effectiveness and efficiency), (3) organisational outcomes (address organisational barriers in RL, facilitate RL implementation, a sustainable RL function, facilitate RLM and decision-making, facilitate PM, facility/location and RC practices in RL,), and (4) a market-related outcome (facilitate CRM).

Figure 6.28 provides a conceptual framework of FM practices, including FM strategies, requirements and related outcomes to manage consumer returns.

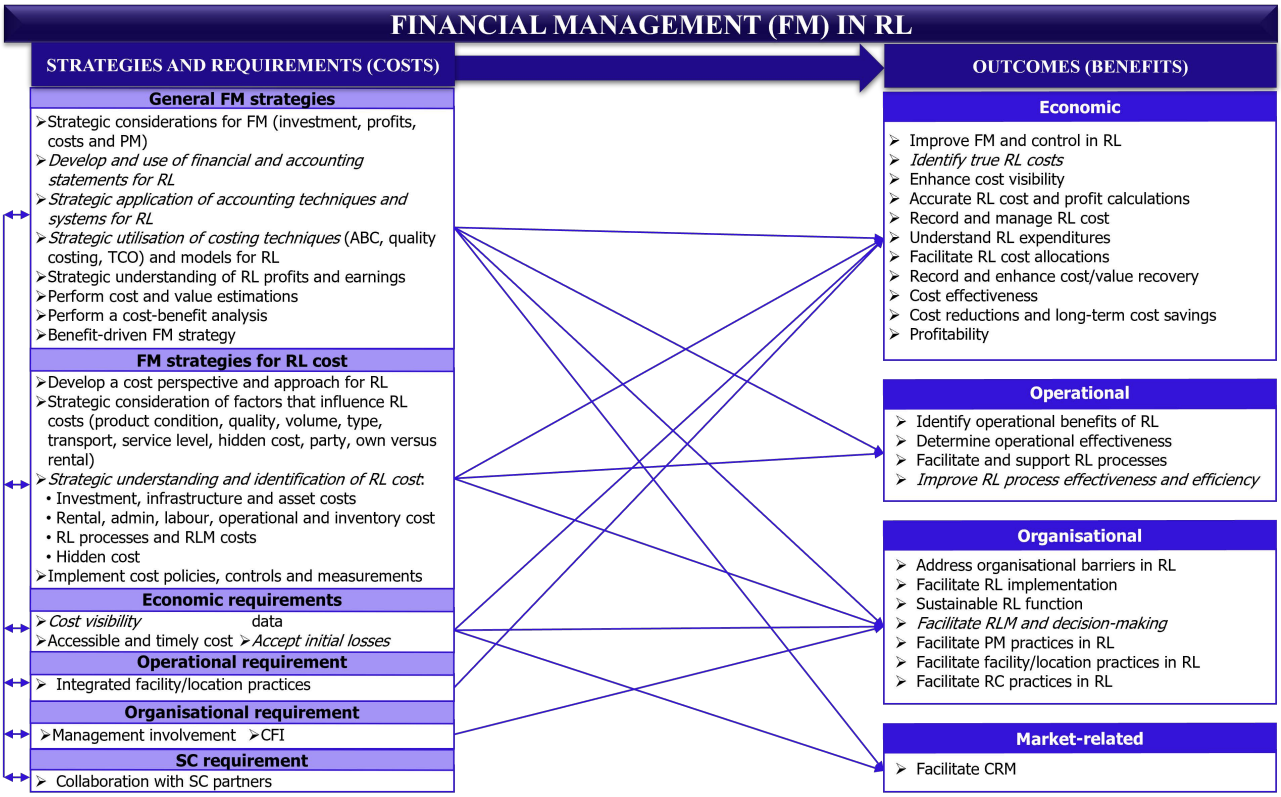


Figure 6.28 Conceptual framework of financial management (FM) practices to manage consumer returns
Source: Compiled by the researcher

Figure 6.28 illustrates the links between RC strategies, requirements and outcomes, demonstrating a cost and benefit relationship. The links between the general FM strategies, FM strategies for RL costs and the FM requirements can be demonstrated by the RL costs (FM) strategy of understanding and identifying RL costs, which links financial and accounting statements (general FM strategy), cost visibility (economic requirement), integrated facility/location practices (operational requirement) and management involvement (organisational requirement).

Additionally, TCO as a RL costing technique (general strategy) links with SC collaboration (SC requirement). Although the links between FM strategies and requirements can be important for FM in RL, the main aim of the framework involves the links between the FM strategies, requirements and outcomes, which can be important for the effective management of consumer returns. Subsequently, the most significant FM strategies and requirements (associated with the most outcomes) and FM outcomes (associated with the most RC practices) are emphasised through italics, which will be elaborated upon in Table 6.39.

Based on Figure 6.28 and the discussions given in section 6.9.2, Table 6.39 provides a summary of the findings and managerial implications, focussing on the most significant FM practices in RL.

Table 6.39 Summary of findings and managerial implications for FM practices in RL

CATEGORY	KEY FINDINGS	MANAGERIAL IMPLICATIONS
Strategies and requirements	•FM in RL involves (1) general strategies, including strategic considerations for FM, financial and accounting statements for RL, strategic application of accounting techniques, utilisation of costing techniques and models, understanding of RL profits and earnings, cost and value estimations, a cost-benefit analysis, and a benefit-driven strategy for FM, and (2) strategies for RL costs, including cost perspective/approach, strategic considerations of factors that influence RL cost, understanding and identification of RL cost (including investment, rental, operational, staff, inventory, RL process, RLM and hidden costs) and implementing cost policies, controls and measures. •The general FM strategies associates with all the FM outcome categories, including economic, operational, organisational and market-related outcomes •From the general FM strategies, financial and accounting statements, application of accounting techniques and utilisation of costing techniques can be the most beneficial for RL •The FM strategies for RL cost associates with most of the FM outcome categories, including economic, operational, and organisational outcomes •From the FM strategies for RL cost, understanding and identifying RL costs can be the most beneficial for RL •The least significant FM strategies, with limited impact on the outcomes include strategic considerations of FM, followed by understanding profits, cost perspective, considering factors that influence RL costs and implementing cost policies, controls and measures. •FM practices in RL involves economic, operational, organisational, and SC requirements •The economic requirements of FM in RL associate with most of the outcome categories, including economic, organisational, and market-related outcomes. •From the economic requirements of FM, cost visibility and acceptance of loss can lead to the most benefits •From the FM practices, operational, organisational and SC requirements can be the least significant practice categories •The least significant requirements, with no impact on FM outcomes, include the economic requirement of timely access of cost data, and the SC requirement of collaboration with SC partners	• Organisations must develop and implement general FM strategies and FM strategies for RL costs • Organisations that seek various economic, operational, organisational and market-related benefits in RL must focus on FM strategies • Organisations must focus on the development and use of financial accounting statements, strategic application of accounting techniques, utilisation of costing techniques and strategic understanding and identification of RL costs for optimum FM benefits in RL • Organisations must focus on the economic requirements relating to cost visibility and acceptance of initial losses (set-up and investment costs) to achieve optimum FM benefits in RL
Outcomes	•FM practices in RL involve economic, operational, organisational and market-related outcomes •The most significant outcomes of FM practices in RL involves economic and organisational outcomes •The least significant outcome of FM practices in RL involves the market-related outcome •The most significant economic outcome of FM practices includes identifying true RL costs •The most significant operational outcome of FM practices in RL includes improving RL process efficiency and effectiveness •The most significant organisational outcome of FM practices in RL includes facilitating RLM and decision-making	• Organisations that seek economic, operational, organisational, and market-related benefits in RL can implement FM practices in RL • Organisations that seek to identify overall and accurate RL costs must implement FM practices in RL • Organisations that experience inefficiencies in the RL process can consider FM practices in RL • To facilitate RLM and decision-making in RL, organisations must consider FM practices in RL • For the effective management of consumer returns, organisations must identify/implement/consider FM strategies, requirements and outcomes.

Source: Compiled by the researcher

Table 6.39 demonstrates the value of FM practices as part of the RL practices for consumer returns. Organisations can use the FM strategies, requirements and related outcomes for effective FM in RL, which can contribute to the effective RLM of consumer returns. FM in RL will further be explored in the interviews with industry experts (chapter 8). In the next section, return prevention and avoidance (RPA) practices in RL will be presented, discussed and analysed.

6.9.3 Return prevention and avoidance (RPA) practices to manage consumer returns

According to Rogers *et al.* (2012:114), RPA practices involve strategies, methods and techniques to minimise returns, which can be the most efficient way to effectively deal with consumer returns. Likewise, Badenhorst (2013:4) asserted that RPA can be one of the best solutions to overcome various

problems and barriers in RL. RPA practices include closely retailed concepts, namely gatekeeping practices[20] and return avoidance (RA) practices. Specifically, RPA entails the gatekeeping of product returns at the point of the consumer, enabling online retailers to effectively implement RA practices and eliminate unnecessary product returns (Hjort *et al.* 2019:774). Nevertheless, RPA practices can extend early gatekeeping prevention initiatives and encompass various strategies to prevent and avoid unnecessary consumer returns (see section 6.9.3.1.).

In the subsequent sections, the strategies, requirements and outcomes of RPA practices will be discussed and concluded with a description, conceptual framework and summary of findings to manage consumer returns.

6.9.3.1 Strategies and requirements of RPA practices in RL

The strategies of RPA practices involve general RPA strategies and strategic methods for RPA, and the requirements of RPA practices involve economic, IT, operational, organisational, market-related and SC requirements, which can contribute to the RLM of consumer returns. Table 6.40 provides an overview of the findings related to the *strategies and requirements of RPA practices in RL*, including the categories, subcategories, supporting sources for the subcategories and key quotations that support both the subcategories and the discussion of the findings.

Table 6.40 Findings related to strategies and requirements of RPA to manage consumer returns

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
General RPA strategies	***Strategic approach and perspective***	Janse *et al.* (2010:502)	• *"[…] a balanced approach that integrates both sides of the same coin: that is, focusing on customer satisfaction without losing sight of cost-effectiveness. This requires an integrative stance […]."* (Asdecker 2015:11) • *"[…] an integrated supply chain approach […] lead to significant avoidance of product returns. This holistic approach would […] enhance the profitability of retailers […]."* (Bernon & Cullen, 2007:55) • *"Reduce is the first element and will lead companies to examine how they can reduce returns arising in the first place […]."* (Bernon & Cullen, 2007:52)
	Prioritise RPA practices	None	• *"To address issues […] in reverse logistics, organisations can implement a variety of first-priority practices, such as […] establishing a gatekeeper or implementing a robust gatekeeping function, establishing clear return policies […]."* (Badenhorst, 2016:9)
	Strategic considerations for gatekeeping practices	Ahsan and Rahman (2016:612) Griffis *et al.* (2012:291)	• *"Gatekeeping measures are less popular in business practice because sellers fear the negative influence these may have on customer satisfaction and the generated turnover."* (Asdecker, 2015:10) • *"[…] distance sellers with high return rates are very likely to benefit from avoidance and gatekeeping […] In contrast, vendors with low return rates should critically review preventive options."* (Asdecker 2015:10) • *"[…] rejection or acceptance of the returned items […] reflect the availability of resources, the commitment of the firm to RL and its customers, and its product mix strategy."* (Dowlatshahi, 2010a:1370) • *"[…] aspects of gatekeeping […] costs vary as a function of the volume of returned products and the service level desired."* (Lambert *et al.* 2011:568) • *"The advisable level of gatekeeping […] is related to the product type and available information infrastructure [...]."* (De Leeuw *et al.* 2016:725) • *"[…] consider three possibilities: (1) centralized screening, […] (2) decentralized*

[20] As indicated in section 4.5, gatekeeping can be a process and practice in RL, but the distinction can be made between gatekeeping activities as part of RL processes and strategic gatekeeping practices aiming to control and reduce product returns.

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
			screening, […] and (3) no screening, in which retailers have a policy of accepting all consumer returns." (De Leeuw *et al.* 2016:716)
	Strategic considerations for return avoidance (RA) practices	Asdecker (2015:10) Bernon and Cullen (2007:48)	• *"A useful approach in the electronic industry is to give customers more accessible information when they are dealing with complex products, such as computers or printers […]."* (Rogers *et al.* 2012:114) • *"[…] policies on returns can have significant impact on the volume and type of products being returned."* (Stock & Mulki, 2009:53) • *"[…] effects inform the discourse on returns avoidance […] included: […] • considered purchases in Electrical and technology category; • "non-critical fit" in apparel category; • returns charging; • customer demographic; • product cost profile and margin erosion; and • ease at which to recover at "A" grade."* (Bernon *et al.* 2016:599)
	Strategic decisions for RPA	None	• *"[…] the decision on which preventive measures to adopt."* (Asdecker 2015:11) • *"Additional decisions […] may include the following […] if a return authorization is necessary, and which verifications should be done."* (Lambert *et al.* 2011:568) • *"An important consideration is where and when to make the decision on what items to allow into the reverse system."* (Rogers *et al.* 2012:114) • *"Retailers can help a great deal by […] making decisions on processing versus returning to manufacturer."* (Stock & Mulki, 2009:53)
	Strategic identification of product return drivers	None	• *"[…] key drivers of product returns are the result of decisions taken upstream in the supply chain […]."* (Bernon & Cullen, 2007:53) • *"[…] strategy formulation should take account of policy and decision-making made in upstream functions that lead to high levels of product returns."* (Bernon & Cullen, 2007:53) • *"[…] better understanding of the sources and reasons behind returns may help design order-to-delivery processes that are better suited to reduce returns and even avoid returns entirely."* (De Leeuw *et al.* 2016:719)
	Establish economic benchmarks	None	• *"Establish economic benchmarks for acceptance or rejection of returned items."* (Dowlatshahi, 2010a:1370)
	Perform a cost-benefit analysis for RPA	None	• *"Gatekeeping measures […] should not be categorically excluded from the realm of possibilities. It is essential to verify whether the reduction in costs associated with the diminished rate of returns can sufficiently compensate for the decline in orders."* (Asdecker, 2015:10) • *"[…] strike a balance between the costs of gatekeeping and inadvertently accepting unauthorized [sic] returns […]."* (De Leeuw *et al.* 2016:720) • *"Simulating the cost and complexity of implementing return avoidance across all products or selected products can be useful in determining whether or not the additional effort of including extra instructional materials at a higher cost, or adjusting product design to make it easier to use, would result in lower product returns and costs."* (Rogers *et al.* 2012:114)
	Benefit-driven RPA strategy	Asdecker (2015:11)	• *"[…] reducing the needs for returns in the first place […] those firms focus on enhancing customer service […]."* (Hall *et al.* 2013:777)
	Develop a clear RL strategy	None	• *"Avoidance is part of a clear reverse logistics strategy."* (Janse *et al.* 2010:502)
	Develop and use return programmes	None	• *"The use of various return programs in retail stores that […] discourage customers from returning products are also important."* (Stock & Mulki, 2009:53) • *"[…] initiating programs designed to minimize [sic] the occurrence of fraudulent returns."* (Harris, 2010:743)
	Develop a consumer database	Asdecker (2015:10) De Leeuw *et al.* (2016:720)	• *"The development of databases of customers who return goods, designed to monitor levels of returning may prove a useful deterrent […]."* (Harris 2010:743) • *"[…] an automatic electronic profile is created for each customer. This profile includes not only information related to specific returns but also information about the customer […]."* (Genchev, 2009:145)
	Strategic utilisation of return analytics	None	• *"[…] analytics that help retailers to capture not only the most profitable customers, […] but also identify the abusers of liberal returns policies are essential to […]."* (Griffis *et al.* 2012:291)
	Strategic classification of consumers	Griffis *et al.* (2012:291)	• *"[…] maintain a database of how often individual consumers have returned products. Consumers who do not return may then be offered rebates on future purchases, which are not offered to consumers who frequently return items.* (De Leeuw *et al.* 2016:720)
	Create measurements for RPA	None	• *"Measuring […] avoidance initiatives can increase the predictability and manageability of products being returned."* (Janse *et al.* 2010:508) • *"Gatekeeping involves […] performance measures […]."* (Lambert *et al.* 2011:568)
	Rewarding RPA initiatives	Asdecker (2015:2)	• *"[…] rewarding avoidance initiatives can increase the predictability and manageability of products being returned."* (Janse *et al.* 2010:508)
Strategic methods for RPA	***Develop clear and appropriate return policies***	Hong *et al.* (2008:177) Stock and Mulki (2009:53) Rogers *et al.* (2013:44)	• *"Preventing avoidable returns […] Clear warranty conditions and harmonised and standardised return policies are basics."* (Janse *et al.* 2010:508) • *"A good returns policy […] has effective gatekeeping that can distinguish legitimate returns from illegitimate ones."* (Griffis *et al.* 2012:291) • *"[…] distance sellers […] to benefit from avoidance and gatekeeping. Such businesses should also reflect upon tightening their returns policies."* (Asdecker 2015:10) • *"[…] in reverse logistics […] practices that were identified for overcoming these barriers included […] zero-return policies […]."* (Badenhorst, 2016:10) • *"[…] restrictive return policy can […] prevent fraudulent returns […]."* (Bahn & Boyd, 2014:415)
	Strategic implementation of	Hong *et al.* (2008:177)	• *"[…] solution to control the return quantity is to establish the "Do Not Return" list*

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
	return restrictions		*[…].”* (Lee & Lam, 2012:593) • *“[…] returns avoidance […] included […] returns charging […].”* (Bernon *et al.* 2016:599) • *“[…] requiring customers to have receipts is a standard practice […] Limiting the time period for returns and charging restocking fees […].”* (Rogers *et al.* 2012:114) • *“[…] the retailer may charge a restocking or handling fee, or they may ask the consumer to pay the shipping fee for returns.”* (Xu *et al.* 2015:89)
	Develop and implement appropriate gatekeeping strategies and practices	Agrawal and Choudhary (2014:19) Asdecker (2015:11) Badenhorst (2013:4) Ravi *et al.* (2008:4867) Tan and Kumar (2006:348)	• *“To be effective, […] companies need to develop […] gate keeping […].”* (Bernon & Cullen, 2007:54) • *“[…] retailers have instituted better ‘‘gatekeeping’’ programs.”* (Rogers *et al.* 2012:114) • *“Appropriate gatekeeping methods ensure that a firm is not accepting unauthorized, invalid or unwanted returns.”* (De Leeuw *et al.* 2016:716) • *“To overcome product quality issues in reverse logistics, organisations should first consider establishing a gatekeeper at the start of the reverse logistics process, implementing a robust gatekeeping function […].”* (Badenhorst, 2016:9) • *“[…] install systems to discourage people to return products they are not allowed to return […].”* (De Leeuw *et al.* 2016:720)
	Develop and implement RA strategies and policies	Asdecker (2015:11) Narayana *et al.* (2014:393)	• *“[…] in reverse logistics […] practices that were identified for overcoming these barriers included […] implementing return avoidance strategies […].”* (Badenhorst, 2016:10) • *“Return avoidance policies aimed at minimizing [sic] product returns are becoming popular.”* (Stock & Mulki, 2009:52) • *“[…] avoidance techniques had been implemented […].”* (Bernon *et al.* 2011:497)
	Strategic implementation of product-related RA initiatives	Bernon *et al.* (2011:495) De Leeuw *et al.* (2016:717) Stock and Mulki (2009:34)	• *“Avoidance […] includes enhancing product quality, streamlining of the product range […] providing comprehensive product information, […].”* (Asdecker, 2015:2) • *“[…] accurate information […] with regard to sizes, colors [sic], styles and other product and service specifications.”* (De Leeuw *et al.* 2016:724) • *“Return avoidance […] can be accomplished by ensuring that product quality and user friendliness to the consumer are at the highest attainable level before the product is sold and shipped.”* (Rogers *et al.* 2012:114)
	Strategic implementation of consumer support initiatives	Bernon and Cullen (2007:48) De Leeuw *et al.* (2016:716-717)	• *“[…] measures aimed at reducing returns […] provide support to customers to purchase the correct product and give relevant information relating to its proper use. Other factors such as easy to use instructions and customer help lines […].”* (Bernon *et al.* 2011:497) • *“[…] give customers more accessible information when they are dealing with complex products, such as computers or printers, […] to increase the likelihood that they can successfully operate the product right out of the box […] companies have significantly increased the use of ‘‘quick start sheets’’ and prominently display tech support phone numbers.”* (Rogers *et al.* 2012:114) • *“Return avoidance […] strategies use customer education programs that focus on training the customer in the proper operation and use of the product.”* (Stock & Mulki, 2009:52-53)
	Strategic implementation of account suspension	None	• *“[…] Amazon decided to close several accounts, providing the following justification […] a careful review of this account and related ones shows you’ve requested refunds and replacements on a majority of your orders for a variety of reasons. […] the rate at which such problems have occurred on your account is extraordinary, and it cannot continue. Your Amazon.com account has been closed, and you will no longer be able to shop in our store […].”* (Asdecker, 2015:10)
Economic requirements	***Investment***	Bernon *et al.* (2011:497)	• *“[…] avoidance investments will permanently improve operating results […].”* (Asdecker, 2015:10)
	Costs	None	• *“[…] balance between the costs of gatekeeping […].”* (De Leeuw *et al.* 2016:720) • *“[…] cost […] of implementing return avoidance across all products or selected products […] the additional effort of including extra instructional materials at a higher cost […].”* (Rogers *et al.* 2012:114) • *“The economic aspects of gatekeeping involve personnel, office automation, and office space. These costs vary […].”* (Lambert *et al.* 2011:568)
IT requirement	***Implement and utilise IT for RL***	Lambert *et al.* (2011:568) Genchev (2009:145)	• *“[…] they have a warehouse management system that validates if products are allowed in the reverse stream […].”* (De Leeuw *et al.* 2016:720) • *“[…] EDI […] reduces the actual occurrence of RL […].”* (Shi *et al.* 2012:222) • *“[…] retailers could track, through their ordering systems, those customers who routinely abuse the system and put in place processes that restrict these practices.”* (Bernon *et al.* 2016:599) • *“The RFID technology could also be used to effectively protect against the return of counterfeit items […].”* (Jayaraman *et al.* 2008:418) • *“Organisations can also make use of a return merchandise authorisation (RMA) system […].”* (Badenhorst, 2013:4)
Operational requirements	***High return volumes***	None	• *“[…] high return rates are very likely to benefit from avoidance and gatekeeping.”* (Asdecker 2015:10)
	Effective return authorisation	None	• *“[…] the authorisation process for a product return should be as precise as possible.”* (Bernon *et al.* 2011:491)
	Facility/office space	None	• *“[…] aspects of gatekeeping involve […] office space.”* (Lambert *et al.* 2011:568)
	Integrate RL/FL	None	• *“[…] combining the forward logistics […] with the reverse logistics creating greater synergies between them […] because the reverse logistics process is a consequence of hidden mistakes in the forward supply chain – such as inadequate packaging, inferior materials and poor delivery performance.”* (Beh *et al.* 2016:20)
Organisational requirements	***Management involvement***	None	• *“By improving the avoidance of returns […] with reverse logistics, managers can make a significant improvement […].”* (Bernon *et al.* 2011:501)

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
	Staff involvement	Lambert *et al.* (2011:568)	• *"Returns practices […] front-line store personnel mostly carries out the screening of online sales returns."* (De Leeuw *et al.* 2016:716)
	Training	None	• *"[…] avoidance techniques […] investment was made in the training of our staff to assist customers to purchase the correct specification of product […]."* (Bernon *et al.* 2011:497)
	Internal information sharing	None	• *"[…] companies could make sure that the requirements for returns are clear and made known to […] employees in advance of a return transaction. This might have the added benefit of eliminating some returns […]."* (Mollenkopf *et al.* 2007:241)
Market related requirements	***Consumer information sharing***	Mollenkopf *et al.* (2007:241)	• *"[…] it is necessary to provide appropriate information about returns processes and procedures in order to reduce returns […]."* (De Leeuw *et al.* 2016:720)
	Request product return information	Genchev (2009:145)	• *"[…] asking a consumer to provide a return reason is one of the most critical steps for companies […]."* (De Leeuw *et al.* 2016:723)
	Consumer contact	Asdecker (2015:10)	• *"The development of databases […] if retailers use such databases for contacting serial returners after a certain number of returns have been made."* (Harris 2010:743)
	CI	None	• *"[…] interface between the retailer and the customer was found to be a significant opportunity for returns avoidance […] A considerable level of returns could be reduced through improved customer service routines."* (Bernon *et al.* 2011:495)
SC requirements	***SCM***	None	• *"[…] reduce returns arising in the first place through the better management of the supply chain […]."* (Bernon & Cullen, 2007:52)
	Collaboration	None	• *"Collaboration with supply chain partners helps organizations [sic] avoid unnecessary product returns […]."* (Partida, 2011:63)

Source: Compiled by the researcher

Table 6.40 indicates the RPA strategies, including general RPA strategies and strategic methods for RPA, and the RPA requirements, which will be discussed in subsequent sections.

6.9.3.1.1 General strategies of RPA practices in RL

The general RPA strategies in RL include (1) strategic approach and perspective, (2) prioritising RPA practices, (3) strategic considerations for gatekeeping practices and return avoidance (RA) practices, (4) strategic decisions for RPA, (5) strategic identification of product return drivers, (6) establishing economic benchmarks, (7) performing a cost-benefit analysis for RPA, (8) a benefit-driven strategy for RPA, (9) developing a clear RL strategy, (10) developing and using return programmes, (11) developing a consumer database, (12) strategic utilisation of return analytics, (13) strategic classification of consumers, (14) creating measurements for RPA, and (15) rewarding RPA initiatives.

Organisations can adopt several *strategic approaches* and *perspectives* for RPA, including balanced, integrative (including an integrative SC) and holistic approaches, focussing on consumer satisfaction, cost-effectiveness and profitability, and a "reduce" perspective in which organisations examine and identify RPA methods. Additionally, like RC practices in RL (section 6.9.1), organisations must *prioritise* RPA practices and focus on developing and implementing effective strategic methods for RPA (see section 6.9.3.1.2) to manage consumer returns.

Several *strategic considerations* can be critical for effective RPA practices, including strategic considerations for gatekeeping practices and strategic considerations for RA practices. The *strategic considerations for gatekeeping practices* involve considering the (1) impact on consumer satisfaction and sales, (2) type of business (e.g. online retailer or traditional retailer), (3) product-mix offering and

type of product, (4) customer service strategy, (5) organisation's commitment to RL, (6) availability of resources, (7) IT infrastructure, (8) facility/location strategies, and (9) return volume.

Additionally, the *strategic considerations for RA practices* involve considering the (1) industry and product type (e.g. electronics or apparel), (2) type of consumer (including demographics), (3) product costs, (4) return costs, (5) return volume and (6) recovery potential of products. Evidently, organisations must consider the business-, industry-, product(s)- and consumer -type, organisational strategies, RC and return volume for effective RPA practices in RL.

Nevertheless, several *strategic decisions* can be important for RPA practices, including the type of RPA methods to adopt, the use of return authorisation and verification, gatekeeping processes and potential agreements with suppliers (e.g. B2B distribution returns). Organisations can use the strategic approach, perspective and considerations for RPA to facilitate RPA decision-making. Furthermore, in developing an RPA strategy, organisations must *strategically identify* the *key drivers of product returns,* for example, identifying the strategies and policies of suppliers and inefficiencies in FL processes that may increase consumer product returns (see section 6.9.3.1.3).

Organisations can *establish economic benchmarks* for product return approval and rejection, which can guide the cost-benefit analyses for RPA practices. Relating to the strategic approach and considerations for RPA, organisations must *perform a cost-benefit analysis* to identify the gatekeeping trade-offs between the costs of lower sales (due to more return restrictions) and the costs of lower returns. Additionally, organisations must perform a cost-benefit analysis that simulate the costs of implementing RA practices (such as additional product information) (see section 6.9.3.1.2) versus the RL cost savings associated with lower return volumes.

Consequently, organisations must implement a *benefit-driven* RPA *strategy* that focusses both on cost-effectiveness and consumer satisfaction, emphasising the importance of a balanced strategic approach in RPA. Nevertheless, organisations must *develop a clear RL strategy,* which can be the basis for developing an effective RPA strategy. Furthermore, *developing* and *using return programmes* (or plans) that focus on discouraging consumer returns can be part of effective RPA strategies.

Organisations can *develop a consumer database,* which can assist with the strategic consideration of the type of consumer and with the *strategic utilisation* of *product return analytics* to identify return abusers. Consequently, the consumer database and product return analytics can be used to *strategically classify consumers,* distinguishing profitable and loyal consumers from less profitable and frequent returning consumers.

The final two RPA strategies relate to PM practices in RL (see section 6.7), involving measuring and rewarding RPA practices. Evidently, organisations must *create measurements for RPA* and based on the set measurement outcomes (e.g. avoiding product returns) reward RPA initiatives, which may create a culture of effective RPA practices.

6.9.3.1.2 Strategic methods for RPA in RL

Several strategic methods can be used for effective RPA in RL, including (1) developing a clear and appropriate return policy, (2) strategic implementation of return restrictions, (3) developing and implementing appropriate gatekeeping strategies and practices, (4) developing and implementing return avoidance (RA) strategies and policies, and (5) the strategic implementation of product-related RA initiatives, consumer support initiatives, and account suspensions.

The strategic methods for RPA must start with *developing* a *clear* and *appropriate return policy,* which stipulates clear warranty and return conditions, and enables effective gatekeeping (easy to identify legitimate and illegitimate returns). Organisations may need to place more restrictions and tighten their lenient return policies, offering more restrictive return policies, or may decide to implement zero-return policies (which might be problematic for retailers, restricted by consumer protection laws). Consequently, organisations can *strategically implement appropriate return restrictions,* including (1) a clear "do not return" or "ineligible for return" list, (2) charging return fees (e.g. return shipping and processing fees), (3) shortening the return timeframe (e.g. from 30 days to seven days) and (4) requesting a proof of purchase, for a more restrictive return policy.

Additionally, organisations can *develop* and *implement appropriate gatekeeping strategies* and *practices,* which can include (1) creating gatekeeping programmes, (2) establishing a robust gatekeeping function, (3) appointing a gatekeeper at the source of the RL process and (4) installing systems to discourage product returns. Consequently, appropriate gatekeeping methods must be created to prevent invalid and unauthorised product returns to enter the reverse supply chain (RSC).

In terms of avoidance, organisations can *develop* and *implement RA strategies* and *policies* to reduce product returns. Specifically, organisations can *strategically implement product-related RA initiatives,* including quality products (to reduce defective returns), streamlining the product offering, providing accurate product information and user-friendly products. The product-related initiatives demonstrate the importance of considering the type of industry, type of products and product offering strategy for RPA practices (see section 6.9.3.1.1).

Similarly, organisations can *strategically implement consumer support initiatives,* including (1) support for sound purchasing decisions, (2) proper instructions to use products correctly, (3) quick start sheets

and technical helplines for more complex products, and (4) consumer education and training programmes. Evidently, the type of support offered to consumers depends on the type of product, reemphasising the importance of considering the product type for RPA practices.

Finally, in extreme cases organisations may *strategically implement account suspensions,* which essentially means, closing the accounts of return abusers to prevent future transactions that result in product returns. Account suspensions rely on the RPA strategies of developing a consumer database, using return analytics and classifying consumers, and demonstrate the importance of performing a cost-benefit analysis comparing the cost of lost sales with the cost savings associated with lower returns (see section 6.9.3.1.1).

Essentially, organisations can develop and implement various RPA strategies, methods and initiatives to reduce product returns and effectively manage consumer returns. Nevertheless, certain requirements can be important to facilitate RPA strategies, which will be discussed next.

6.9.3.1.3 Requirements of RPA practices in RL

The requirements of RPA practices in RL include economic, IT, operational, organisational, market-related and SC requirements. The *economic requirements* of RPA practices involve investments and costs, for example, investing in an after-sale consumer support centre to run technical helplines (see section 6.9.3.1.2) and incurring costs for additional instructions, staff and office space. The investment and cost requirements demonstrate the importance of performing a cost-benefit analysis for RPA practices. The *IT requirement* for RPA practices involve *implementing* and *utilising IT.* Particularly, organisations can use TLIT (traditional IT) (such as EDI, WMS and ordering systems), RFID IT and RLIT (such as RMA systems) for RPA practices, reemphasising the importance of IT practices to manage consumer returns.

The *operational requirements* of RPA practices include high return volumes, effective return authorisation, facility/office space and RL/FL integration. The *high return volume* requirement demonstrates the importance of considering return volume and performing a cost-benefit analysis for RPA practices since organisations with low return volumes might find RPA too costly to implement, emphasising the economic, IT and infrastructure requirements. Similarly, *effective return authorisation,* an activity in CRR (consumer return request) and gatekeeping processes (see sections 4.4.1 and 4.4.2), demonstrates the importance of using implementing RMA (return merchandise authorisation) systems (IT requirement) to support gatekeeping practices.

Relating to the economic cost requirements, organisations must use physical *facility/office space* for effective RPA methods, demonstrating the importance of considering resources, IT and

facility/locations strategies for gatekeeping practices (see section 6.9.3.1.1). Moreover, organisations must implement integrated facility/location practices that involve *RL/FL integration* (see section 6.8.3), which can be important for the RPA strategy of identifying key product return drivers. For example, integrating RL/FL means that organisations can utilise product return information to identify problems in FL that may lead to higher returns (such as poor packaging and handling practices).

The *organisational requirements* of RPA practices mostly involve staff, management and CFI (cross-functional integration) practices in RL, which include management involvement, staff involvement, staff training and internal information sharing. Like other RL practices (e.g. PM, RC and FM practices), *management involvement* can be important for strategic decision-making and developing and implementing RPA strategies. Additionally, *staff involvement* can be important for successful implementation of strategic RPA methods, like acting as gatekeepers and supporting consumers before, during and after purchases (see section 6.9.3.1.2). Nevertheless, organisations must provide *training* to equip staff with the appropriate product knowledge and expertise needed for effective consumer support RA initiatives. Additionally, *internal information sharing* can be important for communicating the return policy and restrictions (strategic RPA methods) to staff, preventing unnecessary and illegitimate product returns.

Similarly, the *market-related requirements* of RPA practices associate with communication, involving consumer information sharing, requesting product return information, contacting consumers and CI (consumer integration) practices. Like internal information sharing, organisations must *share information* on the return policy and return restrictions (e.g. unreturnable products, return time limit and other return conditions) with *consumers.* However, *requesting product return information* (such as return reasons) from consumers can, equally be important to prevent ineligible product returns.

Relating to the RPA strategies of developing a consumer database, using return analytics and classifying consumers (section 6.9.3.1.1), *contacting consumers* flagged as return abusers can be an important requirement, especially for account suspension initiatives (see sections 6.9.3.1.2). Nevertheless, organisations must implement *CI practices* focussing on consumer service and relationship development (also see section 6.4.2), emphasising the importance of (1) following a balanced and holistic approach for RPA, (2) considering the customer service strategy and impact of RPA on consumers, (3) performing a cost-benefit analysis and (4) a benefit-driven RPA strategy (see section 6.9.3.1.1).

Finally, the *SC requirements* of RPA practices involve *SCM* and *SC collaboration*, which not only emphasises an integrated SC approach of RPA but also the significance of strategically identifying SC partners as key product return drivers (section 6.9.3.1.1). Consequently, SC collaboration as part of SCI

(supply chain integration) practices (see section 6.4.1) can be important for curbing product returns associated with inefficiencies in the SC, reemphasising the importance of RL/FL integration (operational requirement) for effective RPA practices.

Essentially, the RPA requirements associate with various RL practices, including IT practices (section 6.3), integration practices (SCI and CI) (section 6.4), facility/location practices (section 6.8) and management and staff practices (section 6.9.5), demonstrating the importance of a holistic approach to RPA practices (RPA strategy). Consequently, RPA practices represent a strong association between the RPA strategies and RPA requirements, which can contribute to the outcomes discussed in the next section.

6.9.3.2 Outcomes of RPA practices in RL

The outcomes of RPA practices involve the benefits associated with the effective implementation of RPA strategies and requirements, which can be important for the management of consumer returns. The outcomes of RPA practices in RL include (1) economic, (2) operational (3) organisational (4) environmental, (5) and market-related outcomes. Table 6.41 provides an overview of the findings related to the *outcomes of RPA practices to manage consumer returns*, including the categories, subcategories, supporting sources for the subcategories and key quotations that support both the subcategories and the discussion of the findings.

Table 6.41 Findings related to outcomes of RPA practices to manage consumer returns

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
Economic outcomes	***Address economic barriers in RL***	None	• *"Gatekeeping is another possible solution to overcoming cost-related problems in reverse logistics."* (Badenhorst, 2013:4)
	RL cost reductions	Bernon and Cullen, (2007:54) Bernon *et al.* (2011:490)	• *"Successful gatekeeping […] eliminates the costs associated with returning products […]."* (Rogers *et al.* 2012:114) • *"[…] avoiding returns is the best method of reducing […] cost of reverse logistics."* (Rogers *et al.* 2012:114) • *"Retailer emphasis on training customers in the proper use of their products can help […] decreasing costs of product returns."* (Stock & Mulki, 2009:53) • *"[…] cost […] of implementing return avoidance […] the additional effort of including extra instructional materials at a higher cost, or adjusting product design to […] lower product returns and costs."* (Rogers *et al.* 2012:114) • *"[…] restrictive return policy can keep logistic costs down […]."* (Bahn & Boyd, 2014:415) • *"[…] Amazon decided to close several accounts […] it can be assumed that the pros and cons were thoroughly weighed prior to this decision and that the expected reduction in costs […]."* (Asdecker, 2015:10)
	Enables cost avoidance	Agrawal and Choudhary (2014:19)	• *"[…] effective gate-keeping will avoid additional logistics costs due to unnecessary transportation and storage […]."* (Tan & Kumar, 2006:348)
	Cost effectiveness	None	• *"[…] a balanced approach that integrates both sides of the same coin: that is, focusing on customer satisfaction without losing sight of cost-effectiveness. This requires an integrative stance and is closely related to the decision on which preventive measures to adopt."* (Asdecker 2015:11) • *"Successful gatekeeping allows firms to control and reduce the rate of returns at the most cost-effective forward point in the channel."* (Rogers *et al.* 2012:114)
	Profitability	None	• *"[…] an integrated supply chain approach […] lead to significant avoidance of product returns. This holistic approach would […] enhance the profitability of retailers […]."* (Bernon & Cullen, 2007:55) • *"[…] more restrictive policy in pursuit of greater profitability […]."* (Bahn & Boyd, 2014:416)
	Maximise asset recovery	Bernon *et al.* (2011:490)	• *"[…] companies need to develop […] gate keeping in order to […] maximise asset recovery."* (Bernon & Cullen, 2007:54)

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
Operational and product return outcomes	***Address operational barriers in RL***	None	• *"[…] the operational barriers in reverse logistics […] The practices that were identified for overcoming these barriers included […], establishing a gatekeeping function […] implementing return avoidance strategies or zero-return policies […]."* (Badenhorst, 2016:10)
	Improve forecasting and visibility	None	• *"To address issues with limited forecasting and visibility in reverse logistics, organisations can implement a variety of first-priority practices, such as […] establishing a gatekeeper or implementing a robust gatekeeping function, establishing clear return policies […]."* (Badenhorst, 2016:9) • *"Measuring and rewarding avoidance initiatives can increase the predictability […] of products being returned."* (Janse *et al.* 2010:508) • *"The implementation of this […] online tool for requesting return authorization […] The information collected in advance enables increased visibility within the returns flow of products."* (Genchev, 2009:145) • *"[…] asking a consumer to provide a return reason […] keeps the returns process transparent […] the advantages of knowing what is coming, know the value of the return, and it is really important to know what you are expecting […]."* (De Leeuw *et al.* 2016:723)
	Address problems with product return quality	None	• *"To overcome product quality issues in reverse logistics, organisations should first consider establishing a gatekeeper at the start of the reverse logistics process, implementing a robust gatekeeping function […]."* (Badenhorst, 2016:9)
	Facilitate and support RL processes	Badenhorst (2013:4) Genchev (2009:145)	• *"Returns avoidance […] as an important strategy […] is a critical activity needed to reduce returns requests."* (Narayana *et al.* 2014:393) • *"Both avoidance and gatekeeping reduce the number of returns to be processed."* (Asdecker 2015:11)
	Improve RL process efficiency and effectiveness	Hall *et al.* (2013:777) Rogers *et al.* (2012:114)	• *"[…] gatekeeping increases effectiveness of returns handling."* (De Leeuw *et al.* 2016:718) • *"[…] the best way of optimizing [sic] the product returns process is to not have returns at all—referred to as returns avoidance."* (Stock & Mulki, 2009:52) • *"[…] also make use of a return merchandise authorisation (RMA) system, which is a system used to make the RMA process more efficient and effective."* (Badenhorst, 2013:4) • *"The implementation of this interactive and easy-to-use online tool for requesting return authorization [sic] resulted in […] reduced human error, and considerable reduction in the returns processing time."* (Genchev, 2009:145)
	Improve FL	None	• *"[…] better understanding of the sources and reasons behind returns may help design order-to-delivery processes that are better suited to reduce returns and even avoid returns entirely."* (De Leeuw *et al.* 2016:719) • *"[…] combining the forward logistics […] with the reverse logistics creating greater synergies between them […] optimising the forward logistics operations because the reverse logistics process is a consequence of hidden mistakes in the forward supply chain – such as inadequate packaging, inferior materials and poor delivery performance."* (Beh *et al.* 2016:20)
	Identify product return reasons	None	• *"[…] an automatic electronic profile is created for each customer […] The type of return is known, the specific reasons for the return are registered."* (Genchev, 2009:145)
	Reduce unnecessary, invalid and fraudulent returns	None	• *"[…] initiating programs designed to minimize [sic] the occurrence of fraudulent returns."* (Harris, 2010:743) • *"One way to mitigate fraudulent returns is to maintain a database of how often individual consumers have returned products."* (De Leeuw *et al.* 2016:720) • *"[…] restrictive return policy can […] prevent fraudulent returns […]."* (Bahn & Boyd, 2014:415) • *"Appropriate gatekeeping methods ensure that a firm is not accepting unauthorized [sic] […], invalid or unwanted returns."* (De Leeuw *et al.* 2016:716) • *"[…] provide as accurate information to consumers as possible in advance of their purchase, with regard to sizes, colors [sic], styles and other product and service specifications. This will reduce the number of products returned and thus reduce unnecessary returns."* (De Leeuw *et al.* 2016:724) • *"[…] precise process for authorising returns makes it much easier to identify fraudulent returns."* (Bernon *et al.* 2011:492) • *"The RFID technology could also be used to effectively protect against the return of counterfeit items […]."* (Jayaraman *et al.* 2008:418) • *"[…] retailers could track, through their ordering systems, those customers who routinely abuse the system and put in place processes that restrict these practices."* (Bernon *et al.* 2016:599) • *"Collaboration with supply chain partners helps organizations [sic] avoid unnecessary product returns […]."* (Partida, 2011:63)
	Reduce and control product return volume	Agrawal and Choudhary (2014:19) De Leeuw *et al.* (2016:724)	• *"[…] solution to control the return quantity is to establish the "Do Not Return" list […]."* (Lee & Lam, 2012:593) • *"Successful gatekeeping allows firms to control and reduce the rate of returns […]."* (Rogers *et al.* 2012:114) • *"[…] avoiding returns is the best method of reducing the volume […] of reverse logistics."* (Rogers *et al.* 2012:114) • *"[…] cost […] of […] adjusting product design to […] lower product returns […]."* (Rogers *et al.* 2012:114) • *"A considerable level of returns could be reduced through improved customer service*

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
			routines and clearer product information at the point of sale." (Bernon *et al.* 2011:495) • *"[…] reducing returns […] connected to the retail-customer interface. Training of store personal was […] to provide support to customers to purchase the correct product […] easy to use instructions and customer help lines."* (Bernon *et al.* 2011:497) • *"[…] reduce returns arising in the first place through the better management of the supply chain."* (Bernon & Cullen, 2007:52)
Organisational outcomes	***Successful return avoidance (RA)***	None	• *"[…] an integrated supply chain approach […] lead to significant avoidance of product returns."* (Bernon & Cullen, 2007:55) • *"Return avoidance […] can be accomplished by ensuring that product quality and user friendliness to the consumer are at the highest attainable level before the product is sold and shipped."* (Rogers *et al.* 2012:114) • *"[…] eliminating some returns altogether by ensuring that both the customers and the company have the same understanding of what constitutes an appropriate return and the procedures required for a return."* (Mollenkopf *et al.* 2007:241)
	Successful RL programmes	None	• *"Return avoidance, which can be accomplished by ensuring higher quality products, increasing user friendliness of product […] could be a critical part of a reverse logistics program."* (Stock & Mulki, 2009:34)
	Facilitate RLM	None	• *"Measuring and rewarding avoidance initiatives can increase the […] manageability of products being returned."* (Janse *et al.* 2010:508) • *"[…] for managing online returns […] Providing appropriate and precise information on products prevents unnecessary returns."* (De Leeuw *et al.* 2016:717)
	Improve information management	None	• *"[…] an automatic electronic profile is created for each customer. This profile includes not only information related to specific returns but also information about the customer […]."* (Genchev, 2009:145) • *"The development of databases […] if retailers use such databases for contacting serial returners after a certain number of returns have been made. Such a process would constitute not only a useful deterrent but also a good source of customer data […]."* (Harris 2010:743)
Environmental outcomes	***Environmental sustainability***	None	• *"[…] an integrated supply chain approach to the issues would lead to significant avoidance of product returns. This holistic approach would […] have a positive effect on sustainable distribution."* (Bernon & Cullen, 2007:55)
	Environmental performance	None	• *"By improving the avoidance of returns […] managers can make a significant improvement to their carbon footprint."* (Bernon *et al.* 2011:501)
Market-related outcomes	***Understand return behaviour***	None	• *"[…] returns avoidance and provide further insights to customer return behavior [sic] […]."* (Bernon *et al.* 2016:599)
	Improve consumer service and experience	None	• *"[…] reducing the needs for returns in the first place, and timely processing returns that do occur, customer service will improve. As those firms focus on enhancing customer service […]."* (Hall *et al.* 2013:777) • *"[…] analytics that help retailers to […] identify the abusers of liberal returns policies are essential to maximizing [sic] […] a firm's returns service offering."* (Griffis *et al.* 2012:291) • *"Successful gate-keeping allows firms to control […] returns without damaging customer service."* (Agrawal & Choudhary, 2014:19) • *"Avoiding returns in a customer friendly manner requires that consumers/users clearly understand what they are purchasing."* (De Leeuw *et al.* 2016:716-717)
	Consumer satisfaction and loyalty	None	• *"[…] a balanced approach that integrates both sides of the same coin: that is, focusing on customer satisfaction without losing sight of cost-effectiveness. This requires an integrative stance and is closely related to the decision on which preventive measures to adopt."* (Asdecker 2015:11) • *"[…] analytics that help retailers to capture not only the most profitable customers, who one seeks to make more loyal […]."* (Griffis *et al.* 2012:291)
	Improve CRM	Mollenkopf *et al.* (2007:241)	• *"Retailer emphasis on training customers in the proper use of their products can help in improving customer relations […]."* (Stock & Mulki, 2009:53) • *"[…] implementation of this interactive and easy to-use online tool for requesting return authorization [sic] resulted in improved relationships with customers […]."* (Genchev, 2009:145) • *"[…] measures aimed at reducing returns […] which were connected to the retail-customer interface. Training of store personal was considered as a key dimension […] to provide support to customers […]."* (Bernon *et al.* 2011:497)

Source: Compiled by the researcher

Table 6.41 presents numerous outcomes of RC practices in RL, including economic, operational and product return, organisational, environmental and market-related outcomes, which will be discussed in subsequent sections.

6.9.3.2.1 Economic outcomes of RPA practices in RL

The economic outcomes of RPA practices in RL can include (1) addressing economic barriers in RL, (2) RL cost reductions, (3) enabling cost avoidance, (4) cost effectiveness, (5) profitability, and (6) maximising asset recovery. RL associate with several *economic barriers* including high RL costs and investment requirements (see sections 2.4.1 and 6.9.2), which can be *addressed* with gatekeeping strategies and practices (strategic RPA method).

Moreover, *RL costs* can be *reduced* through several RPA practices, including (1) performing a cost-benefit analysis (general RPA strategy), (2) developing appropriate return policies (restrictive policies), (3) gatekeeping and RA strategies and practices, (4) strategic implementation of product-related RA initiatives (e.g. adjusting product design), consumer support initiatives (e.g. additional instructions, education and training) and account suspension (strategic RPA methods), and (4) cost (economic) requirements. Consequently, despite the costs of implementing RPA practices, organisations can achieve greater cost savings and even *avoid* unnecessary RL *costs* through effective RPA practices (such as gatekeeping strategies).

Furthermore, organisations can achieve *cost effectiveness* through a balanced and integrative (strategic) approach, strategic decisions (e.g. type of RPA methods to adopt), a benefit-driven RPA strategy and the development and implementation of gatekeeping strategies. Similarly, an integrative SC and a holistic approach to RPA practices can enhance the *profitability* of organisations, demonstrating the important role of RPA as a sustainable business practice.

Finally, organisations can *maximise asset recovery* through the development and implementation of gatekeeping practices. Evidently, gatekeeping strategies allow organisations to separate wanted from unwanted product returns, focussing all recovery efforts on wanted product returns, which emphasise the importance of considering the recoverability of products in RPA practices (see section 6.9.3.1).

6.9.3.2.2 Operational and product return outcomes of RPA practices in RL

The operational and product return-related outcomes of RPA in RL include (1) addressing operational barriers, (2) improving forecasting and visibility, (3) addressing product return quality problems, (4) facilitating and supporting RL processes, (5) improving RL process efficiency and effectiveness, (6) improving FL processes, (7) identifying product return reasons, (8) reducing unnecessary, invalid and fraudulent returns, and (9) reducing and controlling product return volume.

Like the economic outcomes of addressing economic barriers, RPA practices, including clear return policies, gatekeeping and RA strategies (strategic RPA methods), can *address* the *operational barriers*

(e.g. uncertainties in product return quality, quantity and timing) in RL (see section 2.3.2). Subsequently, organisations can *improve product return forecasting* and *visibility* (operational barriers) through several RPA practices, including the (1) general RPA strategies of prioritising RPA practices, creating measures for RPA and rewarding RPA initiatives, (2) strategic RPA methods of establishing clear return policies and implementing gatekeeping practices (e.g. gatekeeper and robust gatekeeping function), and (3) RPA requirements of utilising IT systems (IT requirement) and requesting return information from consumers (market-related requirement).

Additionally, the operational barrier of *problems* with *product return quality* can be *addressed* through the strategic RPA method of developing and implementing appropriate gatekeeping strategies and practices, including a gatekeeper and a gatekeeping function. Similarly, strategic RPA methods, including developing and implementing gatekeeping and RA strategies, can *facilitate* and *support RL processes.* For example, gatekeeping and RA strategies can help the CRC process by reducing the number of return requests received (see section 4.4) and the return processing process by reducing the number of returns that requires processing (see section 5.4).

Subsequently, RPA practices, including gatekeeping and RA strategies (RPA methods), IT systems (such as an RMA system) (IT requirement) and requesting return information from consumers (market-related requirement), can *improve* the *efficiency* and *effectiveness of RL processes.* For instance, utilising appropriate IT systems to request return information from consumers (RPA requirements) can reduce staff errors (less return handling errors) and increase processing speed (e.g. fast refunds or exchanges) (see section 5.4). Moreover, organisations can *improve FL processes* by strategically identifying key product return drivers that originate from upstream SC partners (general RPA strategy) and RL/FL integration (operational requirement), which emphasises the importance of an integrated SC approach (RPA strategy) (see section 6.9.3.1).

In terms of *product return-related outcomes*, organisations can effectively *identify product return reasons* by developing a consumer database (general RPA strategy). Furthermore, organisations can *reduce unnecessary, invalid* and *fraudulent product returns* by (1) developing and using return programmes, (2) creating a consumer database (general RPA strategies), (3) developing appropriate return policies (restrictive policies), (4) developing and implementing gatekeeping strategies, (5) implementing product-related RA initiatives (e.g. accurate product information) (RPA methods), (6) utilising IT systems (IT requirement), (7) implementing effective return authorisation procedures (operational requirement), (8) sharing information with consumers (market-related requirement) and (9) collaboration (SC requirement).

Finally, organisations can *reduce* and *control product return* through the (1) RPA methods of restrictive measures (e.g. ineligible product return list), gatekeeping strategies, RA strategies, product-related RA initiatives (e.g. changing product design) and consumer support initiatives (e.g. technical help lines), and (2) RPA requirements of costs (economic), staff involvement and training (organisational), consumer information sharing and CI (market-related), and SCM (SC), which can be important for the effective management of consumer returns.

6.9.3.2.3 Organisational and environmental outcomes of RPA practices in RL

The *organisational outcomes* of RPA practices in RL include (1) successful RA, (2) successful RL programmes, (3) facilitating RLM, and (4) facilitating information management. Particularly, organisations can realise *successful RA* through an integrated SC approach (general RPA strategy), product-related and consumer support RA initiatives (RPA methods), internal information sharing (organisational requirement), and consumer information sharing (market-related requirements) (e.g. clearly communicating product return restrictions).

Additionally, implementing product-related RA initiatives (such as offering high quality products) can contribute to a *successful RL programme*. Furthermore, the RPA strategies of developing RPA measures, rewarding RPA initiatives and implementing product-related RA initiatives can *facilitate RLM,* demonstrating the importance of RPA practices to effectively manage consumer returns. Lastly, organisations can *improve information management* in RL by developing a consumer database, classifying consumers (e.g. profitable versus return abusers) (general RPA strategies) and contacting consumers (market-related requirements).

In terms of the *environmental outcomes,* RPA practices can provide environmental sustainability and improve environmental performance. *Environmental sustainability* can be achieved through an integrated and holistic approach to RPA (general RPA strategy), which associates with effective RA (organisational outcome). Furthermore, management involvement (organisational requirement) in RPA practices can *improve environmental performance,* reemphasising the importance of managerial involvement in all RL practices.

6.9.3.2.4 Market-related outcomes of RPA practices in RL

The market-related outcomes of RPA practices in RL include (1) understanding consumer return behaviour, (2) improving consumer service and experience, (3) consumer satisfaction and loyalty, and (4) improving CRM. Specifically, through the development and implementation of RA strategies (RPA method) organisations can obtain a better *understanding of consumer return behaviour,* which may facilitate in developing more effective RPA methods.

Furthermore, organisations can *improve consumer service* and *experience* through several RPA strategies, including (1) an integrative strategic approach and a "reduce" perspective, (2) a benefit-driven RPA strategy, (3) utilising product return analytics, (4) classifying consumers (e.g. profitable consumers and return abusers) (general strategies), (5) developing and implementing gatekeeping strategies and practices, and (6) implementing consumer support initiatives (RPA methods). Similarly, organisations can obtain *consumer satisfaction and loyalty* through the general RPA strategies, including a balanced strategic approach, strategic decisions in RPA (e.g. type of RPA methods to implement), a benefit-driven RPA strategy, utilising product return analytics, and classifying consumers (focussing efforts on profitable consumers).

Finally, organisations can improve *CRM* by implementing consumer support initiatives (RPA method), utilising appropriate IT systems (IT requirement), involving and training staff (organisational requirements), requesting information from consumers and CI (market-related requirements), showing the significance of RPA practices for the effective management of consumer returns.

Essentially, RPA strategies and requirements in RL can be important for economic, operational, product return, organisational, environmental and market-related outcomes, contributing to the effective RLM of consumer returns. In the next section, RPA practices in RL will be concluded with a description, conceptual framework and summary of findings for RPA practices to manage consumer returns.

6.9.3.3 Description, conceptual framework and summary of findings for RPA practices to manage consumer returns

Based on the findings presented in section 6.9.3, RPA (return prevention and avoidance) practices in RL can be important for the management of consumer returns, and will be described as follows:

> RPA practices for the management of consumer returns involve (1) general RPA strategies, including a strategic approach and perspective, prioritising RPA practices, strategic considerations for gatekeeping practices and RA practices, strategic decisions for RPA, strategic identification of product return drivers, establishing economic benchmarks, performing a cost-benefit analysis for RPA, a benefit-driven strategy for RPA, developing a clear RL strategy, developing and using return programmes, developing a consumer database, strategic utilisation of return analytics, strategic classification of consumers, creating measurements for RPA, and rewarding RPA, (2) strategic RPA methods, including developing a clear and appropriate return policy, strategic implementation of return restrictions, developing and implementing appropriate gatekeeping strategies and practices, developing and implementing RA strategies and policies, strategic implementation of product-related RA initiatives, consumer support initiatives, and account suspensions, and (3) RPA requirements, including economic requirements (investment and costs), an IT requirement (implement and utilise IT), operational requirements (high return volume, effective return authorisation, facility/office space and RL/FL integration), organisational requirements (management involvement and staff involvement and training), market-related requirements(consumer information sharing, requesting product return information, contacting consumers and CI), and SC requirements (SCM and SC collaboration).
>
> The RPA strategies and requirements can result in several outcomes, including (1) economic outcomes (address economic barriers, RL cost reductions, cost avoidance, cost effectiveness, profitability, and maximise asset recovery), (2) operational and product-related outcomes (address operational barriers, improve forecasting and visibility, address product return quality problems, facilitate and support RL processes, improve RL process

efficiency and effectiveness, improve FL processes, identify product return reasons, reduce unnecessary, invalid and fraudulent returns, and reduce and control product return volume), (3) organisational outcomes (successful RA, successful RL programmes, facilitate RLM, and facilitate information management), (4) environmental outcomes (environmental sustainability and improve environmental performance), and (5) market-related outcomes (understand consumer return behaviour, improve consumer service and experience, consumer satisfaction and loyalty, and improve CRM).

Figure 6.29 provides a conceptual framework of RPA practices to manage consumer returns, which includes the strategies, requirements and outcomes of RPA practices in RL.

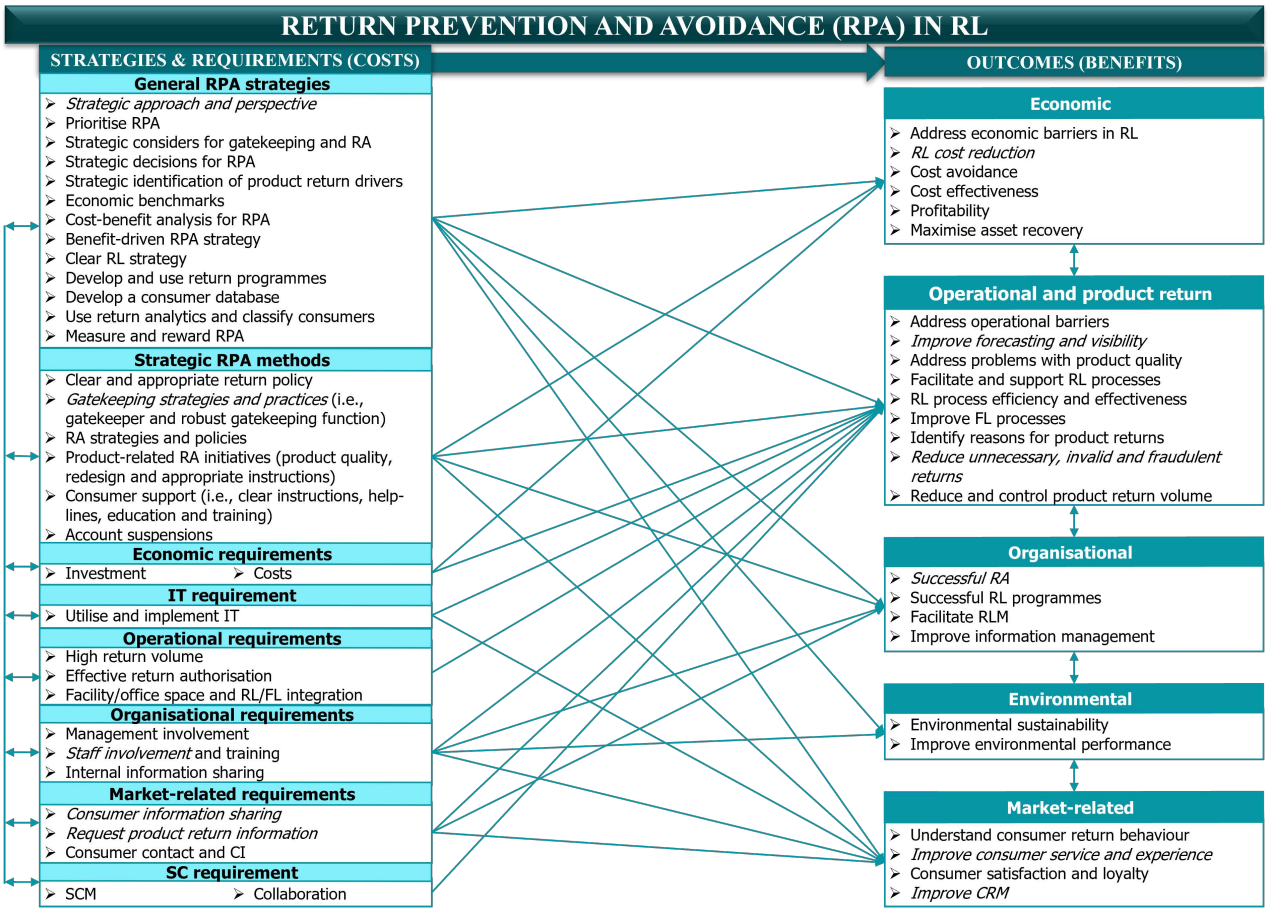


Figure 6.29 Conceptual framework of RPA practices to manage consumer returns
Source: Compiled by researcher

Figure 6.29 illustrates the links between general RPA strategies, strategic RPA methods, RPA requirements and RPA outcomes, demonstrating a cost and benefit relationship. The links between the general strategies, strategic RPA methods and requirements can be demonstrated by the economic requirements of investment and costs, which link with performing a cost-benefit analysis (general strategy), implementing gatekeeping, product-related RA and consumer support initiatives (strategic RPA methods), implementation and utilisation of IT systems (IT requirement), facility/office space (operational requirement) and staff involvement and training (organisational requirements), linking general RPA strategies, strategic RPA methods and RPA requirements. Additionally, the RPA strategy of identifying product return drivers can link with RL/FL integration (operational requirement) and SC collaboration (SC requirement).

Nonetheless, the main aim of the framework involves the links between the RPA strategies, requirements and outcomes, which can be important for the effective management of consumer returns. Subsequently, the most significant RPA strategies and requirements (associated with the most outcomes) and RPA outcomes (associated with the most RPA practices) are emphasised by italics, which will be elaborated upon in Table 6.42.

Finally, the framework shows that the RPA outcome categories can be linked, for example, reducing and controlling product return volume (operational and product-related outcome) can link with RL cost savings (economic outcome), facilitating RLM (organisational outcome), environmental sustainability (environmental outcome) and understanding consumer return behaviour (market-related outcome). Essentially, the links between the RPA strategies, practices and outcomes demonstrate the importance of a holistic approach, considering both the costs (strategies and requirements) and benefits (outcomes) of RPA for the effective management of consumer returns.

Based on Figure 6.29 and the discussions given in section 6.9.3, Table 6.42 provides a summary of the findings and managerial implications of RPA practices to manage consumer returns.

Table 6.42 Summary of findings and managerial implications for RPA practices in RL

CATEGORY	KEY FINDINGS	MANAGERIAL IMPLICATIONS
Strategies and requirements	• RPA in RL involves (1) general strategies, including a strategic approach and perspective, prioritising RPA, strategic considerations, strategic decisions, identification of product return drivers, establishing economic benchmarks, performing a cost-benefit analysis, a benefit-driven strategy, developing a clear RL strategy, developing and using return programmes, developing a consumer database, utilising return analytics, classification of consumers, creating measurements, and rewarding RPA, and (2) strategic RPA methods, including clear and appropriate return policy, implementing return restrictions, developing and implementing appropriate gatekeeping and RA strategies, practices and policies, implementing product-related RA initiatives, consumer support initiatives, and account suspensions. • The general RPA strategies associates with all the RPA outcome categories, including economic, operational, product return-related, organisational, environmental and market-related outcomes • From the general RPA strategies, a strategic approach and perspective can be the most beneficial for RL • Strategic RPA methods associate with most of the RPA outcome categories, including economic, operational, product return-related, organisational, environmental and market-related outcomes • From the strategic RPA methods, developing and implementing gatekeeping strategies and practices can be the most beneficial for RL • The least significant RPA strategies and methods, with no to limited impact on the outcomes include strategic considerations, economic benchmarks and a clear RL strategy, followed by implementation of return restrictions and account suspensions • RPA practices in RL involves economic, IT, operational, organisational, market-related and SC requirements • The organisational requirements of RPA practices in RL associate with most of the outcome categories, including operational/ product return, organisational, environmental and market-related outcomes, followed by market-related requirements • From the organisational requirements of RPA practices, staff involvement can lead to the most benefits • From the market-related requirements of RPA practices, consumer information sharing and requesting product return information can lead to the most benefits • From the RPA practices, operational and SC requirements can be the least significant practice categories	• Organisations must prioritise the implementation of general RPA strategies and strategic RPA methods • Organisations that seek various economic, operational, product return, organisational, environmental and market-related benefits in RL must focus on general RPA strategies • Organisations must focus on developing a strategic approach for RPA to realise optimum benefits in RL • Organisations must focus on developing and implementing gatekeeping strategies and practices for optimum RPA benefits in RL • Organisations must focus on the organisational requirement relating to staff involvement for optimum RPA benefits in RL • Organisations must focus on the market-related requirements of consumer information sharing and requesting product return information to achieve optimum RPA benefits in RL

	• The least significant requirements, with no impact on RPA outcomes, include the economic requirement of investment and the operational requirement of facility/office space	
Outcomes	• RPA practices in RL involve economic, operational, product return, organisational, environmental and market-related outcomes • The most significant outcomes of RPA practices in RL involves operational outcomes (associated with all RPA practice categories), followed by market-related and organisational outcomes • The least significant outcome of RPA practices in RL involves the environmental outcomes • The most significant economic outcome of RPA practices in RL includes RL cost reductions • The most significant operational and product-related outcomes of RPA practices in RL includes improving product return forecasting and visibility and reducing unnecessary/fraudulent product returns • The most significant organisational outcome of RPA practices in RL includes successful RA (return avoidance) • The most significant market-related outcomes of RPA practices include improving consumer service and experience and improving CRM	• Organisations that seek economic, operational, product return, organisational, environmental and market-related benefits in RL can implement RPA practices • Organisations that seek to reduce RL costs can consider implementing RPA practices in RL • Organisations that experience product return forecasting and visibility problems can consider implementing RPA practices in RL • To reduce unnecessary and fraudulent product returns, organisations can implement RPA practices in RL • Organisations that seek to effectively avoid product returns can implement RPA practices in RL • Organisations that experience consumer service and experience problems in RL can consider RPA practices • To improve CRM, organisations can consider RPA practices in RL • For the effective management of consumer returns, organisations must identify/implement/consider RPA strategies, requirements and outcomes

Source: Compiled by the researcher

Table 6.42 demonstrates the value of RPA practices as part of the RL practices for consumer returns. Organisations can use the RPA strategies, requirements and related outcomes for effective RPA in RL, which can contribute to the effective RLM of consumer returns. RPA practices in RL will further be explored in the interviews with industry experts (chapter 8).

In the next section, SPP practices in RL will be explored, analysed and discussed.

6.9.4 Strategic planning and procedural (SPP) practices to manage consumer returns

SPP practices to manage consumer returns relate to strategic planning, formalisation and standardisation. Since a lack of strategic planning and procedural practices in RL represent organisational barriers to effective RLM (see section 2.3.3), SPP practices can be important for the management of consumer returns. Most of the findings related to SPP practices focus on formalisation and standardisation (strategic procedures), which indicates that RL literature (of the QCA) lacks insight into the strategic planning of RL. Consequently, the lack of literature on the strategic planning of RL mirrors the organisational barrier related to a lack of strategic planning in RL, demonstrating a significant gap in RL research.

Like other RL practice categories, SPP practices involve strategies, requirements and related outcomes. In the subsequent sections, the strategies, requirements and outcomes of SPP practices in RL will be discussed and concluded with a description, conceptual framework and summary of findings for SPP practices to manage consumer returns.

6.9.4.1 Strategies and requirements of SPP practices in RL

The strategies of SPP practices involve the strategies for strategic planning in RL and the strategies for strategic procedures in RL, and the SPP requirements include operational, organisational and SC

requirements, which can contribute to the effective RLM of consumer returns. Table 6.43 provides an overview of the findings related to the *strategies and requirements of SPP practices to manage consumer returns*, including the categories, subcategories, supporting sources for the subcategories and key quotations that support both the subcategories and the discussion of the findings.

Table 6.43 Findings related to strategies and requirements of SPP practices to manage consumer returns

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
Strategies for strategic planning in RL	***Strategic approach and perspective for strategic planning in RL***	Lau and Wang (2009:448)	• *"[…] strategic planning approach that integrates RL in the overall SC process […]."* (Das, 2012:1439) • *"[...] a systematic decision-making approach […] in incorporating reverse logistics services as essential to strategic planning […]."* (Cheng & Lee, 2010:1113) • *"[...] for practitioners of reverse logistics to adopt […] a strategic planning perspective."* (Cheng & Lee, 2010:1113)
	Strategic considerations for strategic planning in RL	None	• *"[…] the reverse logistics function determine the reverse logistics strategic plan process […] at the strategic level […]."* (Hernández *et al.* 2011:96) • *"RL should be considered as a strategic planning issue. A successful strategic planning approach […] should address the following key factors: strategies for the collection of returnables and the recovery of components/products; the estimation of returnables and recovered quantities; the […] re-marketing of recovered items; supply management […] and the distribution of new and recovered product to the market."* (Das, 2012:1439) • *"The RL strategies […] have major impact on financial, social, and environmental aspects."* (Shaik & Abdul-Kader, 2014:94)
	Understand and analyse strategic factors in RL	None	• *"[…] strategic plans and visions associated with […] RL practices in their businesses. Understanding and analyzing [sic] Strategic factors is important […]."* (Mangla *et al.* 2016:617)
	Develop a strategic plan for RL	Bernon and Cullen (2007:51) Lau and Wang (2009:448) Hernández *et al.* (2011:96) Yuan *et al.* (2016:189)	• *"[…] strategic plans and visions associated with adoption and implementation of RL practices […]."* (Mangla *et al.* 2016:617) • *"RL should be considered as a strategic planning issue […]."* (Das, 2012:1439) • *"Strategic planning involves identifying reverse logistics goals and specifying long-term plans to achieve them."* (Cheng & Lee, 2010:1112) • *"[…] reverse logistics planning addresses the collection, recovery and marketing of recovered products […]."* (Das, 2012:1439)
	Integrate the strategic plan for RL with organisational strategic plans	Cheng and Lee (2010:1113)	• *"The companies experiencing positive effects are characterized [sic] as follows: RL is incorporated in their strategic plans […]."* (Škapa & Klapalová, 2012:682) • *"[…] strategic-level SC planning that integrates RL […]."* (Das, 2012:1439) • *"[…] successful strategic SC planning that integrates the collection, recovery, […] and redistribution of recovered products [...]."* (Das, 2012:1439)
	Implement a strategic planning model for RL	None	• *"[…] SCs would greatly benefit by implementing an RL integrated strategic planning model […]."* (Das, 2012:1439)
	Utilise incentives for strategic planning	None	• *"[…] RL integrated strategic planning […] using appropriate incentives […]."* (Das, 2012:1439)
	Develop RL strategies	Shaik and Abdul-Kader (2014:94)	• *"[…] significance of Reverse Logistics management […] has also given rise to the development […] of Reverse Logistics strategies […]."* (Rajagopal *et al.* 2015:47)
	Integrate RL strategies with organisational strategies	Lau and Wang (2009:448)	• *"Corporate strategies define the goals and objectives for the whole company. The reverse-flow strategy should contribute to these objectives and support them […]."* (Škapa & Klapalová, 2012:688) • *"[…] significance of Reverse Logistics management […] has also given rise to the […] incorporation of Reverse Logistics strategies in their business model […]."* (Rajagopal *et al.* 2015:47) • *"[…] organisations need to include product returns management within their supply chain strategy."* (Bernon & Cullen, 2007:53)
Strategies for strategic procedures in RL	***Strategic approach for strategic procedures in RL***	None	• *"Innovative approaches to RL can be developed to […] apply special decisions, rules and policies for returns."* (Huang & Yang, 2014:620)
	Prioritise strategic procedures in RL	None	• *"[…] in reverse logistics, organisations can implement a variety of first-priority practices, such as standardising the reverse logistics process […]."* (Badenhorst, 2016:9) • *"The companies […] indicated that process formalization [sic] is a top priority."* (Genchev *et al.* 2011:257)
	Strategic considerations in procedural practices	None	• *"[…] the level of formalization [sic] becomes indicative of how much control a given firm has over its RL operations. The issue of control is associated with the formal development and implementation of a RL program."* (Genchev *et al.* 2011:243)
	Articulate and define RL processes and practices	None	• *"[…] standardized [sic] […] reverse logistic operations […] formulating, tailoring, RL operation specification […]."* (Prakash & Barua, 2015:603) • *"[…] in a standardized [sic] manner from a defined set of collection sites, through defined transport operators and reprocessing units assigned to defined geographical areas."* (Flygansvær *et al.* 2008:14)

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
			• *"[…] formalization [sic] […] as the WMC had defined the terms of operation (e.g. frequencies, capacity and relationship patterns within geographical areas)."* (Flygansvær *et al.* 2008:14) • *"Detailed description of the reverse logistics program, including clear-cut intermediate and final operational outcomes […]."* (Genchev, 2009:147)
	Define roles and responsibilities in RL	None	• *"Formalization [sic] […] involves issues such as establishing clearly defined responsibilities […]."* (Huscroft *et al.* 2013b:309)
	Formal development and implementation of RL programs	None	• *"[…] issue of control is associated with the formal development of a RL program."* (Genchev *et al.* 2011:243) • *"With reverse logistics and product returns programs still not fully developed in some firms, it was not surprising that […] companies did not have standards in the product return process."* (Stock & Mulki, 2009:43) • *"Formalization [sic] involves issues such as […] adequately providing the knowledge to implement the program."* (Huscroft *et al.* 2013b:309) • *"[…] level of formalization [sic] […] is associated with the formal […] implementation of a RL program."* (Genchev *et al.* 2011:243)
	Develop a formalisation strategy for RL	None	• *"[…] Formalization [sic] […] strategy […] for directing logistics operations […]."* (Tiwari, 2013:242) • *"[…] reverse logistics, […] an ideal candidate for developing formalized [sic] methods […]."* (Tiwari, 2013:241)
	Define and develop formal rules and controls for RL	Flygansvær *et al.* (2008:8) Tiwari (2013:242)	• *"[…] formalization [sic] […] if you want to gain control of your reverse logistics program, you must clearly define the rules […]."* (Genchev *et al.* 2011:257) • *"RL program formalization [sic] is most directly related to establishing appropriate process controls."* (Genchev *et al.* 2011:256)
	Formal development of standard operating procedures (SOPs) and manuals for RL	Aitken and Harrison (2013:753) Genchev (2009:147) Huang and Yang (2014:635) Huscroft *et al.* (2013b:309) Lee and Lam (2012:596) Prakash and Barua (2015:603)	• *"[…] formalized [sic] will have standard operating procedures for reverse logistics before they are needed."* (Tiwari, 2013:242) • *"Formal rules can be applied […] according to firms' manuals […]."* (Genchev *et al.* 2011:254) • *"[…] establish formal operating procedures regarding RL operations in order to reap the most win-win benefits and minimize [sic] associated costs."* (Genchev *et al.* 2011:257) • *"[…] formalization [sic] […] also included […] norms."* (Flygansvær *et al.* 2008:14)
	Formalise RL processes and activities	Aitken and Harrison, (2013:753) Genchev (2009:147) Hall *et al.* (2013:782) Hazen *et al.* (2015:163) Huscroft *et al.* (2013b:318) Tiwari (2013:241)	• *"[…] process formalization [sic] is defined here as […] written rules and procedures regarding a particular business operation."* (Genchev *et al.* 2011:246) • *"[…] firms need to formalize [sic] each individual process […]."* (Genchev *et al.* 2011:246) • *"[…] returned products' flow requires formalizing [sic] the […] activities related to selecting the disposition option […]."* (Genchev *et al.* 2011:255)
	Formalise RL skills	None	• *"Formalization [sic] […] skills into assessable and auditable formats […]."* (Aitken & Harrison, 2013:759)
	Standardise RL processes	Flygansvær *et al.* (2008:14) Partida (2011:64) Stock and Mulki (2009:43) Tiwari (2013:241)	• *"[…] in reverse logistics […] practices that were identified for overcoming these barriers included […] standardising the reverse logistics process […]."* (Badenhorst, 2016:10) • *"Formalization [sic]: involves issues such as […] standardization [sic] of processes […]."* (Huscroft *et al.* 2013b:309)
	Standardise RSC	None	• *"[…] formalize [sic] their processes; […] For instance, […] standardizing [sic] the reverse chain […]."* (Hall *et al.* 2013:777)
	Publish accessible strategic procedures for RL	None	• *"[…] published standards for each step of the product returns process […]."* (Stock & Mulki, 2009:43) • *"[…] written rules and procedures must be readily available to guide execution."* (Genchev, 2009:147) • *"Formalization [sic] of processes and skills into assessable and auditable formats […]."* (Aitken & Harrison, 2013:759) • *"[…] employees understand how the RL process is supposed to work and are informed on how to make it operate more efficiently […]."* (Huscroft *et al.* 2013b:318)
	Develop incentives for strategic procedures	None	• *"[…] formalization [sic] […] also included incentives […]."* (Flygansvær *et al.* 2008:14)
	Formal implementation of strategic procedures in RL	Aitken and Harrison, (2013:753) Huang and Yang (2014:620)	• *"The organizations [sic] report having standardized [sic] processes in place organization-wide [sic] to support reverse logistics initiatives […]."* (Partida, 2011:64) • *"Formalization [sic] […] refers to the extent to which rules […] are implemented."* (Flygansvær *et al.* 2008:8) • *"[…] to gain control of your reverse logistics program, you must clearly define the rules […] and strictly enforce them."* (Genchev *et al.* 2011:257)
Operational requirement	***Utilise CRCs***	None	• *"CRCs seem to be a popular reverse-logistics strategy where all products returned are sorted, processed […] at a central depot […] This would lead to more standardised processes […]."* (Jayaraman *et al.* 2008:419)

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
Organisational requirements	***Awareness of the importance of RLM***	None	• *"[…] increasing willingness of consumers to return goods, comes the need to rethink the significance of Reverse Logistics management. This has also given rise to the development and incorporation of Reverse Logistics strategies […]."* (Rajagopal *et al.* 2015:47) • *"[…] firm's awareness that reverse logistics is an important aspect of the business. As more firms place additional emphasis on managing product returns more effectively and efficiently, the use of standards will no doubt increase."* (Stock & Mulki, 2009:43)
	Implement PM practices	Hall *et al.* (2013:777)	• *"[…] formalization [sic] […] the actors in the systems had to report specific performance measures to the WMC on a regular basis."* (Flygansvær *et al.* 2008:14) • *"[…] providing a platform to help measure the effectiveness of RL process formalization [sic] achieved becomes a necessity."* (Genchev *et al.* 2011:246) • *"[…] written rules and procedures […] A formal performance feedback loop should be established."* (Genchev, 2009:147) • *"[…] establishment of metrics as a means by which organizations [sic] can […] formalize [sic] their reverse logistics processes."* (Hazen *et al.* 2015:163)
	Management involvement	None	• *"[…] successful strategic SC planning that integrates the collection, recovery, […] and redistribution of recovered products [...] to be pursued by SC managers for addressing RL in their business."* (Das, 2012:1439) • *"Formalization [sic] […] one of the managers stated, "'Satisfaction guaranteed' can be achieved best through establishing rules and procedures […]."* (Genchev *et al.* 2011:258) • *"RL process managers formalize [sic] their processes […]."* (Hall *et al.* 2013:777)
SC requirements	***Establish SC partnerships***	None	• *"[…] RL integrated strategic planning model […] can be effectively implemented by creating contractual arrangements […]."* (Das, 2012:1439)

Source: Compiled by the researcher

Table 6.43 indicates the SPP strategies, including strategies for strategic planning in RL and strategies for strategic procedures in RL, and the SPP requirements, which will be discussed in subsequent sections.

6.9.4.1.1 Strategies for strategic planning practices in RL

The strategies for strategic planning practices in RL include (1) strategic approaches and perspectives for strategic planning, (2) strategic considerations for strategic planning, (3) understanding and analysing strategic factors in RL, (4) developing a strategic plan for RL, (5) integrating the strategic plan for RL with the strategic plans of the organisation, (6) implementing an integrative strategic planning model for RL, (7) utilising incentives for strategic planning, (8) developing RL strategies, and (9) integrating RL strategies with organisational strategies.

The *strategic approaches* and *perspectives* for strategic planning in RL involves an integrated strategic planning approach, a systematic decision-making approach and a strategic planning perspective in RL, which set the foundation for developing and implementing strategic plans and strategies for RL. Moreover, certain *strategic considerations* can be important for strategic planning in RL, which includes considering (1) the RL function, (2) facility/location and disposition (recovery) strategies, (3) RL processes, (4) product return volume, (5) SCM, and (6) the financial, environmental and social impact of RL strategies. Therefore, organisations must consider both internal and external factors related to RL processes and practices for developing effective strategic plans in RL.

Similarly, organisations must *understand* and *analyse strategic factors* in RL practices, which may include in/outsourcing decisions (section 6.5), disposition decision factors (section 6.6), factors for PM in RL (section 6.7), factors that influence facility/location strategies (section 6.8), factors for FM in RL (section 6.9.2), and factors for RPA in RL (section 6.9.3). Based on the strategic approaches, perspective, considerations, and understanding of strategic factors in RL, organisations can *develop a strategic plan for RL*, which must include the vision and goals for adopting and implementing RL practices and RL processes (such as collection, transport, receiving, processing, inspection, sorting, disposition and redistribution).

Once completed, organisations can *integrate* the *strategic plan* for *RL* with the *strategic plans* of the *organisation* and *implement an integrated strategic planning model for RL*, linking with an integrated strategic planning approach in RL. Additionally, organisations can *utilise incentives*, ensuring effective development and implementation of integrated strategic plans in RL.

Following the development and implementation of the strategic plans for RL, organisations can *develop RL strategies*, which can include developing strategies for individual RL practices (such as integration, outsourcing, disposition, PM, facility/location, RC, FM and RPA strategies). Finally, organisations must *integrate RL strategies* with *organisational strategies*, complementing the integrative strategic plans of RL and the organisation. Consequently, RL strategies must be in line with organisational vision, goals and strategies for the effective management of consumer returns.

6.9.4.1.2 Strategies for strategic procedures in RL

As indicated in the introduction of section 6.9.4, SPP practices in RL mostly focus on strategic procedures, which include formalisation and standardisation of RL. Subsequently, strategic procedures in RL involve several strategies, including (1) a strategic approach for strategic procedures in RL, (2) prioritising strategic procedures, (3) strategic considerations for procedural practices, (4) articulating and defining RL processes and practices, (5) defining roles and responsibilities in RL, (6) the formal development and implementation of RL programs, (7) developing a formalisation strategy for RL, (8) defining and developing formal rules and controls for RL, (9) the formal development of standard operating procedures (SOPs) and manuals for RL, (10) formalising RL processes, activities and skills, (12) standardising RL processes and the RSC (reverse SC), (13) publishing accessible strategic procedures for RL, (14) the formal implementation of strategic procedures in RL, and (15) developing incentives for strategic procedures.

Despite the formal nature of procedural practices, organisations can benefit from implementing strategic procedures with an innovative *strategic approach*, which means that formalisation and

standardisation of RL enables RL innovation and knowledge creation. Furthermore, like RC and RPA practices in RL (sections 6.9.1 and 6.9.3), organisations must *prioritise strategic procedures in RL*, demonstrating the importance and potential benefits of strategic procedural practices for effective RLM. Nevertheless, organisations must *strategically consider* their level of control over RL processes, since this can directly influence the level of formalisation and strategic procedures appropriate for the RL function. Evidently, organisations that outsource some or all RL processes requires less strategic procedures than those that keep the entire RL function inhouse.

In developing strategic procedures for RL, organisations need to *articulate* and *define RL processes* and *practices.* For example, defining collection, transportation, receiving, processing, inspection, sorting, disposition and redistribution processes, and SCI, in/outsourcing, facility/location, disposition and strategic planning practices in RL. Additionally, organisations must *define roles* and *responsibilities in RL*, for example, describing the role and responsibilities for the RL manager, receiving clerks, processing staff and inspectors that handle product returns.

With clear descriptions of the RL function, organisations can start to *formally develop RL programs*, which links with the strategic plans for RL (section 6.9.4.1.1). Consequently, organisations must develop plans or agendas for RL that include information and procedures for the *formal implementation* of the *RL program.* In procedural practices, implementing the RL program can be important since it directly influences the level of formalisation (or procedural practices) needed for RL. Subsequently, organisations can *develop a formalisation strategy for RL*, which forms the foundation of developing and implementing strategic procedures in RL.

As part of the formalisation strategy, organisations must *define* and *develop formal rules* and *controls* for *RL*, followed by the *formal development* of *SOPs* and *manuals* for *RL* to capture the norms and rules for RL. As part of the development of rules and SOPs, organisations can *formalise RL processes* and *activities* that involve written rules and procedures for individual RL processes and activities (e.g. inspection, testing and repackaging), emphasising the importance of defining RL processes during the initial stages of strategic procedures in RL. Likewise, linking to the definitions of roles and responsibilities in RL, organisations must *formalise* the *RL skills* needed to perform RL processes effectively and efficiently.

Additionally, organisations can *standardise the RL process*, ensuring an even and consistent application of strategic procedures across RL functions and operations. However, organisations may choose to extend the standardisation of RL processes to the *standardisation* of the *RSC*, which means that all the organisations in the SC applies the same standards and procedures for managing product returns.

Consequently, SCI and collaborative relationships between SC partners can be important for a SC-wide implementation of strategic procedures for RL.

Following the formalisation and standardisation of RL, organisations must *publish accessible strategic procedures* for RL, meaning that all stakeholders (especially staff) in the RL process can easily obtain the documented rules and SOPs to understand the formalised and standardised RL processes, skills and practices of the organisation. Furthermore, organisations can create *incentives for strategic procedures* in RL, which may link to measuring and tracking the performance and outcomes of formalisation and standardisation in RL (see section 6.9.4.1.3).

Finally, organisations can *formally implement strategic procedures* in RL to gain control over the RL function and realise the benefits associated with the formalisation and standardisation of RL (see section 6.9.4.2). The implementation of the strategic procedures in RL can be organisation-wide to encourage CFI as another important RL practice to manage consumer returns (see section 6.4.3).

6.9.4.1.3 Requirements of SPP practices in RL

Due to the strategic nature of SPP practices, the requirements of SPP are limited to operational, organisational and SC requirements. The *operational requirement* of SPP in RL involve utilising a CRC (centralised return centre) as part of the facility/location practices in RL. Particularly, organisations can use CRCs to support standardisation of RL processes, demonstrating an important link between SPP and facility/location practices.

The *organisational requirements,* including (1) awareness of the importance of RLM, (2) implementing PM for RL, and (3) management involvement, mostly support the effective development and implementation of the SPP strategies in RL. For instance, *awareness* of the *importance* of *RLM* can motivate organisations to pay more attention to RL, and subsequently, develop and implement strategic plans, strategies and procedures for RL. Likewise, *implementing PM* practices in RL, including a PM framework (that include performance perspectives, objective and measures), performance reviews and feedback mechanisms (see section 6.7), can be important to measure the effectiveness of SPP strategies in RL. Measuring the performance of SPP strategies can be important to effectively utilise incentives developed for SPP, including incentives for strategic planning (section 6.9.4.1.1) and strategic procedures in RL (section 6.9.4.1.2). Like other RL practices, *management involvement* can be important for SPP practices in RL. For instance, a SC manager can be important for adopting an integrative strategic planning approach in RL, developing strategic plans for RL and integrating strategic plans for RL with the strategic plans of the organisation (see section 6.9.4.1.1). Additionally,

managers can play important roles in developing and implementing formalisation strategies, rules and SOPs for RL processes and practices.

Finally, *establishing SC partnerships* as a *SC requirement* in SPP practices can be important for the effective implementation of an integrative strategic planning model for RL (strategic planning strategy), which demonstrates the importance of SCI practices for the effective management of consumer returns (see section 6.4.1).

Essentially, SSP requirements strongly associate with the SPP strategies, which can lead to important outcomes of SPP practices in RL, discussed in the next section.

6.9.4.2 Outcomes of SPP practices in RL

The outcomes of SPP practices involve the benefits associated with the effective implementation of the SPP strategies and requirements, which can be important for the management of consumer returns. The outcomes of SPP practices in RL include (1) economic, (2) operational (3) organisational (4) environmental, (5) market-related and (6) SC outcomes. Table 6.44 provides an overview of the findings related to the *outcomes of SPP practices in RL*, including the categories, subcategories, supporting sources for the subcategories and key quotations that support both the subcategories and the discussion of the findings.

Table 6.44 Findings related to outcomes of SPP practices to manage consumer returns

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
Economic outcomes	***Address economic barriers in RL***	None	• *"[…] the high cost of reverse logistics also compels firms to look at the issue seriously from a long-term strategic perspective."* (Lau & Wang, 2009:448)
	Cost reductions	None	• *"[…] formalization [sic] […] can be an effective method of reducing costs effectively […]."* (Huang & Yang, 2014:635) • *"[…] process formalization [sic] is a top priority […] the need to establish formal operating procedures regarding RL operations […] to […] minimize [sic] associated costs."* (Genchev *et al.* 2011:257)
	Cost effectiveness	None	• *"[…] the need to rethink the significance of Reverse Logistics management. This has also given rise to the development and incorporation of Reverse Logistics strategies in their business model […] to gain cost effectiveness […]."* (Rajagopal *et al.* 2015:47) • *"[…] formalized [sic] reverse logistics processes may represent a rare, valuable, and not easily imitable knowledge resource […] enabling more cost effective processes."* (Hazen *et al.* 2015:163)
	Increase RL budget / funding	None	• *"Detailed description of the reverse logistics program […] increases the probability of […] securing favorable [sic] budgeting for the reverse logistics program."* (Genchev, 2009:147)
	Profitability	None	• *"[…] strategic-level SC planning that integrates RL […] as a way of improving […] performance in terms of profit […]."* (Das, 2012:1439) • *"Formalized [sic] efforts would help firms to profitably manage the returned product."* (Genchev *et al.* 2011:255)
	Minimise financial losses	None	• *"The potential for losses from mishandling unwanted product make it imperative for firms to […] effectively formalizing [sic] their programs."* (Genchev *et al.* 2011:245)
Operational outcomes	***Address operational barriers in RL***	None	• *"[…] the operational barriers in reverse logistics included problems with product quality, limited forecasting and visibility, inadequate information and technology systems and developmental barriers. The practices that were identified for overcoming these barriers included […] standardising the reverse logistics process […]."* (Badenhorst, 2016:10)
	Increase forecasting and visibility in RL	Tiwari (2013:241)	• *"To address issues with limited forecasting and visibility in reverse logistics, organisations can implement a variety of first-priority practices, such as standardising the reverse logistics process […]."* (Badenhorst, 2016:9) • *"Formalization [sic] will help to increase visibility of RL […]."* (Genchev *et al.* 2011:258)

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
	Reduce uncertainties in the RL process	Genchev *et al.* (2011:253)	• *"Formalization [sic] of the processes […] reducing the ambiguity that can exist in the process through the application of rules and procedures."* (Aitken & Harrison, 2013:753)
	Address IT and infrastructure barriers in RL	None	• *"[…] strategic plans and visions associated with adoption and implementation of RL practices […] Understanding and analyzing [sic] Strategic factors is important […] to improve certain weaknesses related to technology, infrastructure […]."* (Mangla *et al.* 2016:617)
	Improve operational flexibility and efficiency	None	• *"[…] strategic plans and visions associated with adoption and implementation of RL practices […] Understanding and analyzing [sic] Strategic factors is important […] to improve […] flexibility […]."* (Mangla *et al.* 2016:617) • *"[…] formalization [sic] improved operating flexibility and the achievement of operating efficiency."* (Tiwari, 2013:242)
	Simplify RL processes	None	• *"Simplified […] reverse logistic operations […] formulating, tailoring, RL operation specification […]."* (Prakash & Barua, 2015:603) • *"[…] streamline their RL operations by effectively formalizing [sic] their programs."* (Genchev *et al.* 2011:245)
	Monitor and measure accuracy in RL processes and activities	None	• *"Formal rules can be applied to assess whether returns inspectors made the right decision according to firms' manuals […]."* (Genchev *et al.* 2011:254) • *"Formalization [sic] of processes and skills into assessable and auditable formats […] to monitor variances in execution […]."* (Aitken & Harrison, 2013:759) • *"[…] monitoring […] the reverse logistics operation […] can be moderated by formalizing [sic] the processes and activities involved."* (Genchev, 2009:147)
	Enables control of RL processes	None	• *"[…] level of formalization [sic] becomes indicative of how much control a given firm has over its RL operations. The issue of control is associated with the formal development and implementation of a RL program."* (Genchev *et al.* 2011:243) • *"[…] controlling the reverse logistics operation […] can be moderated by formalizing [sic] the processes and activities involved."* (Genchev, 2009:147)
	Facilitate and support RL processes	Huang and Yang (2014:635)	• *"[…] return initiation […], to receiving and processing the returns, to their final disposition, written rules and procedures must be readily available to guide execution."* (Genchev, 2009:147) • *"The formalization [sic] […] of these activities […] help streamline returns processing."* (Genchev *et al.* 2011:253)
	Improve RL process efficiency and effectiveness	None	• *"RL process formalization [sic] […] facilitate a more efficient flow of goods from the point of consumption to the point of origin."* (Hall *et al.* 2013:782) • *"[…] formalization [sic] […] employees understand how the RL process is supposed to work and are informed on how to make it operate more efficiently, […] to ensure the RL process is executed appropriately."* (Huscroft *et al.* 2013b:318) • *"Efficiency is improved because formal rules and procedures eliminate the need to treat every event as a new decision […]."* (Tiwari, 2013:242)
	Facilitate RL/FL integration	None	• *"RL process managers formalize [sic] their processes; especially when coupled with an effective metrics program […] aligning 'new' reverse process with established pipelines and transportation channels […]."* (Hall *et al.* 2013:777)
Organisational outcomes	***Address organisational barriers***	None	• *"[…] successful strategic SC planning that integrates the collection, recovery, […] and redistribution of recovered products [...] to be pursued by SC managers for addressing RL in their business."* (Das, 2012:1439) • *"Detailed description of the reverse logistics program […] increases the probability of getting senior management's attention […]."* (Genchev, 2009:147)
	Facilitate RL system development	None	• *"Formalization [sic] of the processes can assist in the establishment of a RL system through […] the application of rules and procedures."* (Aitken & Harrison, 2013:753)
	Enables and support RL innovation and initiatives	Tiwari (2013:242)	• *"RL innovation […] for example, […] formalization [sic] […]."* (Huang & Yang, 2014:635) • *"The organizations [sic] report having standardized [sic] processes in place organization-wide [sic] to support reverse logistics initiatives […]."* (Partida, 2011:64)
	Enables control over the RL function	None	• *"[…] process formalization [sic] is a top priority […] if you want to gain control of your reverse logistics program, you must clearly define the rules […] and strictly enforce them […]."* (Genchev *et al.* 2011:257)
	Facilitate and enhance PM in RL	None	• *"[…] formalize [sic] each individual process in order to more accurately measure program performance."* (Genchev *et al.* 2011:246) • *"RL process formalization [sic] will help firms to better align goals with metrics […]."* (Hall *et al.* 2013:782) • *"[…] providing a platform to help measure the effectiveness of RL process formalization [sic] achieved […]."* (Genchev *et al.* 2011:247)
	Improve RL performance	None	• *"Written procedures and guidelines for execution […] to achieve predetermined performance outcomes."* (Genchev, 2009:147) • *"[…] process formalization [sic] as key determinants of enhanced program performance."* (Genchev, 2009:140)
	Facilitate RLM	None	• *[...] strategic planning would improve the achievement of and contribution toward servicing RL management."* (Yuan *et al.* 2016:189) • *"[…] Formalization [sic] is a strategy of control that provides a structure for directing logistics operations […]."* (Tiwari, 2013:242) • *"[…] norms […] develop and guide the behaviour of the actors."* (Flygansvær *et al.* 2008:14) • *"[…] increased process formalization [sic] can help companies to better manage their RL operations."* (Genchev *et al.* 2011:246) • *"Formalization [sic] of processes and skills into assessable and auditable formats*

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
			supports the management of transactions […].” (Aitken & Harrison, 2013:759)
	Facilitate standardisation in RL	None	• *“Simplified and standardized [sic] […] reverse logistic operations […] formulating, tailoring, RL operation specification […].”* (Prakash & Barua, 2015:603) • *“[…] firm’s awareness that reverse logistics is an important aspect of the business. As more firms place additional emphasis on managing product returns more effectively and efficiently, the use of standards will no doubt increase.”* (Stock & Mulki, 2009:43) • *“CRCs seem to be a popular reverse-logistics strategy where all products returned are sorted, processed […] at a central depot […] This would lead to more standardised processes […].”* (Jayaraman *et al.* 2008:419)
	Support RL staff	Lee and Lam (2012:596)	• *“[…] standardized [sic] procedures can help reduce conflict and confusion during RL activities.”* (Huang & Yang, 2014:635) • *“The formalization [sic] […] of these activities should help returns managers and inspectors reduce the level of complexity […].”* (Genchev *et al.* 2011:253) • *“RL process formalized [sic] helps to ensure expectations are clear to […] internal […] stakeholders […].”* (Huscroft *et al.* 2013b:318)
	Facilitate RL decision-making	None	• *“[…] formal rules and procedures eliminate the need to treat every event as a new decision […].”* (Tiwari, 2013:242) • *“Formal rules can be applied to assess whether returns inspectors made the right decision according to firms’ manuals […].”* (Genchev *et al.* 2011:254)
	Effective management of staff	None	• *“[…] personal accountability […] can be moderated by formalizing [sic] the processes and activities involved.”* (Genchev, 2009:147) • *“Formalization [sic] allows for […] the immediate application of corrective actions.”* (Genchev, 2009:147) • *“[…] formalization [sic] may aide in the development and growth of incentive systems. If employees understand how the RL process is supposed to work and are informed on how to make it operate more efficiently, proper incentives can be employed […].”* (Huscroft *et al.* 2013b:318)
	Enhance knowledge and information sharing	Hazen *et al.* (2015:163)	• *“Process formalization [sic] […] provides a mechanism for knowledge transfer […].”* (Aitken & Harrison, 2013:753)
	Facilitate CFI practices	None	• *“[…] formalization [sic] suggests important implications in terms of internal integration of reverse logistics operations […].”* (Genchev, 2009:147) • *“[…] having a formalized [sic] process may complement […] vertical coordination.”* (Huscroft *et al.* 2013b:318) • *“The organizations [sic] report having standardized [sic] processes in place organization-wide [sic] to support reverse logistics initiatives and eliminate silo activities.”* (Partida, 2011:64)
	Facilitate RPA practices	None	• *“[…] comprehensive strategic plan for reverse logistics […] to place a greater emphasis on preventing returns rather than dealing with them later.”* (Bernon & Cullen, 2007:51)
Environmental outcomes	***Support environmental responsibility***	None	• *“[…] RL planning will aid […] the complexities of becoming environmentally responsible […].”* (Das, 2012:1439)
	Improve environmental performance	None	• *“[…] strategic-level SC planning that integrates RL […] as a way of improving […] performance in terms of […] environmental requirements.”* (Das, 2012:1439)
Market-related outcomes	***Increase competitive advantage***	None	• *“[…] strategic plans and visions associated with adoption and implementation of RL practices […] Understanding and analyzing [sic] Strategic factors is important to develop strengths into competitive advantages […].”* (Mangla *et al.* 2016:617) • *“[…] the need to rethink the significance of Reverse Logistics management. This has also given rise to the development and incorporation of Reverse Logistics strategies in their business model […] to gain […] competitive advantage.”* (Rajagopal *et al.* 2015:47) • *“Formalization [sic] […] a key attribute in firms that are considered to be leading-edge in terms of logistics practices.”* (Tiwari, 2013:242) • *“[…] formalized [sic] reverse logistics processes may represent a rare, valuable, and not easily imitable knowledge resource that can be used to attain a marketplace advantage […].”* (Hazen *et al.* 2015:163)
	Improve consumer service and satisfaction	None	• *“[…] formalization [sic] […] can be an effective method of […] achieving better customer service.”* (Huang & Yang, 2014:635) • *“Formalization [sic] […] the managers stated, “‘Satisfaction guaranteed’ can be achieved best through establishing rules and procedures […].”* (Genchev *et al.* 2011:258)
	Enables consumer information sharing and CI	None	• *“Formalization [sic] will help to increase visibility of RL, keeping the […] customer informed of how their claim/return is progressing.”* (Genchev *et al.* 2011:258) • *“RL process formalized [sic] helps to ensure expectations are clear to […] external stakeholders […].”* (Huscroft *et al.* 2013b:318) • *“[…] formalization [sic] suggests important implications in terms of […] external integration with customers.”* (Genchev, 2009:147) • *“[…] having a formalized [sic] process may complement […] customers […] coordination.”* (Huscroft *et al.* 2013b:318)
SC outcomes	***Address SC barriers in RL***	None	• *“[…] strategic plans and visions associated with adoption and implementation of RL practices […] Understanding and analyzing [sic] Strategic factors is important […] to improve certain weaknesses related to […] supply chain coordination and integration […].”* (Mangla *et al.* 2016:617)
	SC benefits and SCI	None	• *“[…] SCs would greatly benefit by implementing an RL integrated strategic planning model […] using appropriate incentives and […] can be effectively implemented by creating contractual arrangements […] to establish long-term partnering for mutual benefits.”* (Das, 2012:1439)

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
	Enable SC information sharing	None	• *"Formalization [sic] will help to increase visibility of RL, keeping the business partner […] informed […]."* (Genchev *et al.* 2011:258) • *"RL process formalized [sic] helps to ensure expectations are clear to […] external stakeholders […]."* (Huscroft *et al.* 2013b:318)
	Improve SC performance	None	• *"[…] strategic-level SC planning that integrates RL […] as a way of improving the SC's overall performance […]."* (Das, 2012:1439)

Source: Compiled by the researcher

Table 6.44 presents numerous outcomes of SPP practices in RL, including economic, operational, organisational, environmental, market-related and SC outcomes, which will be discussed in subsequent sections.

6.9.4.2.1 Economic outcomes of SPP practices in RL

The economic outcomes of SPP practices in RL include (1) addressing economic barriers in RL, (2) RL cost reductions, (3) cost effectiveness, (4) increasing RL budget, (5) profitability and (6) minimising financial loss. RL associate with several *economic barriers* including high RL costs (see sections 2.4.1), which can hamper effective planning and implementation of RL. Consequently, adopting the strategic perspective of strategic planning in RL can address high-cost barriers in RL.

Moreover, *RL costs* can be *reduced* through several strategic procedural strategies, including, prioritising strategic procedures, developing a formalisation strategy (can be viewed as general formalisation in RL), developing SOP's and formalisation of RL processes. Furthermore, organisations can achieve *cost effectiveness* through various SPP practices, including (1) strategic planning strategies that involve developing RL strategies and integrating RL strategies with organisational strategies, (2) the strategic procedural strategy of formalising RL processes, and (3) the organisational requirement of becoming aware of the importance of RLM.

Like RC practices in RL (see section 6.9.1), the strategic procedure strategy of articulating and defining RL processes and practices, including a detailed description of RL programs (plans), can secure funding for RL and *increase* the *RL budget*. Additionally, integrating RL strategic planning with the strategic plans of the organisation (strategic planning strategy) and developing a formalisation strategy (strategic procedure strategy) can increase *profitability*, which demonstrates the strategic significance of RL.

Finally, organisations can *minimise financial losses*, which associate with inefficient handling of unwanted product returns, through the formal development of RL programs (strategic procedure strategy). Consequently, developing appropriate RL programs can link with the RPA practices in RL, which reduce or avoid unwanted returns (see section 6.9.3).

6.9.4.2.2 Operational outcomes of SPP practices in RL

SPP practices in RL involve several operational outcomes, which include (1) addressing operational barriers in RL, (2) increasing forecasting and visibility, (3) reducing uncertainties in the RL process, (4) addressing IT and infrastructure barriers in RL, (5) improving operational flexibility and efficiency, (6) simplifying RL processes, (7) monitoring and measuring accuracy in RL processes and activities, (8) enabling control over RL processes, (9) facilitating and supporting RL processes, (10) improving RL process efficiency and effectiveness, and (11) facilitating RL/FL integration.

Like other RL practices (such as PM, facility/location, RC and RPA practices), the strategic procedure strategy of standardising RL processes can *address operational barriers* in RL, which includes limited forecasting and visibility, problems with product return quality, inadequate IT for RL and developmental (lack of infrastructure) barriers (see section 2.3.2). Particularly, prioritising strategic procedures, formalising RL and standardising RL processes (strategic procedure strategies) can *increase forecasting* and *visibility* in RL.

Similarly, strategic procedure strategies in RL, including developing and defining rules, developing SOPs, formalising RL processes and implementing strategic procedures in RL, can *reduce uncertainties* in the *RL process* (e.g. uncertainties in timing, quality and quantity of product returns) (see section 2.3.2). Furthermore, understanding and analysing strategic factors in RL and developing a strategic plan for RL (strategic planning strategies) can *address IT* and *infrastructure barriers* in RL, implying that SPP practices can support IT practices (see section 6.3) and facility/location practices (see section 6.8) in RL.

Accordingly, SPP practices, including understanding and analysing strategic factors in RL, developing a strategic plan for RL (strategic planning strategies) and formalising RL (strategic procedure strategy), can *improve operational flexibility* and *operational efficiency* in RL. Moreover, *RL processes* can be *simplified* by articulating and defining RL processes and practices and developing a formalised RL program (strategic procedure strategies).

Several strategic procedural strategies, including (1) defining and developing rules in RL, (2) developing a manual for RL (part of SOPs), (3) formalising RL processes and RL skills, and (4) publishing accessible strategic procedures, enable *monitoring* and *measuring* the *accuracy* of *RL processes* and *activities.* Evidently, strategic procedure strategies, especially, strategic considerations (e.g. level of formalisation appropriate for RL) in strategic procedures, the formal development and implementation of RL programs, and formalisation of RL processes, can help organisations to *control RL processes*.

Furthermore, the strategic procedural strategies of defining and developing rules for RL, developing SOPs, formalising RL processes and publishing accessible strategic procedures can *facilitate* and *support RL processes* as well as *improve* the *efficiency and effectiveness of RL processes,* which can be important for the effective management of consumer returns.

Finally, SPP practices in RL, including formalising RL processes (strategic procedure), implementing PM practices and involving managers (organisational requirements), can *facilitate RL* and *FL integration,* confirming the importance of SPP practices for facility/location practices in RL, especially, integrated facility/location practices (see section 6.8.3).

6.9.4.2.3 Organisational outcomes of SPP practices in RL

Like the operational outcomes, SPP practices in RL involve several *organisational outcomes,* including (1) addressing organisational barriers, (2) facilitating RL system development, (3) enabling and supporting RL innovation and initiatives, (4) enabling control over the RL function, (5) facilitating and enhancing PM in RL, (6) improving RL performance, (7) facilitating RLM, (8) facilitating standardisation in RL, (9) supporting RL staff, (10) facilitating decision-making, (11) effective management of staff, (12) enhancing knowledge management and information sharing, (13) facilitating CFI practices, and (14) facilitating RPA practices.

Like the operational barriers in RL, *organisational barriers* can hamper effective implementation and management of RL (see section 2.3.3), which can be *addressed* through SPP practices in RL. Specifically, organisations can address the lack of senior management support for RL and management inattention by integrating RL strategies and organisational strategies (strategic planning strategy), defining RL processes and practices (strategic procedure strategy) and involving management in SPP (organisational requirement). Furthermore, strategic procedure strategies relating to formalising RL processes and publishing accessible strategic procedures (such as rules and SOPs) can *facilitate* the *development* of an *RL system.*

Relating to the strategic procedure approach of innovation (see section 6.9.4.1), formalising RL, standardising RL processes and implementing strategic procedures in RL (strategic procedure strategies) can *enable* and *support RL innovation* and *initiatives.* Furthermore, organisations can obtain *control over the RL function* by prioritising strategic procedures, defining rules, formalising RL processes and implementing the strategic procedures in RL (strategic procedure strategies), which emphasise the operational outcome of enabling control over RL processes (section 6.9.4.2.2).

Organisations can *facilitate* and *enhance PM practices,* including aligning objectives with metrics, measuring RL process effectiveness and measuring RL performance (also see section 6.7), by

formalising RL processes (strategic procedure strategy) and implementing PM practices (organisational requirement of SPP). Similarly, *RL performance* can be *improved* by developing SOPs and manuals for RL, formalising RL processes and implementing PM practices for SPP. Moreover, developing a strategic plan for RL (strategic planning strategy), developing a formalisation strategy, developing SOPs (that include norms) for RL, formalising RL processes and skills, and publishing accessible strategic procedures (strategic procedure strategies) can *facilitate RLM*, confirming the importance of SPP practices for managing consumer returns.

Certain SPP practices can *facilitate standardisation* in *RL,* including articulating and defining RL processes and practices (strategic procedure strategy), utilisation of CRCs (operational requirement) and awareness of the importance of RLM (organisational requirement), which indirectly contributes to several benefits (e.g. operational, organisational and market-related benefits) (see section 6.9.4.2). Furthermore, strategic procedure strategies, like formal development of SOPs, standardisation in RL and formalisation in RL (including RL processes), can *support RL staff.* For example, SOPs and standardisation in RL can reduce confusion and potential conflict in RL operations, formalisation can reduce complex decision-making (e.g. easier for RL manager to identify disposition decisions), and formalisation of RL processes provide clear expectations for internal stakeholders (e.g. RL staff, departments and managers).

Subsequently, strategic procedure strategies, including defining rules, developing SOPs and implementing strategic procedures for RL, *facilitate RL decision-making,* reducing the need to make unique or incorrect decisions in the RL process. Moreover, formalisation and publication of strategic procedures in RL (procedural strategies) enables *effective management of staff,* for example, formalisation of RL processes enables personal accountability and application of corrective action, and formalisation and publication of strategic procedures enables the development of appropriate staff incentives. Additionally, formalisation in RL can *enhance knowledge management* and *information sharing*, demonstrating the importance of publishing accessible strategic procedures (see section 6.9.4.1).

Similarly, strategic procedure strategies, like formalisation in RL, standardisation in RL processes, and implementation of strategic procedures, *facilitate CFI practices*, which involve internal coordination and integration and elimination of silo activities. Furthermore, developing a strategic plan for RL (strategic planning strategy) *facilitate RPA practices,* emphasising that SPP practices can minimise financial losses associated with unwanted returns (economic outcome) (section 6.9.4.2.1). Consequently, SPP practices in RL support other RL practices (like CFI and RPA), which demonstrates the importance of implementing SPP practices for the effective management of consumer returns.

6.9.4.2.4 Environmental and market-related outcomes of SPP practices in RL

A few *environmental outcomes*, related to environmental responsibility and performance, associate with SPP practices in RL. More specifically, developing a strategic plan for RL can *support environmental responsibility* by reducing challenges associated with environmentally responsible practices. Additionally, integrating RL strategic plans with organisational strategic plans can *improve* the *environmental performance* of organisations, emphasising the importance of environmental drivers to effectively manage RL (see section 2.3).

The *market-related outcomes* of SPP practices in RL include (1) increasing competitive advantage, (2) improving consumer service and satisfaction, and (3) enabling consumer information sharing and CI. Several SPP practice in RL can *increase* the *competitive advantage* of an organisation, including the (1) strategic planning strategies related to understanding and analysing strategic factors in RL, developing a strategic plan for RL, developing RL strategies and integrating RL strategies with organisational strategies, (2) strategic procedure strategy related to formalisation of RL processes, and (3) organisational requirement related to the awareness of the importance of RLM.

Furthermore, SPP practices in RL, including formalisation, developing rules, developing SOPs for RL (strategic procedure strategies) and management involvement (organisational requirement), can *improve consumer service* and *satisfaction.* Moreover, developing a formalisation strategy and formalising RL processes *enables consumer information sharing* and *CI.* For instance, increased visibility in the RL process (operational outcome) (section 6.9.4.2.2) ensures that consumers receive information regarding the processing of product returns. Additionally, formalisation of the RL process provides consumers with clear expectations and enhances coordination and integration with consumers. Consequently, SPP practices in RL support CI practices in RL, which can be critical for managing consumer returns effectively (see section 6.4.2).

6.9.4.2.5 SC outcomes of SPP practices in RL

SPP practices in RL involves several SC outcomes, including (1) addressing SC barriers in RL, (2) SC benefits and SCI, (3) enabling SC information sharing, and (4) improving SC performance. Specifically, the strategic planning strategies of understanding and analysing strategic factors in RL and developing strategic plans for RL can *address SC barriers* (e.g. lack of SC coordination and integration) (see section 2.3.4) in RL. Accordingly, SPP practices, including, implementing an integrated strategic planning model for RL, utilising incentives for strategic plans in RL (strategic planning strategies) and establishing SC partnerships (SC requirement), provide *SC benefits* and enable

SCI, which can be an important practice for the effective management of consumer returns (see section 6.4.1).

Like the market-related outcome of consumer information sharing (section 6.9.4.2.4), formalising RL (strategic procedure strategy) *enables SC information sharing*, through improved visibility in the RL process (operational outcome) and clear expectations of the roles and responsibilities of SC parties. Finally, the strategic planning strategy of integrating RL strategic planning with organisational strategic planning (such as SC planning) can *improve SC performance*, demonstrating the importance of adopting an integrated strategic planning approach in RL (see section 6.9.4.1.1).

Essentially, SPP strategies and requirements in RL can not only be important for economic, operational, organisational, environmental, market-related and SC outcomes, but also support of important RL practices (e.g. IT, SCI, CI, CFI, PM, facility/location and RPA), contributing to the effective RLM of consumer returns. In the next section, SPP practices in RL will be concluded with a description, conceptual framework and summary of findings for SPP practices to manage consumer returns.

6.9.4.3 Description, conceptual framework and summary of findings for SPP practices to manage consumer returns

Based on the findings presented in section 6.9.4, SPP practices in RL can be important for the management of consumer returns, and will be described as follows:

> SPP practices for the management of consumer returns involve (1) strategic planning strategies, including a strategic approach and perspective, strategic considerations for strategic planning, understanding and analysing strategic factors in RL, developing a strategic plan for RL, integrating the strategic plan for RL with the strategic plans of the organisation, implementing an integrative strategic planning model for RL, utilising incentives for strategic planning, developing RL strategies, and integrating RL strategies with organisational strategies, (2) strategic procedure strategies, including a strategic approach, prioritising strategic procedures, strategic considerations for strategic procedures, articulating and defining RL processes, practices, roles and responsibilities, the formal development and implementation of RL programs, developing a formalisation strategy for RL, defining and developing formal rules and controls for RL, the formal development of standard operating procedures (SOPs) and manuals for RL, formalising RL processes, activities and skills, standardising RL processes and the RSC, publishing accessible strategic procedures for RL, the formal implementation of strategic procedures in RL, and developing incentives for strategic procedures, and (3) SPP requirements, including an operational requirement (utilise CRCs), organisational requirements (awareness of the importance of RLM, implement PM practices and management involvement) and a SC requirement (establish SC partnerships).
>
> The SPP strategies and requirements can result in several outcomes, including (1) economic outcomes (address economic barriers, RL cost reductions, increase RL budget, cost effectiveness, profitability, and minimise financial loss), (2) operational outcomes (address operational barriers, improve forecasting and visibility, reduce uncertainty in RL process, address IT and infrastructure barriers, improve operational flexibility and efficiency, simplify RL processes, monitoring and measuring accuracy in RL processes and activities, control over RL processes, facilitate and support RL processes, improve RL process efficiency and effectiveness, and facilitating RL/FL integration), (3) organisational outcomes (address organisational barriers, facilitate RL system development, enable and support RL innovation and initiatives, control over the RL function, facilitate and enhance PM in RL, improve RL performance, facilitate RLM, facilitate standardisation in RL, support RL staff, facilitate decision-making, effective management of staff, enhance knowledge management and information sharing, and facilitate CFI and RPA practices), (4) environmental outcomes (environmental responsibility and improve environmental performance), (5) market-related outcomes (competitive advantage, consumer service and

satisfaction, consumer information sharing and CI), and (5) SC outcomes (address SC barriers, SC benefits, SCI, SC information sharing and improve SC performance).

Figure 6.30 provides a conceptual framework of SPP practices to manage consumer returns.

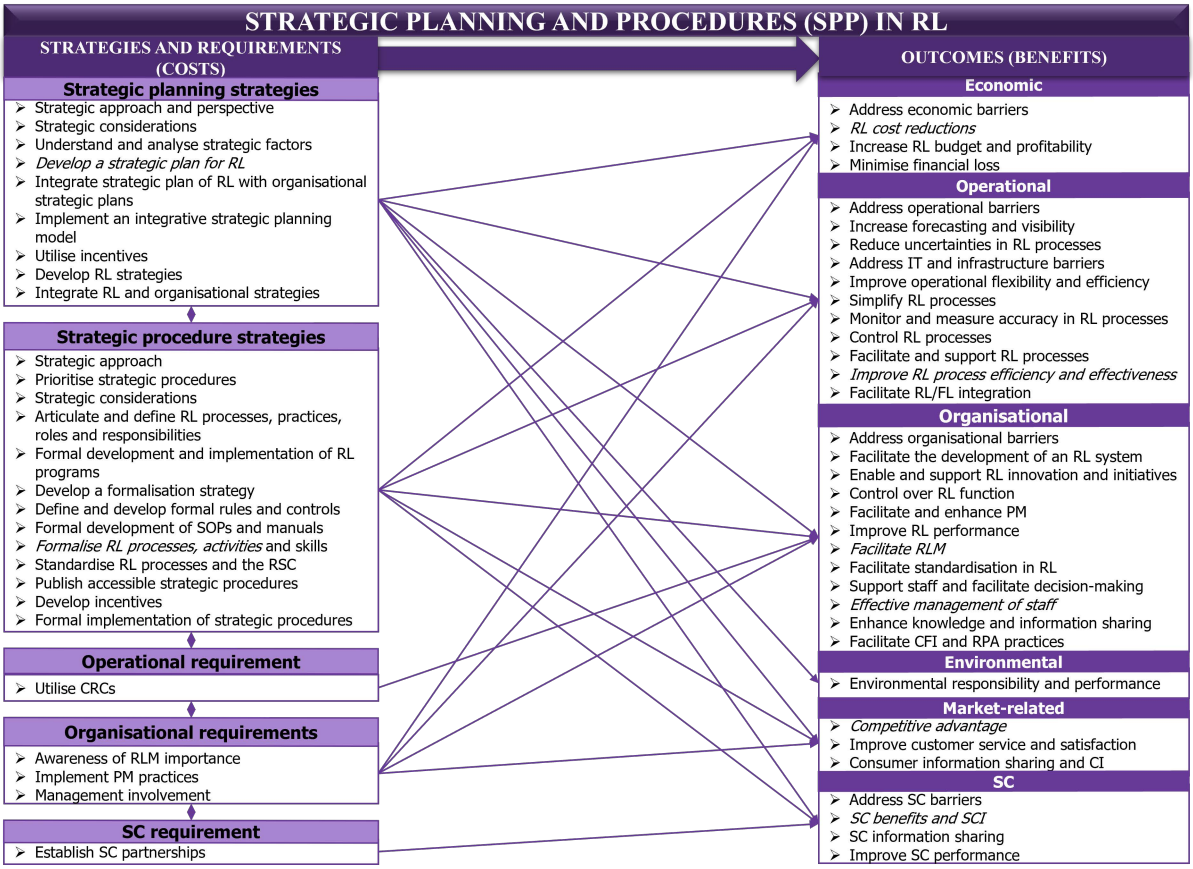


Figure 6.30 Conceptual framework of SPP practices to manage consumer returns
Source: Compiled by researcher

Figure 6.30 illustrates the links between strategic planning strategies, strategic procedure strategies, SPP requirements and SPP outcomes, demonstrating a cost and benefit relationship. The links between the SPP strategies and requirements can be demonstrated by the strategic planning strategy for RL, which links with developing and implementing RL programs (procedure strategy) and management involvement (organisational requirement). Additionally, the operational requirement of CRCs can link with RL standardisation (procedure strategy), and the SC requirement of establishing SC partnerships can link with the implementation of an integrative strategic planning model (planning strategy).

Nonetheless, the main aim of the framework involves the links between the SPP strategies, requirements and outcomes, which can be important for the effective management of consumer returns. Subsequently, the most significant SPP strategies and requirements (associated with the most outcomes) and SPP outcomes (associated with the most SPP practices) are emphasised by *italics*, which will be elaborated upon in Table 6.45.

Based on Figure 6.30 and the discussions given in section 6.9.4, Table 6.45 provides a summary of the findings and managerial implications of the SPP practices to manage consumer returns.

Table 6.45 Summary of findings and managerial implications for SPP practices to manage consumer returns

CATEGORY	KEY FINDINGS	MANAGERIAL IMPLICATIONS
Strategies and requirements	• SPP in RL involves (1) strategic planning strategies, including strategic approach and perspective, strategic considerations for strategic planning, understanding and analysing strategic factors in RL, developing a strategic plan for RL, integrating the strategic plan for RL with the strategic plans of the organisation, implementing an integrative strategic planning model for RL, utilising incentives for strategic planning, developing RL strategies, and integrating RL strategies with organisational strategies, and (2) strategic procedure strategies, including a strategic approach, prioritising strategic procedures, strategic considerations for strategic procedures, articulating and defining RL processes, practices, roles and responsibilities, formal development and implementation of RL programs, developing a formalisation strategy, defining and developing formal rules and controls, formal development of SOPs and manuals for RL, formalising RL processes, activities and skills, standardising RL processes and the RSC, publishing accessible strategic procedures, formal implementation of strategic procedures in RL, and developing incentives for strategic procedures. • The strategic planning strategies in RL associates with all the SPP outcome categories, including economic, operational, organisational, environmental, market-related and SC outcomes • From the strategic planning strategies, developing a strategic plan for RL can be the most beneficial for RL • The strategic procedure strategies in RL associates with most of the SPP outcome categories, including economic, operational, organisational, market-related and SC outcomes • From the strategic procedure strategies, formalising RL processes and activities can be the most beneficial for RL • The least significant SPP strategies, with no impact on the outcomes include strategic considerations for strategic planning, strategic approach for strategic procedures, define roles and responsibilities in RL, standardise RSC and develop incentives for strategic procedures • SPP practices in RL involves operational, organisational, and SC requirements • The organisational requirements, including awareness of the importance of RLM, PM practices and management involvement, of SPP in RL associate with most of the outcome categories, including economic, operational, organisational, market-related and SC outcomes • The least significant requirement categories include operational and SC requirements	• Organisations must develop and implement strategic planning and strategic procedure strategies for RL • Organisations that seek various economic, operational, organisational, environmental, market-related and SC benefits in RL must focus on strategic planning strategies • Organisations must focus on developing a strategic plan for RL for optimum SPP benefits • Organisations must focus on strategic procedure strategies, especially, the formalisation of RL processes and activities, for optimum SPP benefits in RL • Organisations must focus on the organisational requirements relating to the awareness of the importance of RLM, PM practices and management involvement to achieve optimum SPP benefits in RL
Outcomes	• SPP practices in RL involve economic, operational, organisational, environmental, market-related and SC outcomes • The most significant outcomes of SPP practices in RL involves organisational outcomes, followed by economic, operational, market-related and SC outcomes • The least significant outcome of SPP practices in RL involves the environmental outcomes • The most significant economic outcomes of SPP practices in RL includes include cost reductions and effectiveness • The most significant operational outcome of SPP practices in RL includes improving RL process efficiency and effectiveness • The most significant market-related outcome of SPP practices in RL includes a competitive advantage • The most significant SC outcomes of SPP practices in RL includes SC benefits and SCI	• Organisations that seek economic, operational, organisational, environmental, market-related and SC outcomes benefits in RL can implement SPP practices in RL • Organisations that seek to reduce RL costs and improve cost effectiveness can consider implementing SPP practices in RL • Organisations that experience inefficiencies in the RL process can consider SPP practices in RL • Organisations that experience RLM and staff management challenges can implement SPP practices in RL • Organisations can implement SPP practices for a competitive advantage in RL • For greater SC benefits and SCI in RL, organisations can consider implementing SPP practices in RL • For the effective management of consumer returns, organisations must identify/implement/consider SPP strategies, requirements and outcomes

Source: Compiled by the researcher

Table 6.45 demonstrates the value of SPP practices as part of the RL practices for consumer returns. Organisations can use the SPP strategies, requirements and related outcomes for effective SPP in RL, which can contribute to the effective RLM of consumer returns. SPP practices in RL will further be explored in the interviews with industry experts (chapter 8).

In the next section, the final RL practice category, management and staff practices in RL will be analysed and discussed.

6.9.5 Management and staff practices to manage consumer returns

Despite receiving limited attention in literature (see Figure 6.3) management and staff practices can be critical to manage consumer returns, as evident from management involvement, staff involvement and staff training requirements for other RL practices. Management and staff practices involve strategies, requirements and related outcomes. In the subsequent sections, the strategies, requirements and outcomes of management and staff practices in RL will be discussed and concluded with a description, conceptual framework and summary of findings to manage consumer returns.

6.9.5.1 Strategies and requirements of management and staff practices in RL

Management and staff practices in RL involve (1) general, top management, RL manager and RL staff strategies, and (2) economic, operational and organisational requirements, which can contribute to the effective management of consumer returns. Table 6.46 provides an overview of the findings related to the *strategies and requirements of management and staff practices to manage consumer returns*, including the categories, subcategories, supporting sources for the subcategories and key quotations that support both the subcategories and the discussion of the findings.

Table 6.46 Findings related to strategies and requirements of management and staff practices to manage consumer returns

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
General strategies	***Prioritise staff and management practices***	Agrawal *et al.* (2016d:24)	• *"The highest priority is to create awareness at senior management […]."* (Prakash & Barua, 2015:603) • *"[…] having a "dedicated returns service department" as the most important […]."* (Ahsan & Rahman, 2016:625)
	Benefit-driven strategies	None	• *"[…] introduction of training programmes […] focussing on […] sensitising their members to the benefits of RL implementation."* (Chileshe *et al.* 2015:195) • *"[…] warehouse and other staff […] have an opportunity to train and understand the importance of RL as a supply chain-management operation."* (Sharif *et al.* 2012:2523) • *"[…] retailers who focus more on […] returns services need to emphasis more on […] skilled and trained personnel to handle returns […]."* (Ahsan & Rahman, 2016:619)
	Perform a cost-benefit analysis	Lee and Lam (2012:592) Ravi *et al.* (2008:4857)	• *"[…] to provide adequate training and contextual significance to all members of its organisation […] Although this may lead to the increasing of operational costs in order to develop RL capability within the organisation, this indeed indirectly provides a better and longer running responsiveness back to customers […]."* (Sharif *et al.* 2012:2528)
	Provide adequate organisation-wide RL training	Partida (2011:64)	• *"[…] provide adequate training and contextual significance to all members of its organisation to maximise its management and financial-resource commitment.* (Sharif *et al.* 2012:2528)
	Improve work conditions	None	• *"Extensive training […] must be combined with improved working conditions."* (Genchev, 2009:148)
	Strategic development of incentives and feedback programmes	None	• *"The organizations [sic] also recognize [sic] the importance of […] feedback, and incentives programs throughout the enterprise […]."* (Partida, 2011:64)
	Maintain management and staff RL initiatives	None	• *"The organizations [sic] also recognize [sic] the importance of maintaining training, feedback, and incentives programs throughout the enterprise […]."* (Partida, 2011:64)
Top management	***Create top/senior management***	Janse *et al.* (2010:502)	• *"[…] create awareness at senior management that must recognize [sic] a need for change and notice the potential improvement opportunities by implementing*

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
strategies	***awareness of RL importance***		*RL process."* (Prakash & Barua, 2015:603) • *"[…] developing awareness among senior leadership of the importance of reverse logistics […]."* (Partida, 2011:62) • *"Top management awareness is very crucial for the success of RL implementation."* (Agrawal *et al.* 2016d:20)
	Strategic attainment of top/senior management attention, support and commitment	Abdulrahman *et al.* (2014:468) González-Torre *et al.* (2010:900) Huscroft *et al.* (2013b:309, 313, 315) Lee and Lam (2012:596) Shaik and Abdul-Kader (2012:30) Ye *et al.* (2013:134)	• *"[…] reverse logistics requires closer attention at the senior management […]."* (Rogers *et al.* 2013:44) • *"Substantial support […] and commitment of top management can help deal with a large proportion of the problems faced."* (Agarwal *et al.* 2016:2) • *"Stronger senior management support for greater IT investments […]."* (Genchev, 2009:143) • *"[…] managerial commitment, which encompasses tangible organisation and supply-chain wide policies, competences, culture, and strategy."* (Sharif *et al.* 2012:2519)
	Strategic involvement of top management in RL	Huscroft *et al.* (2013b:315)	• *"Top management initiates, guides, and motivates the organization [sic] for adoption and implementation of RL implementation."* (Agrawal *et al.* 2016d:24)
RL manager strategies	***Establish appropriate and sufficient leadership for RL***	None	• *"[…] significant effect on the implementation of reverse logistics […] include […] sufficient management personnel […]."* (Ho *et al.* 2012:39) • *"Efficient leadership is needed to provide clear vision and value to reverse logistics programs […]."* (Ravi & Shankar, 2015:887)
	Strategically create a full-time RL manager portfolio	Partida (2011:63) Stock and Mulki (2009:50)	• *"Also critical in the companies' view is that RL activities should be assigned as a full-time job preferable at an executive-level with complete responsibility for all returns operations […]."* (Li & Olorunniwo, 2008:384)
	Strategically assign a RL expert manager	Li and Olorunniwo (2008:384)	• *"[…] presence of RL expert at management level should lead to the full realization [sic] of the importance of RL […]."* (Abdulrahman *et al.* 2014:468)
	Assign experienced managers to RL	None	• *"[…] significant effect on the implementation of reverse logistics […] include […] experienced management personnel […]."* (Ho *et al.* 2012:39)
	Provide RL training for management staff	None	• *"[…] training was still perceived to be an important activity […] training was reserved only for management […]."* (Sharif *et al.* 2012:2523)
	Demonstrate RL commitment	None	• *"[…] leadership […] should demonstrate commitment to the reverse logistics activities […]."* (Ravi & Shankar, 2015:887)
RL staff strategies	***Strategic establishment of a RL function***	Sharif *et al.* (2012:2523) Subhashini (2016:11)	• *"[…] there is general agreement that some specific […] group or department should be directly responsible for reverse logistics."* (Stock & Mulki, 2009:36) • *"[…] have a functional unit dedicated to reverse logistics management."* (Janse *et al.* 2010:500) • *"[…] having a "dedicated returns service department" as the most important […]."* (Ahsan & Rahman, 2016:625)
	Strategic development of RL skills and knowledge	None	• *"[…] there is a need […] in developing the appropriate skill levels that are desirable for implementing some of the RL practices among its employees."* (Chileshe *et al.* 2015:194) • *"Enhancing the knowledge and skill proficiency of the staff […]."* (Lee & Lam, 2012:592)
	Strategic development and introduction of training and education programmes	Agarwal *et al.* (2016:3) Lee and Lam (2012:592) Partida (2011:64)	• *"Companies, willing to adopt RL will have to develop their own expertise through various education and training programs."* (Agrawal *et al.* 2016d:20) • *"[…] introduction of training programmes associated with RL […] focussing on mechanisms (such as workshops and seminars) that are aimed at sensitising their members to the benefits of RL implementation."* (Chileshe *et al.* 2015:195)
	Strategic implementation of RL training and education	None	• *"[…] education of staff […] may entail rather high costs, this can be done in phases over a longer time horizon."* (Lee & Lam, 2012:592)
	Strategic attainment of staff support and cooperation	None	• *"[…] significant effect on the implementation of reverse logistics […] include […] staff providing full support and cooperation."* (Ho *et al.* 2012:39) • *"[…] personal involvement of all employees engaged in returns handling […]."* (Genchev, 2009:147)
	Provide regular formal training and skills development opportunities	Abdulrahman *et al.* (2014:468) Agrawal *et al.* (2016d:21) Aitken and Harrison (2013:759) Ravi *et al.* (2008:4857) Selvi and Kayar (2016:26) Sharif *et al.* (2012:2528)	• *"Company should offer training and development programs on regular basis for the employees to enhance their skills."* (Agarwal *et al.* 2016:3) • *"[…] management support and employee training and skills provided to improve the effectiveness and efficiency of the RL."* (Shaik & Abdul-Kader, 2012:30) • *"Extensive training […] of all employees […]."* (Genchev, 2009:147)
	Provide informal training	None	• *"Extensive training and on-the-job advising […]."* (Genchev, 2009:148)
	Produce well-managed, -trained and -skilled staff for RL	None	• *"Quality managed personnel and staff are the backbone of any good company […] with more well-trained staff, companies are more willing to implement reverse logistics."* (Ho *et al.* 2012:42) • *"[…] retailers who focus more on […] skilled and trained personnel to handle returns […]."* (Ahsan & Rahman, 2016:619)
Economic requirement	***Investment***	None	• *"[…] there is a need to invest in developing the appropriate skill levels that are desirable for […] RL practices among its employees."* (Chileshe *et al.* 2015:194)

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
	Financial support	None	• *"Training of staff related to the reverse logistics […] requires financial support."* (Ravi *et al.* 2008:4857)
	Cost	None	• *"[…] education of staff […] may entail rather high costs, this can be done in phases over a longer time horizon."* (Lee & Lam, 2012:592) • *"[…] to provide adequate training and contextual significance to all members of its organisation […] this may lead to the increasing of operational costs […]."* (Sharif *et al.* 2012:2528)
Operational requirement	***Separate RL and FL***	Stock and Mulki (2009:37) Subhashini (2016:11)	• *"RL was isolated from forward logistics, training was still perceived to be an important activity […]."* (Sharif *et al.* 2012:2523)
Organisational requirements	***Organisational capability***	None	• *"[…] any RL function is important and is seen as a vital competence in enterprises […] and requires an organisational capability to control and manage it effectively."* (Sharif *et al.* 2012:2523)
	Implement CFI practices	None	• *"Enterprises must provide reverse logistics training for their employees […] the process can be improved by eliminating the lack of internal tracking and coordination related to reverse logistics."* (Selvi & Kayar, 2016:26)
	RC practices	None	• *"[…] extra care and resources should be dedicated to motivating and constantly enhancing their professional skills and abilities."* (Genchev, 2009:148)
	Management involvement	None	• *"[…] managers consider "skilled and trained personnel" as the most critical service determinant […]."* (Ahsan & Rahman, 2016:624)

Source: Compiled by the researcher

Table 6.46 indicates the strategies and the requirements of management and staff practices, which will be discussed in subsequent sections.

6.9.5.1.1 Strategies for management and staff practices in RL

The strategies for management and staff practices in RL can be categorised as general strategies, top management strategies, RL manager strategies and RL staff strategies. The *general strategies* for management and staff practices in RL involve (1) prioritising management and staff practices, (2) benefit-driven strategies, (3) performing a cost-benefit analysis, (4) providing adequate organisation-wide RL training, (5) improving work conditions, (6) strategic development of incentives and feedback programmes, and (7) maintaining management and staff initiatives.

Like RC, RPA and SPP practices, organisations must *prioritise management* and *staff practices* in RL, especially the strategies related to top management awareness and development of a dedicated RL function. Additionally, organisations must develop *benefit-driven* management and staff *strategies* (such as training programmes) focussing on the importance and benefits of RL and on providing good customer service. Furthermore, *performing a cost-benefit analysis* for implementing management and staff practices can be important, for example, focusing on the cost (such as funding requirement for training) (section 6.9.5.1.2) and expected benefits (such as performing RL effectively due to skilled RL staff) (section 6.9.5.2) of implementing management and staff practices.

Although training initiatives can be important for staff and management directly involved in RL (see subsequent paragraphs), *adequate organisation-wide training* on RL must be provided. This strategy can assist with subsequent strategies, like top management awareness, involvement and commitment to RL. Simultaneously, organisations need to implement strategies to *improve work conditions*, ensuring

that organisational buy-in and training in RL can be positively attained. Similarly, organisations must *strategically develop incentives* and *feedback programmes* across the organisation to not only reward RL adoption and implementation but also identify areas of improvement. Finally, organisations must *maintain management and staff initiatives*, like training, incentives and feedback initiatives, ensuring long-term benefits to effectively manage consumer returns.

Top management strategies in RL involves top management awareness, attention, support, commitment and involvement. Particularly, *creating top management awareness* of the importance of RL can be critical for effective adoption and implementation of RL. Top management awareness can be obtained through organisation-wide training (general strategy) in RL. Moreover, *strategic attainment* of *top management attention, support* and *commitment* to RL can be important, addressing various barriers to RL implementation (see sections 2.4.3 and 6.9.5.2) and creating a culture conducive to all stakeholders (e.g. staff, SC partners and consumers). Likewise, direct *involvement of top management* in RL can guide, motivate and sustain RL adoption and implementation needed to manage consumer returns.

RL manager strategies involve (1) sufficient leadership, (2) full-time RL manager portfolio, (3) appointing a RL expert manager, (4) assigning experienced managers, (5) providing manager training, and (6) demonstrating commitment to RL. *Establishing appropriate and sufficient leadership* for RL can be important to compliment top management involvement to develop RL strategies, implement RL and guide and motivate staff in adopting RL. However, organisations must *strategically create a full-time RL manager portfolio* at executive level to be responsible for all RL processes and practices, overseeing the entire RL function. Subsequently, organisations must *strategically assign a RL expert manager* to the full-time portfolio to attain ultimate benefits associated with RL implementation. Assigning an expert to manage RL can involve finding an individual from outside the organisation with experience in RLM, for example, a previously employed managing director of a 3PRL provider that specialises in consumer returns.

Nevertheless, several *experienced* (lower level) *managers* must be *assigned* to manage RL operations/processes and RL staff. Organisations may utilise current management staff (e.g. DC managers) but may need to *provide RL training*, ensuring correct execution of RL processes and activities. However, like top management, RL managers must *demonstrate commitment* to RL, which can be important for guiding and motivating staff to adopt and effectively perform RL operations.

Finally, several *RL staff strategies* can be important, which include (1) establishing a RL function, (2) developing of RL skills and knowledge, (3) developing, introducing and implementing training and education programmes, (4) attaining staff support and cooperation, (5) providing regular formal

training and skills development opportunities, (6) providing informal training, and (7) producing well-managed, -trained, and -skilled staff for RL.

Like creating and appointing a full-time RL manager (strategy), organisations must prioritise (see general strategies) and *strategically establish* a *RL function* dedicated to RL processes and practices for effective RLM. Additionally, organisations must *strategically develop RL skills* and *knowledge* of RL staff, which can be attained through the *strategic development* and *introduction* of *training* and *education programmes* for RL. Linking with benefit-driven (general) strategies, the training and education programmes must not only aim to develop RL skills and knowledge of but also aim to help staff with understanding the benefits of RL implementation.

Subsequently, *training* and *education programmes* must be *implemented strategically*, based on the cost-benefit analysis (general strategy). Evidently, organisations can incrementally implement training and education initiatives to spread the cost of implementation over an extended period (also see section 6.9.5.1.2). However, like top and middle management, organisations must *strategically attain staff support* and *cooperation* for successful RL implementation.

Consequently, organisations must *provide regular formal training* and *skills development opportunities* to RL staff as well as *provide informal* (on-the-job) *training* to ensure cooperation and effective execution of RL processes. Essentially, organisations must aim to *produce well-managed, -trained* and *-skilled* RL staff to effectively perform RL processes and practices to manage consumer returns.

6.9.5.1.2 Requirements of management and staff practices in RL

The requirements of management and staff practices involve economic, operational and organisational requirements. The *economic requirements* of management and staff practices involve investment, financial support and costs. Particularly, developing and implementing training and education opportunities can be costly, requiring investment and funding, emphasising the importance of performing a cost-benefit analysis for management and staff practices (section 6.9.5.1.1).

The *operational requirement* associates with a dedicated RL manager, department and staff, which requires separating RL operations from FL operations. Consequently, organisations must implement separate facility/location strategies (see section 6.8.2) for effective RL manager and staff strategies in RL, demonstrating the importance of adopting a holistic approach to RLM.

Finally, several *organisational requirements*, including (1) organisational capability, (2) CFI practices, (3) RC practices and (4) management involvement, associate with management and staff practices. *Organisational capability* can be important for a dedicated RL department and staff, which

demonstrates the importance of top management awareness, commitment and support in RL (see section 6.9.5.1.1). Additionally, management and staff practices require the *implementation of CFI practices*, encouraging internal information sharing and coordination (see section 6.4.3) needed for effective training and education initiatives.

Likewise, *RC practices* can be important for supporting management and staff practices (also see section 6.9.1), which emphasise investment and financial support requirements and top management commitment to RL. Finally, *management involvement* can be important for RL staff strategies, ensuring well-managed, skilled and trained staff for RL. Essentially, management and staff requirements can be critical for the effective development and implementation of management and staff strategies in RL, which can lead to important outcomes, discussed in the next section.

6.9.5.2 Outcomes of management and staff practices in RL

The outcomes involve the benefits associated with the effective implementation of the strategies and requirements of management and staff practices, which can be important for the management of consumer returns. The outcomes of management and staff practices in RL include (1) economic, (2) operational (3) organisational (4) market-related and (5) SC outcomes. Table 6.47 provides an overview of the findings related to the *outcomes of management and staff practices to manage consumer returns*, including the categories, subcategories, supporting sources for the subcategories and key quotations that support both the subcategories and the discussion of the findings.

Table 6.47 Findings related to outcomes of management and staff practices to manage consumer returns

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
Economic outcomes	***Address economic barriers in RL***	None	• *"The cost and risk of (RL) creates a necessity for guidance and support from top level managers […]."* (Huscroft *et al.* 2013b:315) • *"Support is needed to commit the proper level of resources necessary for RL; this includes proper funding […]."* (Huscroft *et al.* 2013b:315)
Operational outcomes	***Address IT and infrastructure barriers in RL***	None	• *"Stronger senior management support for greater IT investments […]."* (Ye *et al.* 2013:134) • *For a reverse logistics initiative to be successful, it is essential that top managers have a supportive attitude and are committed […] required to support structural and infrastructural change."* (Ye *et al.* 2013:134)
	Facilitate and support RL processes	Sharif *et al.* (2012:2523)	• *"[…] retailers who focus more on […] fairness […] of returns services need to emphasis more on […] skilled and trained personnel to handle returns […]."* (Ahsan & Rahman, 2016:619) • *"There is no substitute for full-time effort being devoted to a process such as product returns. Part-time effort does not allow […] day-to-day oversight needed to ensure the process runs smoothly."* (Stock & Mulki, 2009:50)
	Improve staff understanding of RL processes	None	• *"Enterprises must provide reverse logistics training for their employees so that they can familiarize [sic] with stages in the reverse logistics process. Thus, the process can be improved by eliminating the lack of internal tracking and coordination related to reverse logistics."* (Selvi & Kayar, 2016:26)
	Improve RL process	None	• *"[…] RL activities should be assigned as a full-time job preferable at an executive-level with complete responsibility for […] continuous improvement in the RL processes."* (Li & Olorunniwo, 2008:384) • *"There is no substitute for full-time effort being devoted to a process such as product returns. Part-time effort does not allow sufficient time to fully evaluate and investigate potential improvements in the process […]."* (Stock & Mulki, 2009:50)
	RL process efficiency and effectiveness	Li and Olorunniwo, (2008:384)	• *"The management support and employee training and skills provided to improve the effectiveness and efficiency of the RL."* (Shaik & Abdul-Kader, 2012:30)

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
	Ensure successful RL processes	None	• *"Top management support […] ensure continued success of the […] processes […]."* (Huscroft *et al.* 2013b:313) • *"RL […] isolated from forward logistics, training was still perceived to be an important activity to ensure the success of the logistics operation."* (Sharif *et al.* 2012:2523)
	Facilitate RL/FL integration	None	• *"[…] by having a full-time manager in charge of product returns, better coordination of forward and reverse logistics can occur."* (Stock & Mulki, 2009:50)
Organisational outcomes	***Address organisational barriers in RL***	Huscroft *et al.* (2013b:309)	• *"Top management awareness motivates employees and ensures full support from seniors."* (Agrawal *et al.* 2016d:24) • *"Top management awareness has the highest value and is prioritized [sic] as top most factors. Top management initiates, guides, and motivates the organization [sic] for adoption […] of RL […]."* (Agrawal *et al.* 2016d:24) • *"[…] support of top management is essential, since it is management that definitively decides whether to carry out these types of practices […]."* (González-Torre *et al.* 2010:900) • *"A high commitment and/or presence of RL expert at management level should […] help reduce the reported lack of shared understanding of best RL practices as management barrier […]."* (Abdulrahman *et al.* 2014:468) • *"[…] training […] for management […] for warehouse and other staff […] to train and understand the importance of RL as a supply chain-management operation."* (Sharif *et al.* 2012:2523) • *"Having reverse logistics as a separate function would also reduce or eliminate its subordinate status to forward distribution […]."* (Stock & Mulki, 2009:37) • *"[…] introduction of training programmes associated with RL […] focussing on mechanisms (such as workshops and seminars) that are aimed at sensitising their members to the benefits of RL implementation."* (Chileshe *et al.* 2015:195)
	Facilitate strategic decision-making in RL	None	• *"Because of the greater complexity and level of decision-making involved, reverse logistics requires closer attention at the senior management […]."* (Rogers *et al.* 2013:44) • *"For such strategic decisions, it is essential to have top management's support."* (Lee & Lam, 2012:596)
	Facilitate RL system development	None	• *"[…] up-skilling the people involved in the recovery activities are important enablers in developing a RL system."* (Aitken & Harrison, 2013:759)
	Facilitate successful RL implementation	Prakash and Barua (2015:603)	• *"Top management awareness has the highest value and is prioritized as top most factors. Top management initiates, guides, and motivates the organization for […] RL implementation."* (Agrawal *et al.* 2016d:24) • *"Top management awareness is very crucial for the success of RL implementation."* (Agrawal *et al.* 2016d:20) • *"For a reverse logistics initiative to be successful, it is essential that top managers have a supportive attitude and are committed to implementing the initiative […]."* (Ye *et al.* 2013:134) • *"[…] significant effect on the implementation of reverse logistics […] include […] sufficient management personnel, experienced management personnel, and staff providing full support and cooperation."* (Ho *et al.* 2012:39) • *"[…] there is a need to invest in developing the appropriate skill levels that are desirable for implementing some of the RL practices […]."* (Chileshe *et al.* 2015:194) • *"[…] skilled workers are very important for successful implementation."* (Agrawal *et al.* 2016d:21) • *"Quality managed personnel […] to capture the opportunities brought about by the implementation of reverse logistics […] with more well-trained staff, companies are more willing to implement reverse logistics."* (Ho *et al.* 2012:42)
	Successful RL program and function	Agrawal *et al.* (2016d:24)	• *"[…] the importance of maintaining training, feedback, and incentives programs throughout the enterprise to ensure continuous and sustainable improvement of their reverse logistics programs."* (Partida, 2011:64) • *"Top management support […] ensure continued success of the program […]."* (Huscroft *et al.* 2013b:313) • *"Efficient leadership is needed to provide clear vision and value to reverse logistics programs […]."* (Ravi & Shankar, 2015:887) • *"Having trained personnel and experts are prime requirements for achieving success in any organization [sic]."* (Abdulrahman *et al.* 2014:468)
	Develop RL capabilities and expertise	None	• *"[…] to provide adequate training and contextual significance to all members of its organisation […] this may lead to the increasing of operational costs in order to develop RL capability […]."* (Sharif *et al.* 2012:2528) • *"Companies, willing to adopt RL will have to develop their own expertise through various education and training programs."* (Agrawal *et al.* 2016d:20)
	Facilitate RLM	Stock and Mulki (2009:50)	• *"[…] have a functional unit dedicated to reverse logistics management."* (Janse *et al.* 2010:500) • *"[…] any RL function is important and is seen as a vital competence […] and requires an organisational capability to control and manage it effectively."* (Sharif *et al.* 2012:2523) • *"Enhancing the knowledge and skill proficiency of the staff through training contributes to better process management. Although the education of staff […] may entail rather high costs, this can be done in phases over a longer time horizon."* (Lee & Lam, 2012:592) • *"Training of staff related to the reverse logistics is also essential for efficient management of reverse logistics operations. All of these reverse logistics activities*

CATEGORY	SUBCATEGORY	SUPPORTING SOURCES	KEY QUOTATIONS
			requires financial support." (Ravi *et al.* 2008:4857)
	Facilitate training and skills enhancement of RL staff	None	• *"Stronger senior management support for […] better training for employees […]."* (Genchev, 2009:143) • *"Training and development programs for staff […] Company should offer training and development programs on regular basis for the employees to enhance their skills."* (Agarwal *et al.* 2016:3) • *"[…] extra care and resources should be dedicated to motivating and constantly enhancing their professional skills and abilities."* (Genchev, 2009:148)
	Enable high RL staff retention	None	• *"Extensive training and the personal involvement of all employees engaged in returns handling contributes to the high labor [sic] retention rate."* (Genchev, 2009:147)
	Clear roles and responsibilities	Subhashini (2016:11)	• *"Having reverse logistics as a separate function would also reduce or eliminate […] multiple reporting and role conflicts."* (Stock & Mulki, 2009:37)
	Facilitates CFI practices	None	• *"Stronger senior management support for […] better coordination among the different departments involved in handling returns […]."* (Genchev, 2009:143)
	Facilitate RC practices	Genchev (2009:143) González-Torre *et al.* (2010:900) Ye *et al.* (2013:134)	• *"Support is needed to commit the proper level of resources necessary for RL; this includes proper funding, personnel allocation, employee training […]."* (Huscroft *et al.* 2013b:315) • *"[…] adequate training […] to maximise its management and financial-resource commitment […]."* (Sharif *et al.* 2012:2528)
Market-related outcomes	***Increase competitiveness and obtain a competitive advantage***	None	• *"A high commitment and/or presence of RL expert at management level should lead to the full realization [sic] of the […] firms' future competiveness [sic]."* (Abdulrahman *et al.* 2014:468) • *"Quality managed personnel and staff […] to capture the opportunities brought about by the implementation of reverse logistics and to make it competitive advantage to distinguish the company from its competitors."* (Ho *et al.* 2012:42)
	Increase consumer satisfaction and sales	None	• *"Stronger senior management support […] justified by increased customer satisfaction, resulting in more business."* (Genchev, 2009:143)
	Improve customer service and responsiveness	None	• *"[…] retailers who focus more on […] returns services need to emphasis more on […] skilled and trained personnel to handle returns […]."* (Ahsan & Rahman, 2016:619) • *"[…] to provide adequate training and contextual significance to all members of its organisation […] Although this may lead to the increasing of operational costs […] this indeed indirectly provides a better and longer running responsiveness back to customers […]."* (Sharif *et al.* 2012:2528) • *"[…] managers consider "skilled and trained personnel" as the most critical service determinant […]."* (Ahsan & Rahman, 2016:624)
	Facilitate CRM	None	• *"Support is needed to […] effectively managing relationships with […] customers."* (Huscroft *et al.* 2013b:315)
SC outcomes	***Facilitate SCRM***	None	• *"Support is needed to […] effectively managing relationships with partners […]."* (Huscroft *et al.* 2013b:315)
	Facilitate SCI	None	• *"Efficient leadership is needed […] and should demonstrate commitment to […] integrating all the members of the supply chain."* (Ravi & Shankar, 2015:887)

Source: Compiled by the researcher

Table 6.47 presents the outcomes of management and staff practices in RL, including economic, operational, organisational, market-related and SC outcomes, which will be discussed in subsequent sections.

6.9.5.2.1 Economic and operational outcomes of management and staff practices in RL

The *economic outcome* of management and staff practices is limited to *addressing economic barriers in RL*, which relates to a lack of financial support and financial resources for RL, high RL cost and financial risks in RL (see section 2.3.1). Consequently, attaining top management commitment, support and involvement (top management strategies) can address financial problems in RL.

Several *operational outcomes* associate with management and staff practices in RL, which include (1) addressing IT and infrastructure barriers in RL, (2) facilitating and supporting RL processes, (3) improving staff understanding of RL processes, (4) improve RL processes, (5) improving RL process efficiency and effectiveness, (6) successful RL processes, and (6) facilitating RL/FL integration.

Organisations can *address IT* and *infrastructure barriers* in RL through top management commitment and support (top management strategies), demonstrating the importance of top management awareness and support of RL to address operational barriers in RL (see section 2.3.2).

Additionally, implementing benefit-driven management and staff strategies (general strategy), establishing a RL function and producing well-trained and skilled staff (RL staff strategies) can *facilitate* and *support RL processes.* Furthermore, providing regular staff training (RL staff strategy) and implementing CFI practices (organisational requirement) can *improve staff understanding of RL processes* (such as receiving, processing, inspection, sorting and disposition processes).

Management and staff practices, like assigning a RL expert manager and establishing a RL department can *improve RL processes.* Similarly, organisations can *improve* the *efficiency and effectiveness of RL processes* through top management support, and training and skills development opportunities for RL staff. Subsequently, management and staff practices, including top management support (top management strategy), training and skills development opportunities (RL staff strategy) and separating RL and FL operations (operational requirement) can ensure *successful RL processes.*

Although separating RL and FL operations (which forms part of separate facility/location practices in RL) can be an important requirement for a successful RL process, assigning an expert RL manager (RL manager strategy) can *facilitate* effective *integration* of *RL/FL* (which forms part of integrated facility/location practices in RL) (see section 6.8.3). Consequently, organisations must link management and staff practices to facility/location practices for the effective management of consumer returns.

6.9.5.2.2 Organisational outcomes of management and staff practices in RL

Management and staff practices in RL involve various *organisational outcomes,* including (1) addressing organisational barriers, (2) facilitating strategic decision-making, (3) facilitating RL system development, (4) facilitating successful RL implementation, (5) successful RL program and function, (6) developing RL capabilities and expertise, (7) facilitating RLM, (8) facilitating training and skills enhancement, (9) enabling high RL staff retention, (10) clear roles and responsibilities, (11) facilitating CFI practices, and (12) facilitating RC practices.

Management and staff practices in RL can *address* several *organisational barriers* in RL, namely a lack of awareness and commitment to RL, management inattention, resistance to change and a lack of training in RL (see section 2.3.3). Specifically, (1) prioritising management and staff practices (general strategy), (2) creating top management awareness, attaining top management support and top management involvement (top management strategies), (3) appointing an expert RL manager, training

managers and demonstrating commitment to RL (RL manager strategies), and (4) establishing a RL function and providing regular staff training (RL staff strategies) can address a lack of awareness and support for RL, management inattention and a resistance to change (in adopting RL implementation). Additionally, benefit-driven management and staff strategies and developing and introducing training and education programmes for RL staff can address both the resistance to change and a lack of training in RL.

Top management attention and support in RL can *facilitate* with *strategic decision-making* in RL, implying that top management strategies can address a lack of strategic planning in RL (organisational barrier) (section 2.3.3). Therefore, top management strategies in RL may contribute to strategic planning practices in RL (see section 6.9.4). Moreover, like SPP practices, regular training and skill development opportunities for RL staff (RL staff strategy) can *facilitate RL system development.*

Like the outcome of addressing organisational barriers in RL, several management and staff practices can *facilitate successful implementation* of *RL*. Specifically, organisations can (1) prioritise management and staff practices (general strategy), (2) create top management awareness and attain top management commitment and support in RL (top management strategies), (3) establish sufficient leadership with appropriate experience in RL (RL manager strategies), (4) develop staff skills and knowledge in RL, obtain staff support and commitment, and produce well-managed, -trained and -skilled staff (RL staff strategies), and (5) invest in training and education initiatives (economic requirement) to successfully implement RL.

Similarly, management and staff practices in RL enable a *successful RL program* and *function*, which can be obtained through (1) organisational-wide training, incentives and feedback programmes and maintaining management and staff initiatives (general strategies, (2) top management commitment and support for RL (top management strategies), (3) sufficient leadership for RL and appointing an expert RL manager (RL manager strategies), and (4) well-trained and skilled staff in RL (RL staff strategy). Additionally, organisations can *develop RL capabilities* and *expertise* by performing a cost-benefit analysis for management and staff practices, organisational-wide RL training (general staff strategy), developing and implementing training and education programmes for RL (RL staff strategy) and incurring costs (economic requirement), which can result in valuable intangible resources for RL (see RC practices in section 6.9.1).

Several management and staff practices can *facilitate RLM*, including (1) performing a cost-benefit analysis (general strategy), (2) establishing a RL function/department, (3) developing the skills and knowledge of RL staff, (4) implementing RL training and education initiatives (e.g. incremental implementation over a longer period), (5) providing regular training and skills development

opportunities (RL staff strategies), (6) financial support and incurring costs (e.g. training and development costs) (economic requirements), and (7) organisational capability to manage the RL department (organisational requirement).

Although training and skills development form part of RL staff strategies (section 6.9.5.1), certain management and staff practices can *facilitate training* and *skills enhancement of RL staff.* Specifically, attaining top management support (strategy), strategic development of RL staff skills and knowledge, strategic development of training and education programmes for RL, providing regular training and skills development opportunities (RL staff strategies), and implementing RC practices (organisational requirement) can all facilitate staff training and skills enhancement in RL. Additionally, attaining staff support and cooperation, and providing regular RL training to RL staff can *enable high RL staff retention,* which means that organisations can retain skilled and experienced RL staff and reduce the need for continuous training and skill development of new/inexperienced RL staff.

Furthermore, establishing a RL function/department (RL staff strategy) can reduce staff conflict through *clear roles* and *responsibilities* in RL, emphasising the operational requirement of separating RL and FL operations and the link between management and staff practices and separate facility/location practices in RL (see section 6.9.5.2.1). Finally, although implementing CFI and RC practices can be important requirements for management and staff strategies (section 6.9.5.1.2), attaining top management support *facilitates CFI practices* (such as internal integration) and top management support and regular staff training can *facilitate RC practices* (such as committing financial and human resources to RL). Facilitating both CFI and RC practices emphasise the importance of management and staff practices for addressing organisational barriers in RL (such as a lack of internal coordination and a lack of staff resources for RL) (see section 2.3.3).

6.9.5.2.3 Market-related and SC outcomes of management and staff practices in RL

The *market-related outcomes* of management and staff practices in RL include (1) increasing competitiveness and obtaining a competitive advantage, (2) improving customer service and responsiveness, (3) increasing consumer satisfaction and sales, and (4) facilitating CRM. *Competitiveness* can be *increased* by assigning an expert RL manager that demonstrates a commitment to RL (RL manager strategies). Additionally, organisations can obtain a *competitive advantage* through well-managed, -trained and skilled RL staff (strategy), demonstrating the importance of allocating human resources to manage consumer returns (also see section 6.9.1).

Several management and staff practices can *improve customer service* and *responsiveness,* including the (1) general strategies of benefit-driven strategies (focussing on customer service), a cost-benefit

analysis for staff and management practices and organisational-wide RL training, (2) RL staff strategies of well-trained and skilled staff, (3) economic requirement of costs (expenses related to training and skills development initiatives), and (4) organisational requirement of management involvement (e.g. managers understanding the value of skilled and trained staff for RL).

Furthermore, top management support (strategy) can *increase consumer satisfaction* and *sales* since paying more attention to RL can increase RL efficiency (see section 6.9.5.2.1), which positively impact consumer satisfaction. Ultimately, top management support can *facilitate CRM* and indirectly contributes to CI practices in RL (section 6.4.2), essential for the effective management of consumer returns.

Similarly, the *SC outcomes* of management and staff practices in RL involve supply chain relationship management (SCRM) and SCI. Particularly, top management support can *facilitate SCRM,* demonstrating that top management support can be critical for managing external relationships with RL parties (both partners and consumers). Finally, establishing appropriate and sufficient leadership that demonstrate a commitment to RL can *facilitate SCI,* which can address the SC barrier of a lack of support (or collaboration) (see sections 2.4.4 and 6.4.1).

Therefore, management and staff practices in RL can facilitate with integration practices in RL, including SCI, CI and CFI (see section 6.9.5.2.2), emphasising the importance of implementing all RL practices to manage consumer returns. Essentially, management and staff practices can be important for addressing several barriers in RL, including economic, operational, organisational and SC barriers, and providing various economic, operational, organisational, market-related and SC benefits in RL, contributing to the effective RLM of consumer returns.

In the next section, management and staff practices in RL will be concluded with a description, conceptual framework and summary of findings to manage consumer returns.

6.9.5.3 Description, conceptual framework and summary of findings for management and staff practices to manage consumer returns

Based on the findings presented in section 6.9.5, management and staff practices in RL can be important for the management of consumer returns, and will be described as follows:

> Management and staff practices for the management of consumer returns involve (1) general strategies, including prioritising management and staff practices, benefit-driven strategies, a cost-benefit analysis, adequate organisation-wide RL training, improving work conditions, strategic development of incentives and feedback programmes, and maintaining management and staff initiatives, (2) top management strategies, including top management awareness, attention, support, commitment and involvement, (3) RL manager strategies, including sufficient leadership, full-time RL manager portfolio, appointing a RL expert manager, assigning experienced managers, providing manager training, and demonstrating commitment to RL, (4) RL staff strategies, including establishing a RL function, developing of RL skills and knowledge, developing, introducing and implementing

training and education programmes, attaining staff support and cooperation, regular formal training and skills development opportunities, providing informal training, and producing well-managed, -trained, and -skilled staff for RL, and (5) management and staff requirements, including economic requirements (investment, financial support and costs), operational requirements (separate RL and FL operations), and organisational requirements (organisational capability, CFI practices, RC practices and management involvement).

The management and staff strategies and requirements can result in several outcomes, including (1) economic outcomes (address economic barriers), (2) operational outcomes (address IT and infrastructure barriers, facilitate and support RL processes, improve staff understanding of RL processes, improve RL processes, RL process efficiency and effectiveness, successful RL processes, and facilitate RL/FL integration), (3) organisational outcomes (address organisational barriers, facilitate RL system development, facilitate successful RL implementation, successful RL program and function, RL capabilities and expertise, facilitate RLM, facilitate training and skills enhancement, high RL staff retention, clear roles and responsibilities, and facilitate CFI and RC practices), (4) market-related outcomes (competitiveness and competitive advantage, customer service and responsiveness, increase consumer satisfaction and sales, and facilitate CRM), and (5) SC outcomes (facilitate SCRM and SCI).

Figure 6.31 provides a conceptual framework of management and staff practices to manage consumer returns.

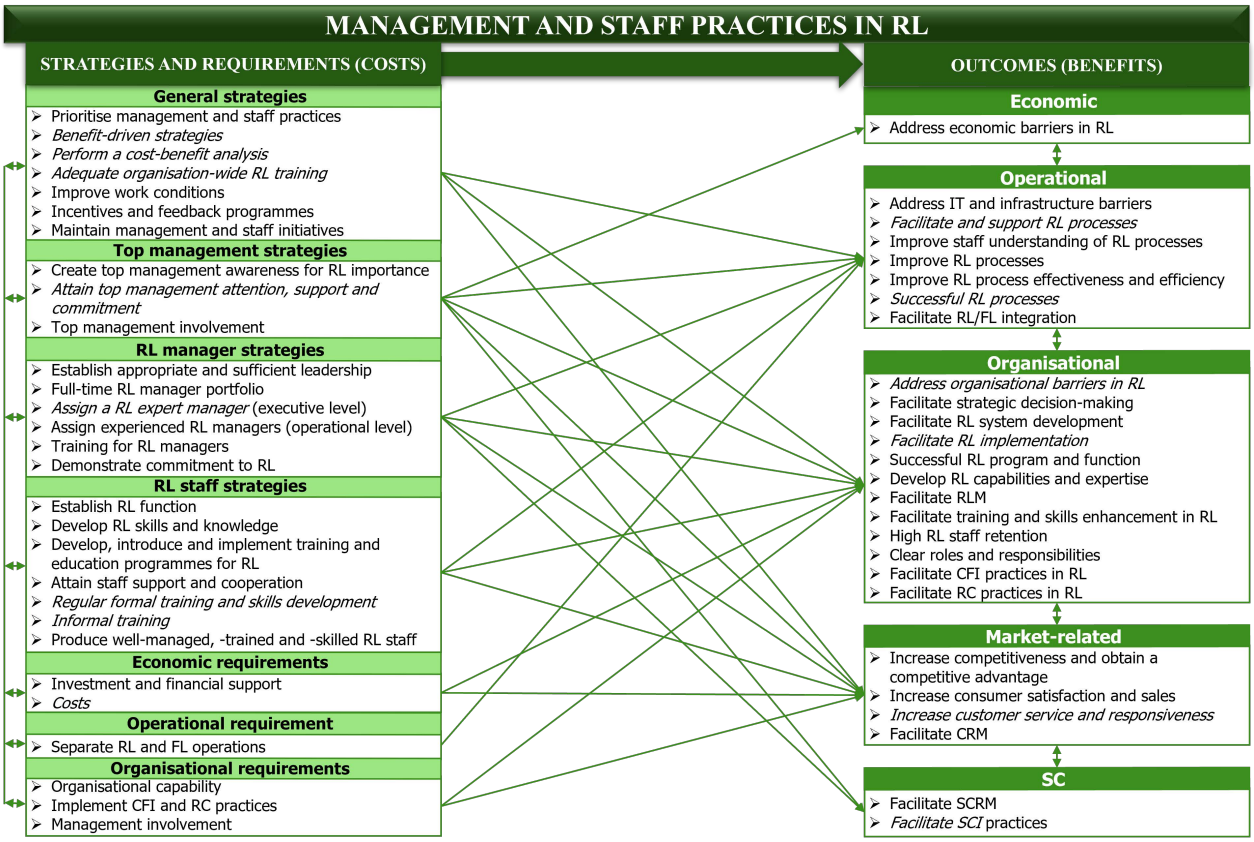


Figure 6.31 Conceptual framework of management and staff practices to manage consumer returns

Source: Compiled by researcher

Figure 6.31 illustrates the links between the strategies, requirements and outcomes of management and staff practices in RL, demonstrating a cost and benefit relationship. The links between the strategies and requirements can be demonstrated by the economic requirements of investment, financial support and costs, which links with performing a cost-benefit analysis (general strategy), top management commitment (top management strategy), assigning a RL expert manager (RL manager strategy),

developing and implementing training and education programmes (RL staff strategies), separating RL and FL (operational requirement) and implementing RC practices (organisational requirement).

Additionally, the framework shows that the management and staff outcome categories can be linked, for example, successful RL implementation (organisational outcome) contributes to successful RL processes (operational outcome), which in turn can enhance consumer service and responsiveness (market-related outcomes). Additionally, addressing organisational barriers (organisational outcome) can facilitate with addressing economic barriers (economic outcome) and IT and infrastructure barriers (operational outcomes) in RL. Nonetheless, the main aim of the framework involves the links between the management and staff strategies, requirements and outcomes, which can be important for the effective management of consumer returns. Subsequently, the most significant management and staff strategies and requirements (associated with the most outcomes) and related outcomes (associated with the most practices) are emphasised by *italics*, which will be elaborated upon in Table 6.48.

Based on Figure 6.31 and the discussions given in section 6.9.5, Table 6.48 provides a summary of the findings and managerial implications of the management and staff practices to manage consumer returns.

Table 6.48 Summary of findings and managerial implications for management and staff practices to manage consumer returns

CATEGORY	KEY FINDINGS	MANAGERIAL IMPLICATIONS
Strategies and requirements	•Management and staff practices in RL involves (1) general strategies, including prioritising management and staff practices, benefit-driven strategies, a cost-benefit analysis, adequate organisation-wide RL training, improving work conditions, strategic development of incentives and feedback programmes, and maintaining management and staff initiative, (2) top management strategies, including top management awareness, attention, support, commitment and involvement, (3) RL manager strategies, including sufficient leadership, full-time RL manager portfolio, appointing a RL expert manager, assigning experienced managers, providing manager training, and demonstrating commitment to RL, and (4) RL staff strategies, including establishing a RL function, developing of RL skills and knowledge, developing, introducing and implementing training and education programmes, attaining staff support and cooperation, regular formal training and skills development opportunities, providing informal training, and producing well-managed, -trained, and -skilled staff for RL. •The general management and staff strategies associate with a few outcome categories, including operational, organisational and market-related outcomes •From the general management and staff strategies, a cost-benefit analysis, benefit-driven strategies and providing adequate organisation-wide training, can be the most beneficial for RL •The top management strategies associate with all the outcome categories, including economic, operational, organisational, market-related and SC outcomes •From the top management strategies, strategic attainment of top management attention, support and commitment, can be the most beneficial for RL •The RL manager strategies associates with most of the outcome categories, including operational, organisational, market-related and SC outcomes •From the RL manager strategies, strategically assigning a RL expert manager can be the most beneficial for RL •The RL staff strategies associate with a few outcome categories, including operational, organisational and market-related outcomes •From the RL staff strategies, providing regular formal RL training can	•Organisations must develop and implement general, top management, RL manager and RL staff strategies in RL •Organisations must perform a cost-benefit analysis, focus benefit-driven management and staff strategies and provide organisation-wide RL training for optimum RL benefits •Organisations that seek various economic, operational, organisational, market-related and SC benefits in RL must focus on top management strategies •Organisations must attain top/senior management attention, support and commitment for optimum benefits in RL •Organisations must assign/appoint a RL expert manager for optimum benefits in RL •Organisations must focus on providing regular formal RL training for optimum benefits in RL •Organisations must focus on the economic requirement of costs and on various organisational requirements to achieve optimum management and staff benefits in RL

	be the most beneficial for RL •The least significant management strategies, with no impact on the outcomes include strategic improvement of work conditions and informal RL training. •Management and staff practices in RL involves economic, operational and organisational requirements •The economic and organisational requirements of management and staff practices in RL associate with a couple of outcome categories, including organisational and market-related outcomes. •From the economic requirements, costs can lead to the most benefits in RL •All organisational requirements, including organisational capability, CFI, RC and management involvement can lead to benefits in RL •From the management and staff practices, the operational requirement can be the least significant practice category	
Outcomes	•Management and staff practices in RL involve economic, operational, organisational, market-related and SC outcomes •The most significant outcomes of management and staff practices in RL involves organisational and market-related outcomes •The least significant outcome category of management and staff practices in RL involves the economic outcomes •The most significant operational outcomes of management and staff practices in RL include facilitating and supporting RL processes and successful RL processes •The most significant organisational outcomes of management and staff practices in RL includes addressing organisational barriers in RL and successful RL implementation •The most significant market-related outcomes of management and staff practices include improving consumer service and responsiveness •The most significant SC outcome of management and staff practices include facilitate SCI	•Organisations that seek economic, operational, organisational, market-related and SC benefits in RL can implement management and staff practices in RL •To facilitate and support RL processes, organisations can consider management and staff practices in RL •Organisations can implement management and staff practices for a successful RL process •Organisations that experience organisational and RL implementation barriers can implement management and staff practices in RL •Organisations that seek to improve consumer service and responsiveness can consider management and staff practices in RL •To facilitate SCI in RL, organisations can consider management and staff practices in RL •For the effective management of consumer returns, organisations must identify/implement/consider management and staff strategies, requirements and outcomes.

Source: Compiled by the researcher

Table 6.48 demonstrates the value of management and staff practices as part of the RL practices for consumer returns. Organisations can use the management and staff strategies, requirements and related outcomes for effective management and staff practices in RL, which can contribute to the effective RLM of consumer returns. Management and staff practices in RL will further be explored in the interviews with industry experts (chapter 8).

In the next section, the final conceptual framework and key findings for RL practices will be presented and discussed.

6.10 CONCEPTUAL FRAMEWORK AND SUMMARY OF FINDINGS FOR RL PRACTICES TO MANAGE CONSUMER RETURNS

This section provides the final conceptual framework and summary of findings for RL practices to manage consumer returns. The focus of the conceptual framework for RL practices was on the common strategies, requirements and outcomes (must associate with at least two main practice categories). Therefore, the conceptual framework illustrates the most appropriate strategies, requirements and related outcomes of RL practices for the effective management of consumer returns.

However, the framework only focused on the overall strategies, requirements and outcomes of the main practice categories, namely IT, integration, in/outsourcing, disposition, PM, facility/location, RC, FM, RPA, SPP and management staff practices. Evidently, any unique strategies, requirements and

outcomes for specific (sub) RL practices (e.g. IT, integration and general facility/location practices) can be identified through the separate frameworks, summaries of findings and managerial implications presented in the respective sections throughout the chapter. Since some of the strategies for a specific practice can represent the requirements in another practice (e.g. integrated IT is a strategy in IT but a requirement in SCI), the strategies and requirements were combined and classified as follow: (1) general strategies (e.g. strategic approach and considerations), (2) economic requirements, (3) IT strategies and requirements, (4) operational strategies and requirements, (5) organisational strategies and requirements, (6) market-related strategies and requirements and (7) SC strategies and requirements.

Figure 6.32 demonstrates a conceptual framework of RL practices for the effective management of consumer returns. Specifically, the conceptual framework illustrates a summary of key findings related to all main RL practice categories, focussing on the combined strategies and requirements (costs) and outcomes (benefits). Additionally, the most significant (occurring the most often) strategies, requirements and outcomes associated with the main RL practice categories (at least seven out of eleven practices) are emphasised through *italics*. However, a strategy, requirement and outcome that associates with nine, ten or eleven RL practice categories is marked with a blue dot•. The strategies, requirements and outcomes without italics associate with a minimum of two and a maximum of six main practice categories. For presentation purposes, facility/location practices are referred to as F&L and management and staff practices as M&S.

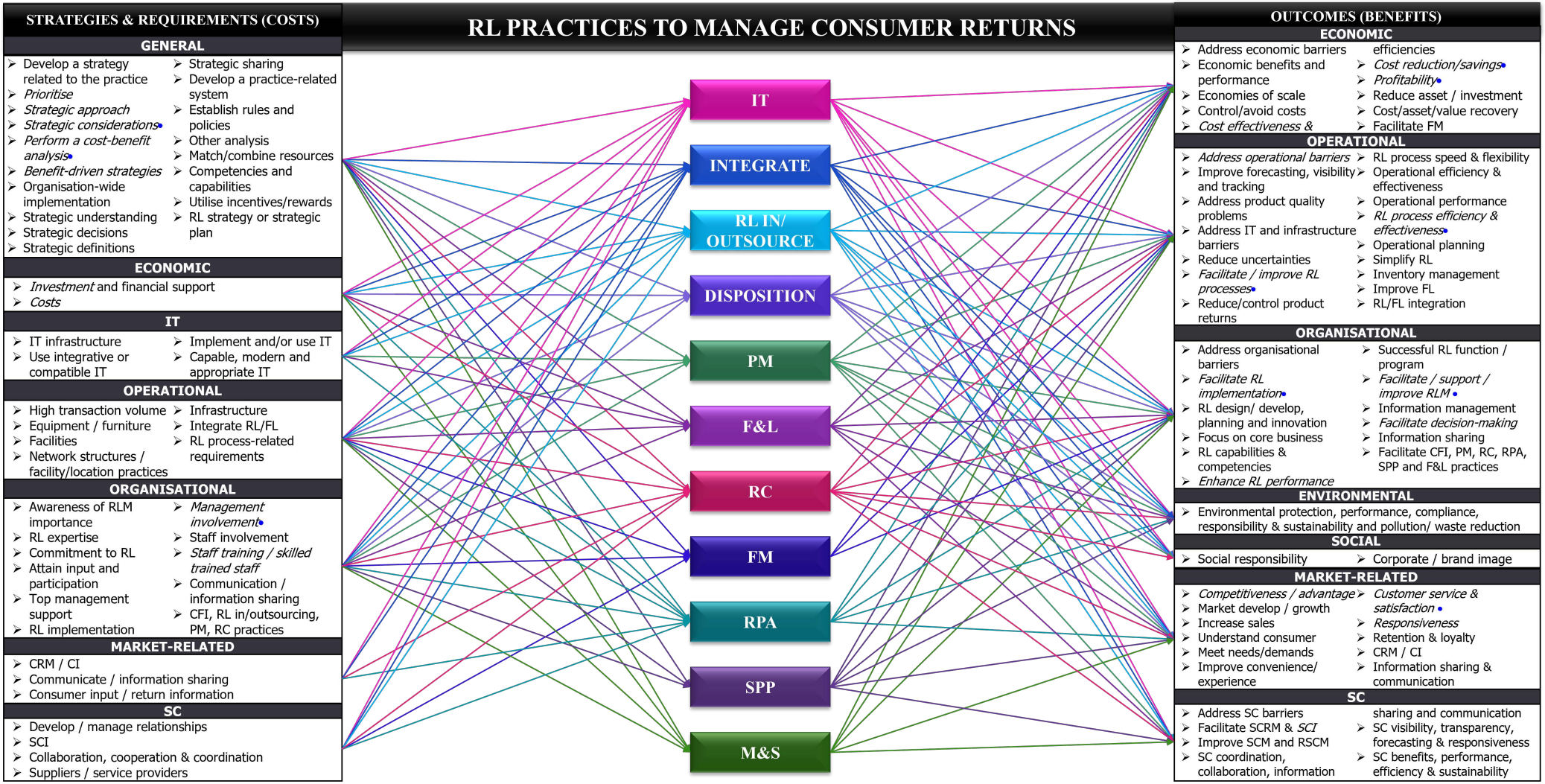


Figure 6.32 Conceptual framework of RL practices to manage consumer returns
Source: Compiled by the researcher

Based on Figure 6.32, Table 6.49 provides a summary of the key findings and managerial implications for RL practices to manage consumer returns.

Table 6.49 Summary of key findings and managerial implications for RL practices to manage consumer returns

FINDING CATEGORY	KEY FINDINGS AND MANAGERIAL IMPLICATIONS
Cost (strategy / requirement) categories	• The general, operational and organisational cost (strategy/requirement) categories associate with all (eleven) practice categories, which means that organisations should prioritise the implementation of general, operational and organisational strategies and requirements for the effective management of consumer returns • The economic cost (requirement) category associates with most (eight) practice categories, which means that organisations can implement economic requirements for the effective management of consumer returns • The IT cost (strategy/requirement) category associates with several (six) practice categories, which means that organisations can benefit from implementing IT strategies and requirements for the effective management of consumer returns • The market-related cost (strategy/requirement) category associates with limited (four) practice categories, which means that organisations can consider implementing market-related strategies and requirements to manage consumer returns • The SC cost (strategy/requirement) category associates with some (six) practice categories, which means that organisations can benefit from implementing SC strategies and requirements for the effective management of consumer returns
Specific costs (strategies/requirements)	• Organisations should prioritise RL practices and develop RL practices strategies that involve strategic approaches, strategic considerations (highest priority), cost-benefit analyses (highest priority) and benefit-driven strategies • Organisations need to focus on investment and cost requirements for effective RL practices • Organisations can prioritise management involvement for effective RL practices • Organisations need to train staff or appoint/use skilled/trained staff for effective RL practices
Practice categories	• IT and integration practices associate with all (seven) cost and benefit categories, which means that organisations must implement IT and integration practices for the effective management of consumer returns • RL in/outsourcing associate with most (six) cost categories and with all (seven) benefit categories, which means that organisations should prioritise the implementation of RL in/outsourcing practices for the effective management of consumer returns • RL disposition practices associate with some (four) cost categories but with most (six) benefit categories, which means that organisations need to prioritise the implementation of RL disposition practices to manage consumer returns • PM practices associate with some (four) cost categories but with all (seven) benefit categories, which means that implementing PM practices should be organisations' highest priority for the effective management of consumer returns • Facility/location practices associate most (five) cost categories and (six) benefit categories, which means that organisations can benefit from implementing facility/location practices to manage consumer returns • RC practices associate with most (six) cost categories and with all (seven) benefit categories, which means that organisations can benefit from implementing RC practices for the effective management of consumer returns • FM practices associate with some (four) cost categories but with few (three) benefit categories, which means that organisations should carefully perform a cost-benefit analysis for the implementation of FM practices to manage consumer returns • RPA practices associate with all (seven) cost categories and most (five) benefit categories, which means that organisations need to carefully perform a cost-benefit analysis for the implementation of RPA practices to manage consumer returns • SPP practices associate with a few (three) cost categories but with most (six) benefit categories, which means that implementing SPP practices can be organisations' highest priority for the effective management of consumer returns • Management and staff practices associate with some (four) cost categories and (five) benefit categories, which means that organisations can benefit from implementing management and staff practices to manage consumer returns
Benefit (outcome) categories	• Economic, operational, organisational and market-related benefit (outcome) categories associate with all (eleven) RL practice categories, which means that organisations seeking various economic, operational, organisational and market-related benefits can implement RL practices • The environmental benefit category associates with most (nine) RL practice categories, which means that organisations seeking environmental benefits can implement various RL practices • The social benefit category associates with some (six) RL practice categories, which means that organisations seeking social benefits can consider implementing some RL practices • The SC benefit category associates with various (eight) RL practice categories, which means that

	organisations seeking SC benefits can implement several RL practices
Specific benefits (outcomes)	• Organisations should implement RL practices for cost effectiveness in RL • Organisations that seek cost reductions/savings and profitability in RL can prioritise the implementation of RL practices • Organisations that experience operational barriers in RL can implement various RL practices • Organisations should prioritise the implementation of RL practices to facilitate and improve RL processes and to improve the efficiency and effectiveness of RL processes • Organisations that experience RL implementation and decision-making challenges can prioritise the implementation of RL practices • Organisations can implement various RL practices to enhance RL performance • Organisations that seek to facilitate, support and/or improve RLM must prioritise the implementation of RL practices • Organisations that seek competitiveness or a competitive advantage in RL can implement various RL practices • Organisations that seek to improve consumer service and satisfaction can prioritise the implementation of RL practices • Organisations can implement various RL practices to increase consumer responsiveness in RL • Organisations that experience SCI challenges in RL can implement various RL practices

Source: Compiled by the researcher

Table 6.49 demonstrates key findings and managerial implications related to RL practices to manage consumer returns. Organisations can use the conceptual framework and key findings to identify the most significant RL costs, practices and benefits to manage consumer returns. Essentially, the relationship between the costs (strategies and requirements), practices and benefits (outcomes) emphasise the importance of the holistic implementation of RL practices for the effective management of consumer returns.

Nevertheless, organisations must identify key barriers, problems or weaknesses in RL and identify and implement the RL practice strategies and requirements (costs) to address the problem areas. Essentially, all RL practices discussed in this chapter, including IT, integration, RL in/outsourcing, disposition, PM, facility/location, RC, FM, RPA, SPP and management staff practices, will contribute to the final framework for the effective RLM of consumer returns in online retailing, which will be presented in chapter 9.

In the next section, this chapter is concluded with a conclusion.

6.11 CONCLUSION

In this chapter, the QCA findings of RL literature for RL practices to manage consumer returns were presented, analysed and discussed. The aim with this chapter was to achieve the *fourth* secondary research objective, which is ***to identify and explore RL literature for RL practices to manage consumer returns (SRO-4)*** (see Figure 5.1). Additionally, the findings presented in this chapter will be used to achieve the primary research objective of this study, which was to *develop a framework for the effective RLM of consumer returns in online retailing*.

The chapter started with the introduction and overview of the chapter (section 5.1), followed by an overview of RL practices (section **Error! Reference source not found.**). Additionally, the findings related to the main RL practice categories were presented and discussed in separate sections, including IT practices (section 6.3), integration practices (section 6.4), RL in/outsourcing practices (section 6.5), disposition practices (section 6.6), PM (performance measurement) practices (section 6.7), facility/location practices (section 6.8) and other RLM practices (section 6.9). The other RLM practices represented smaller RL practice categories (limited findings), which included RC (resource commitment) practices (section 6.9.1), FM (financial management) practices (section 6.9.2), RPA (return prevention and avoidance) practices (section 6.9.3), SPP (strategic planning and procedure) practices (section 6.9.4), and management and staff practices (section 6.9.5).

The QCA findings of RL literature was presented as follows: (1) qualitative data tables, with overviews of the categories, subcategories, sources and key quotations, (2) discussion and interpretation of the findings presented in the qualitative data tables, (3) description and conceptual frameworks for each category, and (4) final conceptual framework (for practices with sub-practice categories) and summary of findings and managerial implications in text tables for each main practice category. The chapter concluded with a final conceptual framework and a summary of key findings for RL practices to manage consumer returns (section 6.10) and a conclusion.

The focus of this chapter was on the costs (strategies and requirements) of implementing RL practices and the resulting benefits (outcomes), which can be important for the management of consumer returns. The main findings showed that (1) all RL practices can be important for managing consumer returns, (2) organisations must focus on general, economic, operational and organisational strategies and requirements for effective RL practices, (3) the most significant costs (strategies/requirements) for RL included strategic approaches, prioritisation of RL practices, strategic considerations, cost-benefit analyses, benefit-driven strategies, investment, costs, management involvement and staff training or skilled/trained staff, (4) PM and SPP practices must be organisations highest priority, followed by RL in/outsourcing, disposition, RC, IT and integration practices, (5) organisations can benefit from implementing facility/location and management and staff practices but must carefully perform a cost-benefit analysis for FM and RPA practices, (6) organisations can realise various economic, operational, organisational, environmental, social and SC benefits through the implementation of various RL practices, and (7) the most significant benefits (outcomes) of RL practices included cost effectiveness, cost savings/reductions, profitability, addressing operational barriers in RL, facilitate and improve RL processes, improve RL process efficiency and effectiveness, facilitate RL implementation and decision-making, enhance RL performance, facilitate/support and improve RLM, competitiveness or a

competitive advantage, improve consumer service and satisfaction, increase consumer responsiveness and facilitate SCI.

Essentially, this chapter will be the foundation for the empirical study (phase four – interviews with industry experts) and contribute to the final framework for the effective RLM of consumer returns in online retailing.

In the next chapter (chapter 7), the research methodology for the interviews with industry experts will be discussed.

Chapter 7 - Research methodology of interviews with industry experts

7.1 INTRODUCTION

In chapter 1 an overview of the research approach and method of this study was given, including the research methods related to the four phases of the study. The study was classified as a multimethod qualitative study, using different qualitative research methods, which in combination will contribute to the primary objective of "*developing a framework for the effective RLM of consumer returns in online retailing*". In chapter 3, the overall research design of this study in terms of justifying qualitative research designs, challenges in qualitative research, research paradigm and assumptions, research approaches to theory development and multimethod qualitative research, as well as the methodology and application of the Qualitative Content Analysis (QCA) of RL literature, were discussed.

In this chapter the qualitative research methodology and application of the interviews with industry experts, which formed part of phase 3 of the study, will be discussed. Figure 7.1 provides a graphical overview of phase 3 of the study and the related secondary objectives that will be reached.

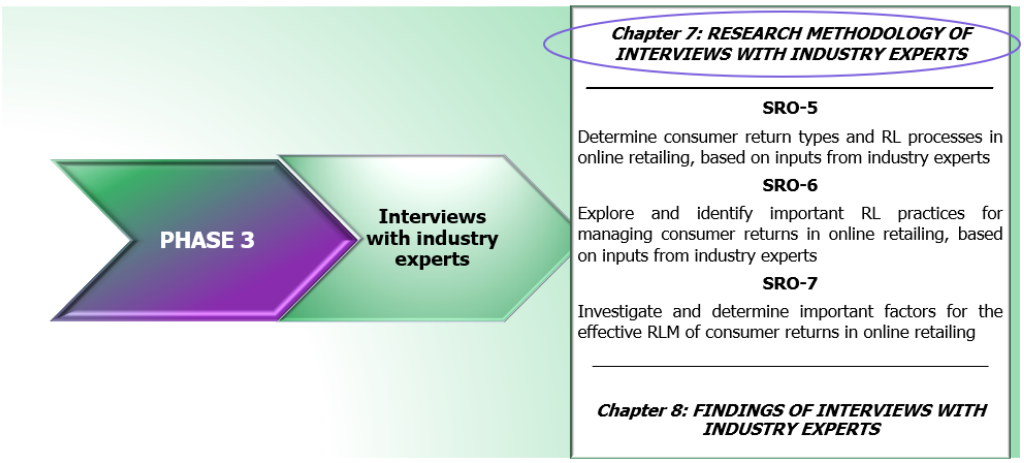


Figure 7.1 Methodology of interviews with industry experts - Aim of chapter 7
Source: Compiled by the researcher

Figure 7.2 provides an overview of the main sections of chapter 7.

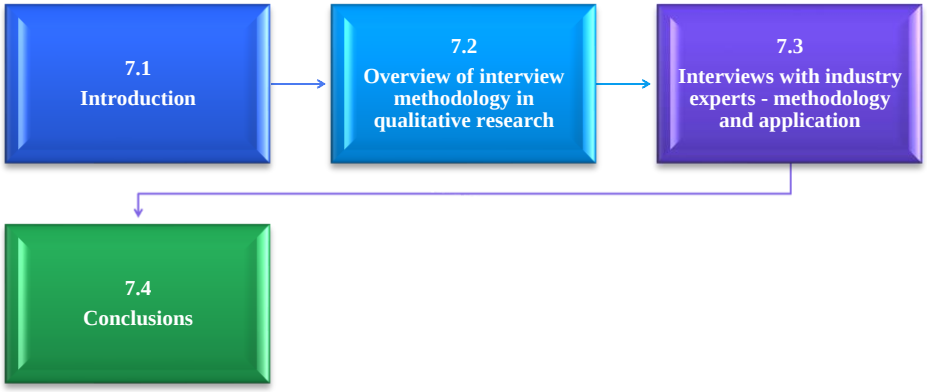


Figure 7.2 Overview of chapter 7
Source: Compiled by the researcher

Figure 7.2 shows that chapter 7 includes (1) the introduction (section **Error! Reference source not found.**), (2) overview of interview methodology in qualitative research (section 7.2), (3) interviews with industry experts: methodology and application (section 7.3), and (4) the conclusion (section 7.4). In the next section, the overview of interview methodology in qualitative research will be given.

7.2 OVERVIEW OF INTERVIEW METHODOLOGY IN QUALITATIVE RESEARCH

Methodology is about the principles that guide research practices (Klenke, 2016a:17). This section focusses on a theoretical overview of interview methods in qualitative research. The section starts with describing in-depth interviews in qualitative research, followed by a distinction between the different interview styles, discussion of the potential problems and challenges of interviews in qualitative research, and a discussion of the motivating factors and advantages of interviews in qualitative research.

7.2.1 Describing in-depth interviews in qualitative research

An interview can be described as a research method for primary data collection in which sampled participants are asked questions related to the topic to gain inputs from their views, knowledge and experiences. The qualitative interview is the most common and one of the most important data gathering tools of a qualitative inquiry (Klenke 2016c:149; Myer & Newman, 2007:3) because it adds richness and credibility to a research study (Myers, 2013:120; Saunders *et al.* 2019:444). In qualitative research, some authors deem it more suitable to use the word conversation instead of interview (Gudkova, 2018:80; Klenke 2016c:125). Therefore, a qualitative interview can be described as a purposeful conversation between two individuals (the interviewer and the interviewee) to collect data on a specific topic (Salkind, 2010:633; Saunders *et al.* 2019:434). Qualitative interviewing provides a way of generating empirical (primary) data, enabling the researcher to study a phenomenon in a "real world" or practical context (Klenke 2016c:125). Consequently, the purpose of the qualitative interview

is to look for new qualitative knowledge about various aspects of the world in which interviewees live, expressed in words, and not in numbers (Gudkova, 2018:82).

In-depth interviewing is a generic name for a technique that engages with the participant in a way that encourages a detailed exchange of information (Harvey, 2019:np). In-depth interviews can be classified as unstructured, semi-structured or structured (see section 7.2.2), ranging from free-form conversations to more formalised approaches (such as interrogation and cross-examination) (Harvey, 2019:np; Klenke 2016c:132). From a qualitative research perspective, an in-depth interview entails a close interaction between the researcher (interviewer) and participant (interviewee), establishing an environment for knowledge exchange (Gudkova, 2018:80). Rather than focusing on the researcher's perspective, it is the participant's account that is sought and highly valued (Klenke 2016c:131). Therefore, the participants are encouraged to accurately describe their experiences, views, emotions and expertise, which the researcher captures and interprets (through qualitative data analysis techniques), resulting in complex descriptions of the specific characteristics of the phenomenon (Gudkova, 2018:82).

Essentially, the general purpose of in-depth interviewing is to discover the participants' perceptions and to explore the topic in detail (Harvey, 2019:np). Therefore, the qualitative interview is obviously and exclusively a social interaction and a conversation between the interviewer and the interviewee in which both participants create narrative versions (questions, probes and answers) about the topic of investigation (Klenke 2016c:134).

Although the interview method for this study is classified as an in-depth interview, in the rest of the chapter the word "interview" will be used instead of "in-depth interview". In the next section, the styles (or forms) of interviews in qualitative research will be explored.

7.2.2 Interview styles in qualitative research

Interviews can be one-on-one or in small groups (focus groups), ranging from highly structured, where predetermined and specific questions are asked, to unstructured, where a topic is explored, without a specific order of predetermined questions (Merriam & Grenier, 2019:14). Evidently, interviews can be classified as structured, semi-structured, or unstructured (Billups, 2021:42; Cassell, 2015:12). The style that the researcher adopts is mostly based on the research goal and the amount of control that the researcher wants to exercise over the responses of the participants (Billups, 2021:42; Salkind, 2010:634). Usually, in qualitative approaches interviews are semi-structured (interview style of this study), or unstructured, encouraging the participants to talk at length around the subject (Cassell, 2015:13; Collis & Hussey, 2021:120). Nevertheless, most qualitative research literature discusses

structured interviews as an interview style that can be used in qualitative studies. Structured, unstructured and semi-structured interview styles will subsequently be discussed.

7.2.2.1 Structured interviews

Structured interviewing refers to a situation in which the researcher asks all interviewees/participants a series of preestablished questions in a set order and within a specific timeframe (Cassell, 2015:12; Gudkova, 2018:78; Klenke 2016c:128; Myers, 2013:121). Structured interviews associate with quantitative research designs (Van Zeeland, Van den Broeck, Boonen, & Tintel, 2021:2), which can be conducted telephonically or online (i.e. emails) with survey research, market/consumer research, and political polling, or face-to-face with intercept research in public places such as shopping malls and parking lots (Myers, 2013:133).

The backbone of the structured interview is the interview protocol (or interview guide, interview schedule or discussion guide), which consists of a list of questions the researcher wants to ask about the topic (Klenke 2016c:128). The structured interview protocol typically includes close-ended questions where the interviewee is asked to choose between several predetermined answers. For example, the question "How satisfied are you with your company's RL process?" may be answered as (1) very satisfied, (2) satisfied, (3) neither satisfied nor dissatisfied, (4) dissatisfied, and (5) very dissatisfied. Additionally, some questions may involve "Yes/No/Do not know" answers, which should be kept to a minimum in qualitative interviewing since the interviewees may be forced into giving responses that may not reflect their true feelings, causing validity problems (Klenke 2016c:128-129).

Although an interview protocol is used in semi-structured interviews, structured interviews offer no room for improvisation by the researcher (Billups, 2021:42; Myer & Newman, 2007:4) as the exact wording and sequence of questions are determined in advance (Billups, 2021:42; Klenke 2016c:128). Therefore, structured interviews minimise the role of the researcher during the interview without the need for probing questions (Billups, 2021:42; Myers, 2013:133). Likewise, the role of the interviewee is limited because the participant is expected to answer a set of structured questions without giving detailed information (Klenke 2016c:128). Essentially, in structured interviews the interactions between the researcher and the participant are kept to a minimum (Billups, 2021:42; Klenke 2016c:128).

The purpose of structured interviews is to ensure consistency across multiple interviews (Cassell, 2015:12; Myers, 2013:133), which enables the researcher to employ a quantitative data analysis from a qualitative data collection tool (Billups, 2021:42; Cassell, 2015:13). Additionally, the nature of the structured interview may enhance the reliability of the results since all interviewees will provide the same answers, regardless of the characteristic of the interviewer (Cassell, 2015:14). Therefore, the

general aim may be to perform some statistical tests on the data and make conclusions regarding the generalisation of the findings (Cassell, 2015:15).

Some advantages of structured interviews relate to easy coding, an inquiry with a clear direction, high reliability, the production of comparable data, and the reduction of researcher bias. Additionally, with structured interviews specific issues (or problems) can be addressed and rules or problem-solving strategies can be discovered (Klenke 2016c:129). Nevertheless, structured interviews involve several disadvantages, including limited flexibility, limited insight into new concepts, and weak insight into procedural knowledge (Klenke 2016c:129).

Essentially, structured interviews can be used in qualitative research for (1) information gathering about a participant's opinion/attitude that can be quantified for analysis, and (2) hypothetical testing where data can be quantified to test theory (Cassell, 2015:13). Evidently, structured interviews may be appropriate for mixed-method research using qualitative and quantitative data collection and analysis techniques. Structured interviewing is unsuitable for this study because the goal of this multimethod qualitative study is to gain an in-depth understanding into the RLM of consumer returns in online retailing.

7.2.2.2 Unstructured interviews

Unstructured interviews involve few, if any, pre-formulated questions, asked in no specific order, and without a set timeframe (Billups, 2021:43; Cassell, 2015:12; Myers, 2013:121). The questions are adapted according to the responses of the participants and will be different for each participant (Cassell, 2015:22). Subsequently, the researcher decides the sequence of questions during the interview conversation (Gudkova, 2018:78) to elicit an authentic account of the participant's subjective experience (Klenke 2016c:129). Additionally, unstructured interviews aim to obtain true meanings that participants assign to their experiences and the complexities of their attitudes and behaviours (Klenke 2016c:129). Therefore, the goal of the unstructured interview is to gain an insider account from an individual about a given phenomenon (Cassell, 2015:22-24).

Unstructured interviews exclude formal interview schedules and rely on the social interactions between the researcher and the participant to elicit information (Klenke 2016c:130). Therefore, an interview protocol is rarely used since the researcher explains the overall topic of the research whereafter the participants are asked to tell their own story (Cassell, 2015:22-24). Unstructured interviews are intended to increase the salience and relevance of the questions (Klenke 2016c:130). Mostly, the researcher uses open-ended questions that emerged from the conversation instead of relying on a predetermined sequence (Klenke 2016c:129). Additionally, unlike structured interviews with close-

ended questions (section 7.2.2.1), the open-ended questions of unstructured interviews often begin with words like “how” or “why” (Gudkova, 2018:78), for example, “How did you become involved in RL?” or “Why is RL important in online retailing?”. By using these open-ended questions, the researcher aims to uncover the participant’s feelings or know-how about the topic (Klenke 2016c:129).

Evidently, the researcher focusses on building rapport with the participants and encouraging them to talk about their own experience/knowledge (Cassell, 2015:22-24), which means that participants can talk freely without any restrictions (Billups, 2021:43; Myers, 2013:121). Additionally, in unstructured interviews, more than in any other interview style, the participant guides the interview process rather than the researcher (Cassell, 2015:22). Although unstructured interviewing allows for greater social interaction between the researcher and participants, the researcher needs to minimise potential biases, limit interactions (or avoid unnecessary interruptions by the researcher), resist the urge to agree or disagree with participants, avoid awkward silences and encourage expressions with neutral probes (Klenke 2016c:130).

Clearly, the more unstructured the interview becomes, the more actively the researcher needs to think throughout the interview process, which requires a high level of skills (Cassell, 2015:12). Nevertheless, unstructured interviews can offer much since it allows participants to talk freely about important experiences (Myers, 2013:122). Additionally, more complex issues can be probed, answers can be clarified, and a more relaxed conversation may elicit more in-depth and sensitive information (Klenke 2016c:130). Evidently, the advantages of unstructured interviews include, (1) complex issues can be uncovered, (2) limited understanding is needed of the problem or topic, (3) important information can be obtained, which can guide future inquires, and (4) general insight into problem-solving methods can be uncovered (Klenke 2016c:130).

However, unstructured interviews also involve several disadvantages and may be a risky approach for inexperienced researchers (Cassell, 2015:12). On the one hand, the participant may not be in a talkative mood and end up saying little, resulting in limited data needed for an in-depth understanding into the topic. On the other hand, the participant may be too talkative, and the interview may last an entire day, resulting in a large amount of data that may be irrelevant to the topic at hand (Myers, 2013:122). Additionally, data collection of unstructured interviewing is time consuming, expensive and only feasible with small samples (Collis & Hussey, 2021:121; Klenke 2016c:130). Consequently, the disadvantages of unstructured interviews include, (1) being time consuming, (2) attention is not focussed on the given issue, (3) limited relevant information is offered, and (4) limited detail is uncovered on key concepts (Klenke 2016c:130).

Although unstructured interviews may be valuable for gaining insight into the RLM practices from industry experts, this study relies to some extent on theory (deductive approach) and the experience of the researcher, which means that an unstructured interview style is less appropriate for this study. Accordingly, the interview style of this study is semi-structured interviewing, which is discussed next.

7.2.2.3 Semi-structured interviews

Semi-structured interviews fit somewhere between structured and unstructured interview styles, involving some preformulated questions, but without a strict adherence and specific order to them (Collis & Hussey, 2021:121; Myers, 2013:122). In contrast to structured and unstructured interviews, semi-structured interviews associate with qualitative research designs that leave more flexibility for both the researcher and participant with a clear list of topics the researcher wants to discuss (Van Zeeland *et al.* 2021:3). Consequently, the subject/topic (or research aim) guides the questions asked in semi-structured interviews, but the mode of asking follows an unstructured interviewing approach (Klenke 2016c:131), meaning that the researcher must improvise and allow new questions to emerge from the conversation (Collis & Hussey, 2021:121; Myers, 2013:121). Essentially, a semi-structured interview style provides a participant with the opportunity to add important insights during the conversation, as well as affords the researcher with some direction with the preprepared questions, ensuring that the focus remains on the topic (Myers, 2013:123).

Like unstructured interviews (see section 7.2.2.2), semi-structured interviews involve a less formal (or detailed) interview protocol (Myer & Newman, 2007:4), developed around a list of topics without fixed wording or ordering of questions (Collis & Hussey, 2021:121; Klenke 2016c:131). Additionally, semi-structured interviews combine unstructured questions with highly structured questions that usually relate to specific information desired from all the participants (Merriam & Grenier, 2019:14), ensuring some consistency across the interviews (Myers, 2013:122). Evidently, the interview protocol will include a list of questions and prompts, but the researcher can deviate from the schedule, depending on the responses of the participants (Collis & Hussey, 2021:121; Cassell, 2015:12).

In terms of the question types, semi-structured interviewing involves a combination of close-ended and open-ended questions (Adams, 2015:493; Klenke 2016c:131), which usually corresponds with the research objectives/questions, asking “how”, “why”, and “what” questions (Azungah, 2018:387; Eriksson & Kovalainen, 2008:94). However, with a less structured approach to the questioning, the researcher may rephrase the questions or add additional questions that may include “what”, “who”, “where”, “when”, “why” and “how” questions, based on the participant’s answers and conversation flow (Klenke 2016c:131).

Unlike unstructured interviews, the researcher plays a larger role in the semi-structured interview process. For instance, the researcher needs to create a semi-structured interview protocol with structured and unstructured questions and demonstrate flexibility, improvisation and openness during the interview (Myer & Newman, 2007:14). Additionally, the researcher must be prepared to explore interesting lines of research, and look for surprises (Myer & Newman, 2007:17).

According to Cassell (2015:13), semi-structured interviews can be in a "distinctive format" or a "thematic format", involving different interview types and aims. The distinctive format involves several semi-structured interview types, including event-based (how participants make sense of different events), comparative (forcing participants to make comparisons), narrative (encourage participants to tell stories), biographical (gain insight from participant through chronological reflection), and visual techniques (encourage participants to project feelings or views onto a visual stimulus). Consequently, distinctive format semi-structured interview types fall outside the scope (or aim) of this study.

The thematic format involves exploratory and theoretical semi-structured interviews. The purpose of an exploratory semi-structured interview is to explore a specific organisational issue from different perspectives (Cassell, 2015:16). The researcher develops the questions around specific themes to gather information about the topic or question (Saunders *et al.* 2019:437; Cassell, 2015:16). In a theoretical semi-structured interview, theory plays a role in the structure of the interview questions and the aim is to collect data for theory development (which was the approach of this study). Consequently, the researcher thematically organises questions to explore different theoretical aspects of an organisational phenomenon (Cassell, 2015:7).

Since semi-structured interviews combine structured and unstructured interview styles, greater flexibility is possible. For instance, the content of a semi-structured interview focusses on key concepts concerning the research question, but the types of questioning (or probing) and a less-structured discussion allows for new concepts to emerge (Klenke 2016c:131). Therefore, semi-structured interviews provide some structure, while simultaneously, allow for improvisation (Billups, 2021:50; Myers, 2013:123). Evidently, the researcher can follow up on interesting issues that the participant raises, which can lead to new insight not previously anticipated by the researcher (Cassell, 2015:12). In fact, this is one of the main benefits of semi-structured interviews since the idea is to discover new realities and delve more deeply into practical or real-world situations (Myer & Newman, 2007:12).

Mostly, semi-structured interviews work well with a somewhat skilled and experienced interviewer (researcher) that may result in more benefits than other interview styles (Eriksson & Kovalainen,

2008:95). Other advantages of semi-structured interviews include, (1) positive rapport between the researcher and participant, (2) higher reliability, (3) addressing and clarifying complex issues, (4) increased consistency across interviews, and (5) reduced prejudgement by the researcher (due to less structured questioning and discussion) (Klenke 2016c:132).

Regardless, an inexperienced researcher who rigidly follows the prepared structure of questions without any improvisation and probing, may miss new lines of enquiry and valuable information from the participant during the interview (Myers, 2013:122). Consequently, the most challenging part of semi-structured interviews can be ensuring that all topics are covered and, at the same time, being prepared to probe for more in-depth responses. Furthermore, it may be difficult to compare the findings because the participants may respond to their own and somewhat varying interpretations of the same questions (Eriksson & Kovalainen, 2008:95). Essentially, the disadvantages of semi-structured interviews include the following: (1) require a skilled interviewer with ability to formulate questions during the interview, (2) require participants that can articulate appropriate answers, (3) time consuming and expensive, (4) depth of information can result in difficult analysis, (5) limited generalisability, and (6) a lack of validity (Klenke 2016c:132).

Nevertheless, with semi-structured interviews the advantages of both structured and unstructured interview styles can be obtained, and with a skilled researcher the risks and disadvantages of both styles can be minimised (Myers, 2013:123). Furthermore, the purpose of semi-structured interviews is to gather information from key informants (i.e. industry experts) who have personal experiences, attitudes, and views related to the topic of interest (DeJonckheere & Vaughn, 2019:2). Additionally, Myers (2013:123) and Eriksson and Kovalainen (2008:94) found that researchers in the field of business and management often use semi-structured interviews for qualitative research for the following reasons (DeJonckheere & Vaughn, 2019:2-3): (1) to collect qualitative, open-ended data; (2) to explore participant knowledge, experience, expertise and perceptions about a particular business topic; and (3) to delve deeply into sensitive (or confidential) information (i.e. trade secrets).

Accordingly, ***a semi-structured interview style (particularly a theoretical semi-structured format)*** was adopted in this study, using theory for the interview questions but also allowing new insights from industry experts through probing and improvisation by the researcher.

7.2.3 Roles of the researcher and participants in interviews

Both the researcher (interviewer) and the participants (interviewees) can be seen as actors in the interview data collection process. Particularly, the researcher plays the part of an interested interviewer, while the participant plays the part of a knowledgeable person in an organisation or field of study

(Myer & Newman, 2007:13). Therefore, the main role of the researcher is to ask questions and the main role of the participant is to provide the answers (Salkind, 2010:633). Evidently, through cooperation in the research process, which depends on the quality of rapport between researcher and participant, both parties act as co-creators of knowledge and meaning (Klenke 2016c:126). Nevertheless, the researcher and participants play various roles that must be understood and performed by both parties during the interview process for successful data collection (Myer & Newman, 2007:13). In the subsequent sections, the roles and skills of the researcher and the role of participants during interview data collection, will be explored.

7.2.3.1 Role of the researcher in interview data collection

Apart from the role of asking questions, the researcher must listen, prompt, encourage, and direct a participant during the interview (Myer & Newman, 2007:15). Additionally, the researcher needs physical, social, emotional and communicative skills, which embodies the act of interviewing (Klenke 2016c:134). Based on literature findings, the roles played, and skills needed by the researcher in interviewing include:

- ***Research instrument or tool***: In qualitative interviewing, the researcher is the primary data collection tool (Klenke 2016c:140) and generates interview data that align with the research purpose of the study (Roulston, 2014:298). Therefore, the researcher must develop skills, acting as a human instrument to collect and interpret interview data (Klenke 2016c:134).

- ***Transparency***: Transparency means that the researcher clearly explains the purpose and goals of the interview (Myer & Newman, 2007:12) as well the roles of gatekeepers and shareholders (Klenke 2016c:135). Additionally, the researcher needs to clarify the goals and expectations for both researcher and participant prior to the interview (Klenke 2016c:135).

- ***Flexible and insightful***: A skilled researcher must be flexible and insightful to obtain an in-depth and detailed understanding of a participant's experience (Klenke 2016c:133). Therefore, the researcher needs to be flexible and ready with subtle improvisations when the actual conversation diverges from the original order on the agenda (Adams, 2015:503).

- ***Social skills***: The researcher must be able to deal with different types of behaviour from participants (Myer & Newman, 2007:12) and cope with alternating phases of openness, withdrawal, trust, distress, and embarrassment (Klenke 2016c:133). Evidently, the researcher must show empathy, understanding, and respect to the participants and create a space for participants to share their personalities and identities (Myer & Newman, 2007:12). Participants

that feel comfortable may be more open, talkative and willing to disclose important information (Myers, 2013:119).

- ***Communication skills***: Because of the complex dynamics involved in in-depth interviewing, the researcher must be a good listener and be skilled at encouraging participants to talk (Klenke 2016c:133). A researcher that talks too much may stifle the participant and restrict the amount of data disclosed (Myer & Newman, 2007:12). Therefore, the researcher must listen intently (Myer & Newman, 2007:14) and be sensitive to nonverbal messages while interviewing (Klenke 2016c:133). Particularly, if participants become side-tracked, the researcher who attentively listens, can pick up a conversation and come back with salient points to help participants to get back on track (Bolderston, 2012:69).

- ***Problem solver***: The researcher must overcome several potential problems in the interview (also see section 7.2.4), for instance, the fear of embarrassment, the fear of exploitation (from the participant) and the fear of silence (i.e. the participant does not talk, or the researcher does not know what to say) (Myer & Newman, 2007:12).

- ***Directing and managing***: As with the other skills of listening and communication, trusting and encouraging, the researcher must be able to move and direct the interview forward toward shared outcomes (Klenke 2016c:126; Myers, 2013:119). Therefore, the researcher must give stage direction and pay attention to stage management in the interview (Myer & Newman, 2007:12). With directing the interview process, the researcher can pursue (with probing) promising avenues of interest (Adams, 2015:503) and delve more deeply into the social situation (Myer & Newman, 2007:12). However, if a participant digresses too far from the main point or questions, the researcher must be able to direct and manage the interview process, while simultaneously, avoid over-directing the interview (i.e. rigidly control the conversation) (Myer & Newman, 2007:12).

Essentially, the researcher needs to be flexible, open, emotionally intelligent, a good listener and communicator, a problem-solver and a manager/leader during the interview to establish good rapport with participants and collect information-rich data. Consequently, an aspiring qualitative researcher must learn the skill of comprehension, reflection and interpretation to ensure successful collection and analysis of interview data (Klenke 2016c:134).

7.2.3.2 Roles of participants during interview data collection

Participants/interviewees can be described as selected (or volunteering) individuals who agreed to participate in a research study by allowing the researcher to interview them (Salkind, 2010:1017). Although limited literature studies refer to the roles of participants/interviewees, a few authors indicated that the essential roles of participants in interviewing relates to participation and communication. Subsequently, the role of participants during the interview can be described as follows:

- ***Unit of analysis:*** An interviewee can be viewed as the unit of analysis in a qualitative interview study (Salkind, 2010:1017).
- ***Informant:*** Participants as the "owners" of data must be willing to disclose information and serve as active co-creators of the interview experience (Klenke 2016c:126, 135). Evidently, to be good informants, participants must be knowledgeable in the field of study and must be willing to share that knowledge during the interview (Salkind, 2010:1017).
- ***Communicator:*** Participants must listen to the questions posed by the researcher and then appropriately answer each of these question during the interview (Myer & Newman, 2007:14).
- ***Collaborator:*** Participants must expect to be treated as equal participants in the research process and must actively collaborate during the interviews (Klenke 2016c:134, 135).
- ***Contributor to research:*** Through the interview process, participants can make major contributions to research in various disciplines (Salkind, 2010:1017).

Essentially, both the researcher and participant play important roles in the interview data collection process, and both needs to collaborate (participate), communicate (talk and listen), work towards a common goal of reaching the primary research objective, and contribute to the field of study.

In the next section, potential problems of interviews as a qualitative method will be discussed.

7.2.4 Potential problems of interviews in qualitative research

According to Myer and Newman (2007:5) a researcher must understand the potential problems and pitfalls of interviews in qualitative research. Researchers may reduce the impact of potential shortcomings and challenges, if they understand, consider and address the potential problems prior to choosing and conducting interviews. Based on various literature sources, the potential problems associated with interviews in qualitative research include, (1) resources, time and effort, (2) interviewer and interviewee problems, (3) difficulties in data analysis and discussion of findings, and (4) challenges

related to organisational research in academia and practice, which will be described in subsequent sections.

7.2.4.1 Potential interview problems - resources, time and effort

Often researchers may be underestimating the resources required to recruit participants, conduct interviews, transcribe recordings and analyse the data (DeJonckheere & Vaughn, 2019:7). Likewise, the process of preparing for the interviews, organising interviews, conducting interviews, and analysing interviews takes considerable time and effort by the researcher (Adams, 2015:493; Cassell, 2015:74). Evidently, interviews as a qualitative research method can create challenges and hold-ups throughout the research process (Cassell, 2015:74).

However, the time-consuming problems of qualitative interviewing can start prior to the interview process because it requires interviewer skills and experience (also see section 7.2.4.2), which necessitate interviewer training (Klenke 2016c:134). Furthermore, finding participants in an interview study can be challenging since participants must afford considerable time and commitment; thus, interviews can also be time-consuming for interviewees (Cassell, 2015:74; King, 2004a:21).

Other time, effort and resource problems associate with developing an interview guide and managing high volumes of data for transcription and analysis, which may be challenging for master and doctoral students (or novice researchers) (Cassell, 2015:74; King, 2004a:21). Additionally, conducting the actual interview not only takes time but also involve considerable concentration from the interviewer (King, 2004a:21), which may result in interviewer fatigue and incomplete data gathering (i.e. rushing the final questions during a three-hour interview) (Myers, 2013:123; Myers & Newman, 2007:4).

Essentially, for interviews to be successful, the researcher/interviewer requires time-management skills, realistic expectations, resources, commitment and training, which will also become more evident from the subsequent discussions.

7.2.4.2 Potential interview problems - interviewer and interviewee

The problems associated with interviewer and interviewees involve, (1) interviewer-specific problems, (2) interviewee-specific problems, and (3) relational problems between interviewers and interviewees, which will be described below.

Researchers need to be smart, sensitive, composed and nimble during the interview, knowledgeable about the topic/subject (Adams, 2015:493), unbiased, and open to the process of listening and understanding the viewpoints of participants (Bolderston, 2012:69). A lack of these characteristics can

result in *interviewer problems* that relate to the way interviews are conducted, interviewer inconsistency and interviewer bias. For instance, the interviewer may fail to probe or ask follow-up questions, fail to actively listen, have a poorly-developed interview guide/protocol and/or ask questions in an insensitive way (DeJonckheere & Vaughn, 2019:7). Furthermore, interviewer inconsistency can distort the outcomes of the research due to variation in the manner that the interviews are conducted (Roller, 2016:16).

Additionally, the interviewer may affect the participants' answers, resulting in measurement error that may impact the findings and conclusions of the interview data (Salkind, 2010:637). Likewise, the interviewer may bias research outcomes by allowing personal beliefs or expectations to skew the manner of questioning and recording of responses (Saunders *et al.* 2019:447; Roller, 2016:16). However, interviewer/researcher bias is mostly unintentional and excludes deliberate provocation of false information from participants (Roller, 2016:16). Nevertheless, interviewer-related problems can be addressed through interviewer training, continuous supervision, monitoring and prompt feedback, and a well-developed interview guide with carefully worded questions (Salkind, 2010:637).

The *interviewee-related problems* include problems with answering questions, interviewee temperament or personality types and interviewee behavioural problems. For instance, interviewees may avoid answering questions or remain silent due to (1) uncertainties about the information required by the researcher, (2) not understanding the questions (or not knowing the answers), and (3) privacy issues (Klenke 2016c:133) or the reluctance to share sensitive or personal information (i.e. non-disclosure agreements with their employers) (DeJonckheere & Vaughn, 2019:7). Interviewees may also be bored with the questioning, become disinterested or fatigued if the interviews last several hours (Myer & Newman, 2007:12). Additionally, it may be hard to engage in conversation with some participants (DeJonckheere & Vaughn, 2019:7) as they may be shy, answering in short/mono syllables, or be overwhelmed by feeling inferior to the researcher (Myer & Newman, 2007:12).

Alternatively, some participants may show off (exaggerates their importance), try to reverse roles and probe the interviewer for information about other interviewees/organisations or may adopt deceptive behaviour and be dishonest about commercially sensitive matters, their positions or performance in their organisations. Furthermore, some interviewees may treat the interview as a confessional experience by revealing sensitive and confidential information about themselves or their organisation (Myer & Newman, 2007:13), which also relates to the challenges of interviews in organisational research (see section 7.2.4.4). Unlike the time constraints and interviewer problems that may be addressed through training, skills and experience, the problems related to interviewing difficult participants can affect both experienced and novice interviewers (DeJonckheere & Vaughn, 2019:7).

Therefore, it is important that interviewers are well-prepared to deal with any interviewee personality type and behaviour.

Apart from the abovementioned problems, *relational problems between interviewers* and *interviewees* may exist due to personalities, moods, and interpersonal dynamics (Klenke 2016c:134). Additionally, physical characteristics (such as gender, race, ethnicity and appearance) may weaken the relationship between the interviewer-interviewee and impact a trusting research environment needed for accurate and useful qualitative data (Roller, 2016:16). Similarly, communication problems between interviewers and interviewees may hamper the interview process and cause inefficiencies in data gathering. For instance, the interviewer/researcher may convey approval or disapproval by responding positively or negatively to the comments made by the participant, which may influence the accuracy of data collection (Bolderston, 2012:69). Likewise, a lack of trust between the interviewer and interviewee may hamper important information needed for a successful research study (Myers, 2013:123-126; Myers & Newman, 2007:4-5). Consequently, researchers must consider potential relationship problems that may occur during interviews, ensuring complete and accurate data collection.

7.2.4.3 Potential interview problems - data analysis and discussion of findings

The difficulties in data analysis relate to the nature of qualitative data, volume of data, time constraints, data management problems and methodological concerns. The subjective and comprehensive nature of interview data can cause many challenges in the analysis and interpretation of the data (Klenke 2016c:134). Mostly, interviews involve the difficult task of analysing a huge volume of data and many hours of transcripts (Adams, 2015:493). Consequently, the more in-depth the data gathered during the interview (i.e. numerous interviews that last several hours), the more challenging and time-intensive the data is to analyse (Forman & Damschroder, 2008:44).

Furthermore, managing large amounts of interview data for analysis can be challenging because researchers need to keep track of data (i.e. electronic copies of transcripts and audio files), store and password-protect data files, and retrieve files. The researcher must also condense or reduce interview data because an hour-long interview alone may generate a 20-page transcript that must be analysed. Consequently, an interview study may generate hundreds of pages of data that must be reduced, interpreted and presented as findings in articles, books, and dissertations with word/page restrictions (Roulston, 2014:306).

Finally, methodological data analysis problems can include uncertainties of analysing the interview data correctly as well as choosing the most appropriate data analysis method for accurate interpretation

of interview data (Roulston, 2014:306). Essentially, researchers must carefully plan their techniques and methods of managing and analysing interview data as to avoid these potential pitfalls.

7.2.4.4 Potential interview problems - organisational research in academia and practice

Despite the general problems related to resources, time, effort, interviewers and interviewees, and data analysis and findings, other problems relate to organisational research both in academia (university degrees or journal articles) and practice (researching organisational practices).

Mostly, in business and management research, a more positivist approach is followed with an emphasis on quantitative techniques. Particularly, supervisors of business management masters' and doctoral students may prefer quantitative techniques, due to a stronger positivist approach in the field or unfamiliarity of qualitative research and interview methods (Cassell, 2015:75). This stigma may also apply to publication in business and management journals that may prefer quantitative techniques and may find interview data unreliable because of the subjective nature of data analysis and smaller sample sizes, making generalisation difficult.

Additionally, interview challenges related to organisational research include gaining access to organisations and recruiting participants, level of entry, elite bias and high-status interviewees. As mentioned in section 7.2.4.1, interviews can be time-consuming for interviewees, which may cause problems in recruiting participants and gaining access to some organisations and occupations (King, 2004a:21; Saunders *et al.* 2019:465). Likewise, the level of entry to an organisation can cause challenges, for example, if a researcher enters at a lower level (such as interviewing a RL administrator), it may prove difficult or even impossible, to interview senior managers (such as a national RL manager) at a later stage (Myers, 2013:123; Myers & Newman, 2007:4).

In contrast, an elite bias may be the result of interviewing only a few high-status individuals (e.g. CEO and CFO) without gaining an understanding of the broader situation by also interviewing lower-level staff (Myers, 2013:124; Myers & Newman, 2007: 5). Subsequently, the findings may be limited to the information from top management of organisations, and it may be difficult to study the phenomenon (subject) holistically and comprehensively. Additionally, business executives are usually well-read, time-constrained, accustomed to dominating conversations, prominent public personalities with reputations on the line, and as such, interested in impression management (Ma, Seidl & McNulty, 2021:81). Consequently, when interviewing people of high status (such as senior managers and professionals), who may be treated with a degree of reverence in their daily interactions, the researcher must set the relationship to an appropriate level. For example, the high-status interviewee may find it offensive if the researcher is over-familiar or appear overconfident with the subject (i.e. RLM in online

retailing) (King, 2004a:19). Conversely, the high-status interviewee may patronise an overly nervous or submissive researcher, which may hamper the level of information obtained (King, 2004a:19, Ma *et al.* 2021:84).

Evidently, the researcher must be respectful, especially working with industry experts (top managers or business owners) but at the same time, confident about the research subject and own level of expertise (King, 2004a:19). Essentially, by understanding the potential problems/challenges of interviews (as discussed throughout section 7.2.3), the researcher can adequately prepare for the interview process, which can contribute to the advantages of interviews, discussed in the next section.

7.2.5 Motivating factors and advantages of interviews in qualitative research

Despite the problems and challenges of interviews (section 7.2.3), some valuable advantages can be obtained from interviews as a qualitative research method (Adams, 2015:493). Qualitative interviews can be a powerful research tool, and researchers should not only understand its challenges but also have an appreciation of its advantages (Myer & Newman, 2007:5). Particularly, when used to its full potential, a qualitative interview can be a powerful data gathering technique (Myer & Newman, 2007:5), offering researchers numerous advantages (Akinyode & Khan 2018:165; Cassell, 2015:73). These advantages, which can be viewed as motivating factors, include (1) advantages related to interviewers and interviewees, (2) advantages related to exploratory research and in-depth information, (3) flexibility and advantages related to research aims, data collection and analysis, and (4) appropriateness for organisational research, which will be discussed in subsequent sections.

7.2.5.1 Advantages related to interviewers and interviewees

Interviews in qualitative research can benefit the interviewers and interviewees in several ways. For instance, interview techniques establish rapport between the researcher and participants, which may be valuable for networking and future engagements (i.e. easier access to reinterview or obtain additional information) (Akinyode & Khan 2018:165). However, as mentioned earlier (see section 7.2.4.2), researchers need interpersonal skills to develop a rapport with the participant to encourage conversation and benefit from these opportunities (Bolderston, 2012:68).

Nevertheless, interviews give researchers the opportunity to explain questions if a participant misunderstands any question (Akinyode & Khan 2018:165). Likewise, interviews allow the participants to express their viewpoints, by using their own words rather than being restricted to predetermined response categories (such as in a questionnaire) (Bolderston, 2012:68; Klenke 2016c:134). Additionally, De Villiers, Farooq and Molinari (2021:12) observed that professional

participants (i.e. industry experts and senior managers) can be enthusiastic about their work and field of expertise, appreciating the opportunity to share their experiences and insights. Similarly, King (2004:21) indicated that participants commonly enjoy the interview experience since interviews can help them clarify their thoughts on a particular topic.

Other advantages relate to familiarity, as most individuals (such as industry professionals) are familiar with the term interview and may understand the expectations surrounding an interview, which may help the researcher at the recruiting stage as participants will know what to expect (Cassell, 2015:73). Essentially, interviews can benefit both the interviewers and interviewees and provide high credibility and face validity, allowing researchers the flexibility to apply their knowledge, expertise and people skills to explore interesting or unexpected ideas raised by participants (Klenke 2016c:134), which associates with other advantages (i.e. exploratory research and flexibility) discussed below.

7.2.5.2 Advantages related to exploratory research and in-depth information

As mentioned in section 7.2.5.1, interviews can provide researchers with the opportunity to obtain valuable information from the experiences, expertise and viewpoints of participants (Klenke 2016c:134). Furthermore, qualitative interviews are ideal for examining topics, exploring different levels of meanings (King, 2004a:21) and giving insights (or a better understanding) about the topic for further investigation (Akinyode & Khan 2018:165). Consequently, interviews allow researchers to conduct exploratory research about a topic or field of study (Akinyode & Khan 2018:165).

Additionally, the researcher can adapt the questions to explore emerging topics and obtain in-depth information from participants during interviews (Bolderston, 2012:68; Saunders *et al.* 2019:444), which is not possible with quantitative methods (such as surveys) or other qualitative methods (such as observations or document analysis) (King, 2004a:21). Therefore, interviews are appropriate when more than a few of the open-ended questions require follow-up queries for further exploration (Adams, 2015:493-494; Collis & Hussey, 2021:121). Essentially, interviews can be valuable if limited knowledge about a topic/subject is available, allowing a researcher to conduct exploratory research, obtain in-depth information about a topic and create new knowledge (Akinyode & Khan 2018:165).

7.2.5.3 Flexibility and advantages related to research questions, outcomes and organisational research

Interviews are highly flexible and can be used for various research questions, within a variety of epistemological positions (Cassell, 2015:73). In other words, interviews are adaptable and can be used to answer several types of research questions, making it one of the most flexible research methods

available (King, 2004a:20). Furthermore, interviews are suitable for probing and asking key informants (such as managers) open-ended questions, enabling the researcher to obtain unchartered (or new) knowledge and information that can be used to address a problem (Adams, 2015:493). The flexibility of interviews also relates to different interview styles (such as structured, semi-structured and unstructured styles) and both qualitative and quantitative forms of analysis, which can enhance the research outcomes and findings of a study (Cassell, 2015:73).

The final motivating factors for interviews relate to organisational research. According to Cassell (2015:74), interviews can be applied to any field but added that interviews are particularly suited for studies interested in organisational practices and the experiences of key individuals who can answer questions regarding the subject. Additionally, interviews can address focused questions about certain aspects of organisational life, for instance, specific decision-processes and the management of processes (King, 2004a:21). While interviewing business executives can be challenging (see section 7.2.4.4), top executives, CEOs and senior managers frequently possess a special understanding of management practices, enabling researchers to obtain valuable information and insights in to organisational practices and strategies that are frequently unattainable through other data collection methods (e.g. questionnaires) (Ma *et al.* 2021:83-84).

Essentially, the possibility of adapting questions (during the interview) and using different types of questions (open and close-ended questions) and/or interview styles (i.e. semi-structured style), makes interviewing a flexible and appropriate method that can be used to answer the research questions, provide new knowledge and reach meaningful conclusions. Additionally, the interview method can be used for a variety of purposes, depending on the research objectives and scope of the study (Cassell, 2015:4), and can be suitable for gaining valuable insight from business executives or industry professionals on appropriate organisational practice (Ma *et al.* 2021:83). In sum, Cassell (2015:75) suggested that the advantages of interviews in terms if meaningful insights and high-quality data far outweigh the problems and challenges of interviews (as discussed in section 7.2.3), making interviews a valuable research method.

Based on the abovementioned motivating factors (throughout section 7.2.5), *the interview method is appropriate for this study as it affords the researcher with the flexibility to explore RL processes and practices based on inputs from industry experts (professionals and senior management) to obtain insight into (1) types of consumer returns, (2) RL processes, (3) RL practices and (4) RLM factors in online retailing.*

In the next section, the methodology and application for the interview process of industry experts will be discussed.

7.3 INTERVIEWS WITH INDUSTRY EXPERTS – METHODOLOGY AND APPLICATION

Interviewing involves several steps, namely, determining the interviewees, preparing for the interview, and conducting the interview (Salkind, 2010:633). Since this study involved a thematic semi-structured interview style, the steps described by DeJonckheere and Vaughn (2019) were adapted to explain the methodology and practical process of the interviews with industry experts. Table 7.1 provides an overview of the research process (sequential steps) followed for the semi-structured interviews with industry experts.

Table 7.1 Overview of the interview process with industry experts

Stage	Process of interviews with industry experts
1	Defining the purpose and research question of interviews with industry experts
2	Considering ethics issues and practices of interviews with industry experts
3	Developing the interview protocol for interviews with industry experts
4	Sampling procedures and identifying participants for interviews with industry experts
5	Pre-interview planning for interviews with industry experts
6	Conducting the interviews with industry experts
7	Post-interview reflection
8	Data analysis of interviews with industry experts
9	Demonstrating the trustworthiness strategies employed in interviews with industry experts

Source: Compiled by the researcher from DeJonckheere and Vaughn (2019:3)

In this section, the methodology as well as the practical application of the abovementioned steps will be given, to explain the research process of interviews with industry experts.

7.3.1 Stage 1: Defining the purpose and research question of interviews with industry experts

The aim of the interviews with industry experts was to (1) *determine consumer return types and RL processes in online retailing, based on inputs from industry experts (SRO-5)*, (2) *explore and identify important RL practices for managing consumer returns in online retailing, based on inputs from industry experts (SRO-6)*, and (3) *investigate and determine important factors for the effective RLM of consumer returns in online retailing (SRO-7).*

In multimethod research designs, defining the purpose and framing the research question for each method can be crucial, affecting when, to what extent, and in what way data from different methods were integrated (Brannen & O'Connell 2015:260). Evidently, the purpose of the interviews with industry experts was to gain practical insight from industry on the main themes of the study, namely, consumer return types, RL processes, RL practices and important factors for the effective RLM of consumer returns in online retailing, which was also used to (1) triangulate (confirm/compare) the

findings from the QCA on RL literature (consumer return types, RL processes and RL practices), (2) identify themes that can contribute to the effective RLM of consumer returns in online retailing, and (3) develop a framework based on the thematic analysis of interview findings, which can contribute to the final framework for effective RLM of consumer returns in online retailing.

With the above aims in mind, the main research questions for the interviews with industry experts include:

1. *What are the reasons and types of consumer returns in online retailing?*
2. *What are the RL processes of consumer returns in online retailing?*
3. *What are important RL practices for managing consumer returns in online retailing?*
4. *What are important factors for the effective RLM of consumer returns in online retailing?*

The focus of the first two questions was to triangulate the findings of the interviews with the findings QCA of RL literature findings through a deductive approach and a descriptive analysis. The focus of research question three above was to triangulate the interview findings with the QCA findings through an inductive approach and a reflexive thematic analysis. The final question focused on identifying important factors for the effective RLM of consumer returns from the interview findings through an inductive approach and a reflexive thematic analysis. These deductive and inductive approaches will be discussed in section 7.3.8 focussing on the thematic analysis (TA) of interviews with industry experts. Regardless of the approach, all the questions that drove the interviews with industry experts aimed to contribute to the primary objective/question of the study, which was to develop a framework for effective RLM of consumer returns in online retailing.

In the next section, the ethical consideration for interviews with industry experts will be discussed.

7.3.2 Stage 2: Consider ethics issues and practices for interviews with industry experts

A “good” qualitative study is one that was conducted in an ethical manner, adding to the trustworthiness of a study (Merriam & Grenier, 2019:29). In chapter 3, the philosophical approach of the study was explained, which indicated that axiology, referring to the role of values and ethics in research, can be added to the ontology, epistemology and methodology of a study (Klenke, 2016a:17). In qualitative research, ethical dilemmas mostly emerge during data collection and dissemination of findings (Merriam & Grenier, 2019:30). However, an ethical attitude must be present from the start of a research study, incorporating integrity, objectivity, respect, sensitivity and tact towards participants throughout the research process (DeJonckheere & Vaughn, 2019:4). In chapter 1 (see section 1.7), a brief outline of the ethical implications of the study was given, which mentioned the ethical principles outlined in Policy on Research Ethics of the University of South Africa (2016).

The focus of this chapter will be on the ethical considerations for the primary data collection method of qualitative interviews. Although ethics must be considered at an early stage (stage 2) of the interview process (before recruitment and data collection), ethical practices must be applied throughout the interview process. Therefore, the ethics issues and practices covered in this section, applies to the (1) pre-interview process, including interview design stage (i.e. formulating research questions and aim) and gaining access to participants, (2) during the interviews (data collection), and (3) post-interview process, including data analysis and presentation/publication of findings. Figure 7.3 provides an overview of ethics at different stages of the interviews with industry experts.

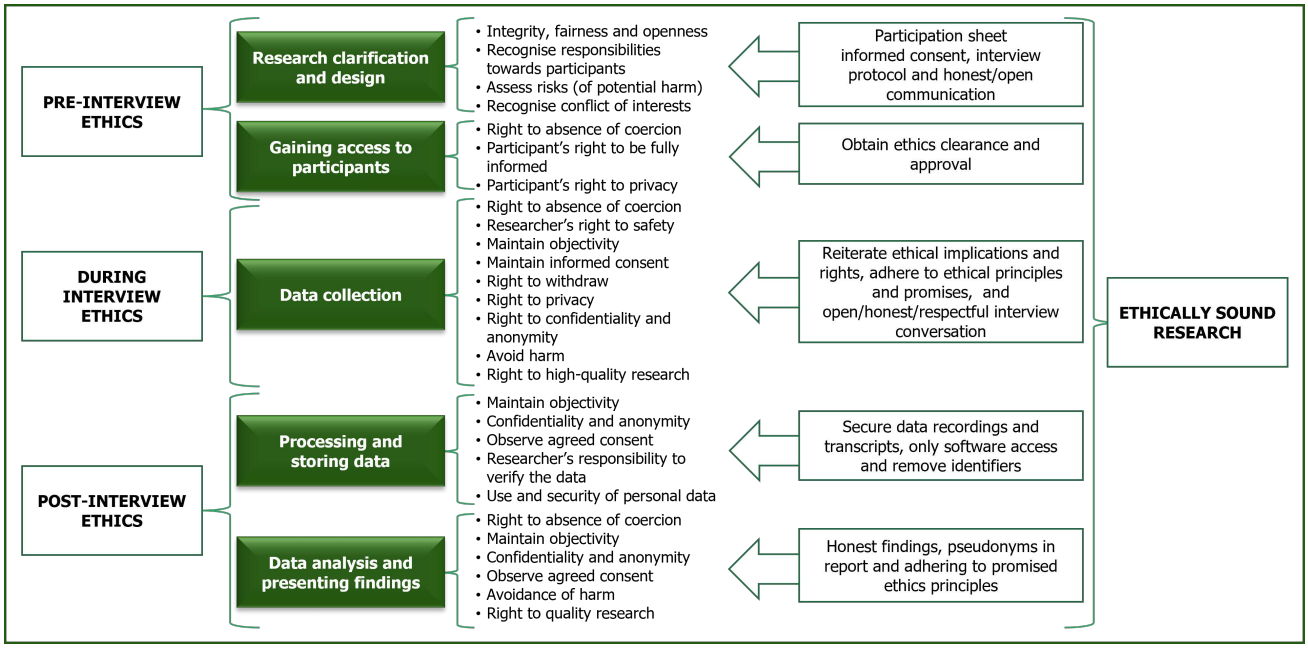


Figure 7.3 Ethics during different stages of the interview process
Source: Compiled by researcher and adapted from Saunders *et al.* (2019:264)

In subsequent sections the ethics applied during the different stages of the interviews with industry experts as presented in Figure 7.3, will be discussed.

7.3.2.1 Pre-interview ethics

Pre-interview ethics start during the research design stage, continues with gaining access to prospective participants and ends with pre-interview communication with participants. In the early stage of the research, ethics in interviewing involve permissions, which include obtaining ethics approval from ethics committees (internal) and obtaining permission from third parties and gatekeepers (external) (Myer & Newman, 2007:23).

7.3.2.1.1 Ethics approval for interviews with industry experts

According to the Policy on Research Ethics of the University of South Africa (Unisa) (2016) students and academics require ethics clearance before data collection. *Therefore, the researcher applied for ethics clearance from the Research Ethics Review Committee (RERC) of the College of Economic and Management Science (CEMS), Unisa, before the interviews with industry experts.*

Researchers must complete a lengthy *application form*, providing details on the risk level of the study, research proposal (including purpose and objectives of the research), research design and methodology, including primary data collection and data analysis techniques, and trustworthiness of the research. Additionally, *approval letters* from institutions to assist with the research must be attached (see Appendix E.3), a *participation sheet* must be completed (Appendix E.1) and the *research instrument* (interview protocol) (Appendix D.1) must be submitted. Evidently, the application for ethics clearance was a rigorous process, which enhanced the integrity and objectivity of the study and recognition of responsibilities towards participants.

Ethics clearance was obtained on 14 June 2018, which allowed the researcher to continue with the primary data collection of interviews with industry experts in an ethically responsible manner. The ethics clearance application was extended to 2024, ensuring that the ethics principles remain valid in the finalisation of this study. Appendix E.4 provides a copy of the original and extended ethics clearance certificates for the study.

7.3.2.1.2 Ethics in gaining access and recruitment of industry experts

Before interviews and during the recruitment phase, prospective participants must be informed about the research, including the purpose of the research and the dissemination of findings (Myers, 2013:52). Potential participants must receive sufficient information and assurance to understand the implications of participation and reach a fully informed and freely given decision about participation, without any pressure or coercion (Saunders *et al.*, 2019:226). Approval usually requires that prospective participants sign a consent form agreeing to participate, after being informed of potential risks and benefits (Klenke 2016c:149), the research topic, question types and data storage (Bolderston, 2012:73).

After being carefully and truthfully informed about the research, the researcher must ask participants for their informed consent before data collection can start (Klenke 2016c:148). Informed consent entails communication between the researcher and participants that allows participants to (1) understand the consequences of participation, and (2) reach fully informed and conscious decisions about participation, without threat or intimidation (Myers, 2013:51; Saunders *et al.* 2019:257).

Evidently, the purpose of informed consent relates to protecting the welfare of each participant and promoting positive feelings before and after completing a study (Salkind, 2010:603).

According to Salkind (2010:605) three conditions must be met for a valid informed consent, including (1) the participant must understand the information presented, (2) consent must be voluntary, and (3) the participant must be competent to give consent. Specific elements of informed consent include:

- *Explain research* – purpose of research, potential duration of participant and description of procedures written in clear and understandable language (Leedy & Ormrod, 2021:136).
- *Describe risks* – indicate potential discomfort harm (Leedy & Ormrod, 2021:136), loss, or damages, including inconvenience or physical, psychological, social, economic, and legal risks, which might occur (Salkind, 2010:605).
- *Describe benefits* – indicate the benefits to the participants and society (Leedy & Ormrod, 2021:136), including scientific knowledge, insight, training and learning, empowerment, and future opportunities, psychosocial benefits (e.g. increased self-esteem), and community or organisational benefits (e.g. improved policies) (Salkind, 2010:605).
- *Describe alternatives to participation* – provide additional resources and alternative data collection methods (e.g. telephone interview or online meeting software) (Salkind, 2010:605).
- *Assurance of confidentiality or anonymity* – keep the names and other identifying information associated with the interviewee anonymous (Klenke 2016c:149; Leedy & Ormrod, 2021:136) (e.g. using numbers or code names instead of the names of the participants).
- *Contact details* – provide contact information of the researcher or other individual(s) (i.e. supervisor and ethics chair) that participants can contact for any questions or for ethical concerns (Leedy & Ormrod, 2021:136; Salkind, 2010:605).
- *Describe right of withdrawal* - participation is voluntary and participant can withdraw from the study at any time without penalty (Leedy & Ormrod, 2021:136; Salkind, 2010:605).
- *Copy of consent* – a copy of the signed consent form must be given to participants (Salkind, 2010:605)
- *Summary of findings* – offer participants the opportunity to receive a summary of the findings (Leedy & Ormrod, 2021:137)

Salkind (2010:607) and Lobe *et al.* (2020:5) indicated that a researcher may send participants the informed consent form, which can be the most common way for online interview data collection (remote interviewing).

During the *interview recruitment stage* of this study, *prospective participants received* an email/message (call to participate discussed in 7.3.4) with the *participation information sheet* that

contained significant details about the study, including (1) introduction and information about the researcher (2) the overall aim of the research, (3) the aim of the interviews, (4) the reasons for selecting the participants, (5) benefits and risks of the study, (6) confidentiality, (7) data protection, (8) incentives, (9) ethics clearance, (10) contact details of the researcher and the ethics representative of Unisa, and (11) the informed consent form.

Additionally, participants that indicated interest in the study, *received the interview protocol* (discussed in section 7.3.3) via email, which contained further information, interviewee rights and the interview questions. Finally, selected industry experts (participants in sample) received via email, an *electronic copy of informed consent to read and sign before the interview*. All *participants* selected in the sample, *consented to take part in the study and the signed informed consent forms,* which were saved in a secure folder on the researcher's personal computer (also see section 7.3.2.3)

Essentially, the participation sheet (Appendix E.1), informed consent form (Appendix E.2) and interview protocol (Appendix D), developed during the process of ethics clearance and approved by the research ethics committee of Unisa, ensured an ethically sound pre-interview process.

7.3.2.2 Ethics during interviews with industry experts

Ethics during the interviews involve keeping pre-interview promises (made to participants), adhering to institutional ethics principles and policies and conducting interviews in a respectful, honest and harm-free manner. Subsequently, the same principles applicable to the pre-interview ethics (see section 7.3.2.1.2) applied to the ethics during the interviews (also see Figure 7.3).

Treating participants with *respect* involve respecting their time, respecting their position within an organisation and respecting their knowledge (Myer & Newman, 2007:23). In this study the *researcher treated the industry experts* with *respect* through open/honest communication, adhering to scheduled interview times, acknowledging their expertise and importance to the field, fulfilling pre-interview promises (i.e. voluntary participation) and allowing them to share their expertise and answer questions without interruptions or disrespectful comments by the researcher.

Apart from showing respect, the most important rules to be observed during the interviews involve the prohibition of causing harm to the participants, the right of participants to withdraw from research at any time, and the right to anonymity and confidentiality (Stasik & Gendźwiłł, 2018:239-240). *Protection from harm* means that the researcher protects the interviewee from physical, emotional, psychological, or any other kind of damage, which may cause psychological stress, legal or political repercussions, or ostracism of peers or staff (Klenke 2016c:149). During the interviews with industry

experts, the researcher maintained a low-risk (minor inconvenience in terms of time) and *harm-free* atmosphere, reiterating the rights of the participants. Specifically, each industry expert was assured that they can *withdraw from the interview at any stage* and *can choose not to answer specific question/s without any coercion, harm or consequences*.

Confidentiality requires that the researcher guarantees to keep the names and other identifying information associated with the participant anonymous (Klenke 2016c:149). Additionally, the principle of *autonomy* can be enhanced by giving participants the choice to decide the degree of their collaboration in the study (Cardano, 2020:69). In this study, the researcher *verbally assured the industry experts* that their details and information will be *treated as strictly confidential* and that their *identity (using pseudonyms) will be protected* throughout the study and in future publications, assuring their *anonymity*.

Using online remote interviewing, may involve *privacy* concerns, as a researcher may be intruding into participant's personal space, especially with video recording (Roberts, Pavlakis & Richards, 2021:3). Although, video recording of interviews may be common, the digital environment can lead to additional awareness and privacy concerns (Van Zeeland *et al.* 2021:2). Recording the audio alone can help protecting participants' confidentiality, especially using the participant's chosen pseudonym (e.g. P1) on the audio recording (Roberts *et al.* 2021:9). Consequently, in this study the researcher maintained a level of *privacy, anonymity and confidentiality* by conducting the *remote online interviews* by using the *audio-only* option (without video or face-to-face contact) (Klenke 2016c:149) along with audio-only recording. Furthermore, the researcher asked the industry experts for *permission to record the conversation* for accuracy and quality purposes, assuring that the recordings are kept secured without third-party access (apart from transcript and analysis software used for analysis) (see section 7.3.2.3).

Essentially, the researcher ensured that all ethical principles were maintained during the interviews with industry experts by (1) treating them with respect, (2) informing them of their rights (e.g. right to withdraw), (3) guaranteeing confidentiality, anonymity and privacy, and (4) asking for permission to record the interviews.

7.3.2.3 Post-interview ethics

Like the pre-interview and interview stages, post-interview ethics continue to maintain informed consent, confidentiality, privacy, anonymity and safety of participants (see Figure 7.3). However, these ethical principles apply to the storage and processing of data, data analysis and presentation of findings.

According to Myer and Newman (2007:17) researchers must keep recordings and transcripts confidential and secure. In this study, the researcher *stored the interview recordings and transcripts* on a personal computer and on the "cloud" (Dropbox) in a *secure and password-protected folder*. Additionally, the researcher used the *latest antivirus software*, *firewall protection* and *personal (password protected) internet services* to ensure security of the data.

Apart from the researcher and supervisor, *no third-party person had access to the data recordings and transcripts*. The researcher used Sonix, a secure online automated software transcription service, to transcribe the audio recordings (speech-to-text) (see Appendix D.3). Furthermore, the researcher solely accessed and used ATLAS.ti software for the analysis of transcriptions, which was securely saved on the researcher's personal laptop. *Other interview documentation*, including the emails between the researcher and participants and informed consents forms (see section 7.3.2.1.2) were *saved in an encrypted folder* and then removed from the researcher's Microsoft Outlook inbox. All electronic records will be *stored for a maximum of five years*, whereafter the records will be securely deleted from the Dropbox folder and hard drive of the researcher's computer.

Additional ethics principles in the qualitative data analysis stage of interviews include anonymity and confidentiality, which must be protected throughout the transcription process (Cassell, 2015:47). Additionally, the researcher must practise integrity and quality in data analysis to produce most authentic and valid conclusions (Schutt & Chambliss, 2014:354) without prejudice to participants' right to privacy (Cardano, 2020:69). Consequently, *a pseudonym was assigned to each industry expert* (e.g. P7) to disguise their identities and maintain confidentiality and anonymity during presentation of findings (Myers, 2013:51). Table 7.6, in section 7.3.4.5, lists the details on the final sample of the study, including the pseudonyms assigned to the participants.

Essentially, after the interviews with industry experts, the researcher adhered to the ethical commitments made to the participants and intuition, by keeping transcripts/recordings and the technology confidential and secure (Myer & Newman, 2007:23). The researcher practised honesty and transparency throughout the pre-interview, interview and post-interview stages, about the research methods, data, and presentation of findings (Myers, 2013:50), producing a trustworthy and ethically sound research study (as illustrated in Figure 7.3).

7.3.3 Stage 3: Developing the interview protocol for interviews with industry experts

Besides the importance of participants consenting to be interviewed, the most important element in interview data collection is the content of an interview protocol (Adams, 2015:496). The purpose of the interview protocol is to achieve the research objectives of a study by including carefully considered

information and questions (Klenke, 2016c:132). Evidently, designing good questions and developing a well-crafted interview protocol (or discussion guide) is essential for the success of a study (Adams, 2015:496; Bolderston, 2012:69). Although the interview protocol for this study was developed during the ethics clearance pre-interview stage (see section 7.3.2.1), this section will provide details on the interview protocol structure, forming part of stage 3 of the interview process.

Depending on the interview style (structured, semi-structured and unstructured) (see section 7.2.2), interview protocols vary in level of detail and structure (King, 2004a:15). Generally, an interview protocol lists the topics that the researcher wants to cover during the interview (King, 2004a:15; Silverman & Patterson, 2021:70) and outlines the purpose of the study, ethical information, the main interview questions, probes and follow-up questions (Bolderston, 2012:69). Roller (2016:18) explained that the interview protocol must start broadly and progressively narrow to subject-specific matters. In other words, a funnel approach can be used in the interview protocol to lead the researcher on a path towards meeting the research objectives (Roller, 2016:19).

Based on various literature sources, the suggested structure of an interview protocol includes (1) the introduction, (2) opening questions, (3) research-specific questions, and (4) closing questions and the conclusion. In subsequent sections, a theoretical explanation of the interview protocol structure will be provided to motivate the structure of the interview protocol used in the interviews with industry experts. Where appropriate, examples from the interview protocol used in this study were added to the theoretical discussion, however, the final interview protocol (after piloting) can be viewed in Appendix D1.

7.3.3.1 The introduction of the interview protocol

The introduction of the interview protocol (also known as the interview preamble) provides important information about the study, setting the tone of the interview (Cassell, 2015:28). Specifically, the introduction can include: (1) *details of the researcher* (interviewer) and other parties/institutions associated with the research (i.e. supervisor and university), (2) *purpose of the research*, (3) *the objective of the interview*, (4) *interview process* or summary of the interview questions, (5) *reasons for recruiting* the participant, (6) *ethics* (issues of consent, assurance of confidentiality and anonymity, and permission to record the interview), (7) intended *use of the interview data*, and (8) a question that affords participants with an opportunity to comment or *ask any questions* (Bolderston, 2012:69; Cassell, 2015:28; Myer & Newman, 2007:14; Roller, 2016:18).

The interview protocol for this study covered these abovementioned elements, which was basically a summary of the participant information sheet, provided during the recruitment stage. The introductory part of the interview can be viewed in Appendix D.1.

7.3.3.2 Opening questions in the interview protocol

The opening questions in the interview protocol must be designed to (1) ease participants into the interview, (2) set the foundation for the interview questions and (3) make participants feel more comfortable for the duration of the interview (Cassell, 2015:30). Opening questions can relate to the content of the overall research question, which enable participants to talk about their experience (DeJonckheere & Vaughn, 2019:5). Additionally, the researcher can ask participants for demographical details, for instance, ethnicity, age, job title or any other details that associate with the research objective (Cassell, 2015:31).

Some examples of opening questions in the interview protocol include, "can you tell me more about yourself?", "what is your job title and how many years of experience do you have in your current job?", "what is your level of expertise in the field?", or "can you tell me more about your background?" (Cassell, 2015:30; Myer & Newman, 2007:16). Any one of these questions may encourage participants to open-up, talk about something they feel comfortable with, and provide valuable information (Cassell, 2015:30), which can enrich the findings and add to the validity and trustworthiness of a study (Myer & Newman, 2007:16).

In this study the *opening question* in the interview protocol was *"Can you please tell me more about your background and level of expertise in the field of RL?"* (Appendix D.1). Essentially, the opening questions can be useful for setting the stage in the interview before delving into more research-specific (key) questions (Cassell, 2015:30).

7.3.3.3 Research-specific questions in the interview protocol

Researchers can identify research-specific questions from academic literature, own knowledge and experience, informal preliminary discussions with other individuals (knowledgeable in the field) and exploratory research (King, 2004a:15; King, 2004b:258). Research-specific questions can be divided into sections around various themes or different aspects of the research objectives (Cassell, 2015:30). The *interview protocol* for the interviews with industry experts *consisted of two parts*, with different research objectives, the *first set of research-specific questions* (Section B) was *based on the research objective related to consumer returns and RL processes* (SRO-05), and the s*econd set of research-specific questions* (Section C) was *based on the research objectives related to RL practices and RLM*

factors (SRO-06 and SRO-07) (see section 7.3.1). The questions for each section were identified from literature, which was also used for the coding framework from the QCA of RL literature (see Appendix A.2). Appendix D.1 shows the research-specific questions included in Section B and Section C of the interview protocol.

In terms of the interview protocol structure, research-specific questions can include main questions and follow-up questions to elicit in-depth and detailed information from participants (Klenke 2016c:132). The *main questions* in the interview protocol must be developed to encourage participants to freely talk about the topics or themes of the study (DeJonckheere & Vaughn, 2019:5). Like the interview protocol structure, main interview questions in the protocol can follow a funnel approach, starting with broader questions that can be the foundation for narrower more research-specific questions (Roller, 2016:18). For example, a *broader main question* can be, "*can you tell me about the parties involved in RL*?", while a *narrower main question* can be "*can you please tell me more about the information systems and technologies implemented to manage the RL processes of consumer returns in online retailing*?". Nevertheless, both broader and narrower main questions must relate to the (1) purpose of the interview, (2) research objectives of the study and (3) phenomenon under investigation (DeJonckheere & Vaughn, 2019:5; Klenke 2016c:132; Roller, 2016:18).

The main research-specific questions in the interview protocol can be supplemented with *follow-up questions*, which consist of planned and unplanned probing questions (Cassell, 2015:30). Planned probing questions can be used to answer specific aspects of a main question or to elicit more details from a participant (DeJonckheere & Vaughn, 2019:5). Therefore, *planned probing questions*, like "*can you elaborate on that*?" or "*can you give me an example of that*?", can increase the richness and depth of main question responses and can demonstrate the level of detail required by the researcher (Klenke, 2016c:132).

In contrast, *unplanned probing* questions arise during the interview and depend on the responses of participants. Consequently, during an interview, unplanned probes and questions can be added to the interview protocol to obtain greater details and information from participant-specific responses (DeJonckheere & Vaughn, 2019:5). Additionally, through unplanned questions, like "*if I understand you correctly…*?", a researcher can request clarification and encourage participants to elaborate more about their statements (Cassell, 2015:31). Evidently, the interview protocol can be modified during interviews by adding new probes or even whole topics based on participant responses (King, 2004a:15) (also see section 7.3.6).

Essentially, the research-specific questions in the interview protocol aims at achieving rich and in-depth information, by exploring key words, ideas and themes related to the research question(s) and using follow-up questions to encourage participants to reveal more information (Klenke, 2016c:133).

7.3.3.4 Closing questions and conclusion in the interview protocol

The conclusion part of the interview protocol can cover open-ended questions, snowball referrals, future communication and closing comments. The open-ended question in the conclusion aims to add new insight or additional information, like "do you have any other questions or anything else to add?" (Cassell, 2015:31; Myers, 2013:141). Importantly, the closing questions in the interview protocol need careful consideration and must be designed to (1) make participants feel satisfied with the information they provided, and (2) satisfy the researcher with the interview outcomes (i.e. covered all areas of interest) (Cassell, 2015:31). In this study, the *open-ended closing question* was, *"Do you have anything to add to our discussion that you believe is important in the RLM of consumer returns in online retailing?"*.

One of the most important aspects in the conclusion of the interview protocol involves snowballing or snowball sampling, which involve asking a participant to recommend other individuals that may qualify as participants in the study (Cassell, 2015:31; Myers, 2013:141; Myer & Newman, 2007:15). Since *snowball sampling* was used in this study (see section 7.3.4.1) the interview protocol included the following question: *"Do you know of any other individual/s that qualify to participate in this study?"*.

Additionally, the interview protocol conclusion can include future contact possibilities, for example, follow-up emails to clarify any uncertainties in participant responses (Myer & Newman, 2007:15) and, if requested, emails to provide feedback on the findings (e.g. an executive summary of findings will be sent to the participant) (Myer & Newman, 2007:15). In this study, *future communication* in the conclusion of the interview protocol included: *"Do you want to a summary of the findings once the research has been published?"*.

Finally, the conclusion of the interview protocol must conclude with thanking the participants, ending the interview on a positive note (Cassell, 2015:31; Myers, 2013:141). For example, in this study the *closing remarks* included, *"Thank you for taking the time out of your busy schedule to meet with me. You have been very helpful."*

In sum, the development of the interview protocol starts early in the interview planning stage but can be modified during interviews, by using probes/topics that emerged spontaneously in the interview and dropping or re-formulating incomprehensible questions or questions that consistently fail to elicit

responses relevant to the research question(s) (King, 2004a:15). Nevertheless, the interview protocol must be well-designed before data collection starts, enabling the researcher to adequately prepare for the interviews and conducting successful interviews. Appendix D.1 provides the final version of the interview protocol that was used during the interviews with industry experts.

In the next section, the sampling and recruitment procedures for the interviews with industry experts will be discussed.

7.3.4 Stage 4: Sampling procedures and identifying participants for interviews with industry experts

In general, sampling can be defined as "a selection of specific data sources from which data are collected to address the research objectives" of a study (Gentles *et al.* 2015:1775). Sampling may involve the selection of participants using probability sampling and nonprobability sampling techniques (Salkind, 2010:1304; Salkind, 2021:80). The goal for both probability and nonprobability samples, is to generalise information collected from the sample to the relevant population (Salkind, 2010:1396; Salkind, 2021:80).

However, probability sampling techniques are not always appropriate for a research study because of insufficient information available about a population, limited access to potential participants, or a research design that involves nonstatistical criteria (Salkind, 2010:922; Saunders *et al.* 2019:296). Additionally, sampling for qualitative interview methods (unstructured or semi-structured) is usually purposeful in nature (Bolderston, 2012:68; Shaneen *et al.* 2019:25), involving non-probability techniques (Leedy & Ormrod, 2021:272; Salkind, 2010:924). Therefore, this study used *non-probability sampling* techniques to identify industry experts.

According to Daniel (2012:88) five main steps can be followed to select and recruit a non-probability sample, including (1) define the target population and choose the sampling techniques, (2) identify the inclusion and exclusion criteria, (3) create a plan to recruit participants that satisfy inclusion and exclusion criteria, (4) determine the sample size, and (5) finalise the sample of selected participants. Based on these steps of Daniel (2012:88), the subsequent sections will provide a theoretical and practical overview of sampling procedures and recruitment methods for the interviews with industry experts.

7.3.4.1 Target population and sampling techniques

The first important step in sampling procedures and identifying participants involve identifying the population or entire group of interest, which include all participants of theoretical interest to the researcher (Salkind, 2010:1303; Salkind, 2021:80). In contrast to the entire population (e.g. all industry experts in RL), a target population can be a more manageable starting point for sample selection (Saunders *et al.* 2019:295). Because one of the aims of the study was to gain input from industry experts in the field of RLM, the *target population* was individuals that are *industry experts in RL with knowledge or work(ed) in the online retailing industry in South Africa*.

Once the targeted population was defined, it was necessary to choose the most appropriate sampling technique to recruit the participants from the targeted population. A sample can be described as a subset of a population, which can be a set of people, animals, countries, regions, organisations and institutions. The notion of subset implies that a sample is smaller than the population to which it is connected (Salkind, 2010:1395; Salkind, 2021:80). Researchers mostly prefer a sample over an entire population (known as a census) because a sample is cost-effective, convenient and fast with the potential to improve the quality and reliability of a research study (Salkind, 2010:1304).

As mentioned in the introduction of section 7.3.4 the sampling for this study was *a non-probability sampling*. In nonprobability sampling, randomisation is not important in selecting a sample from a population, therefore, not all potential participants have an equal chance of selection (Etikan *et al.* 2016:1; Salkind, 2010:1305). Instead of extracting a sample from an existing and a clearly defined population, non-probability sampling often begins with a sample and then creates a population (e.g. RL experts in South Africa) that fits the sample (Salkind, 2010:1396). Evidently, nonprobability sampling is conducted without the knowledge that those chosen in the sample are representative of the entire population (Salkind, 2010:922).

Although various nonprobability sampling techniques can be used in qualitative research (such as theoretical sampling and expert sampling), the four main nonprobability sampling types include convenience sampling, purposive sampling, quota sampling and snowball sampling (Salkind, 2010:1396; Trotter, 2012:399). Table 7.2 provides an overview for the main non-probability sampling techniques, including the definition/description, reasons and purpose, appropriate research studies and other names or types.

Table 7.2 Overview of non-probability sampling techniques

Technique	Definition/description	Reasons and purpose	Appropriate research studies	Other names / types
Convenience	Convenience sampling is a nonprobability sampling technique in which participants are selected	Affordable and easy to conduct, proximity and availability of participants close to the researcher	Mostly suitable for qualitative research designs but can also be used in surveys	Accidental sampling, availability sampling and haphazard sampling

	from the population because of their availability and convenience to the researcher (Daniels, 2012:82).	(Etikan, et al. 2016:2; Salkind, 2010:1396; Shaneen *et al.* 2019:36).	(quantitative designs).	(Daniels, 2012:83; Salkind, 2010:1396; Saunders *et al.* 2019:324).
Purposive	Purposive sampling is a nonprobability sampling technique in which participants of a target population are selected based on inclusion and exclusion criteria that fits the purpose of a study (Daniel, 2012:87; Etikan et al. 2016:1; Saunders *et al.* 2019:321).	Selection of participants, due to their special significance in a study (Collis & Hussey, 2021:119; Salkind, 2010:923). Aim to understand a phenomenon (Collis & Hussey, 2021:119; Forman & Damschroder, 2008:43; Suter, 2012:350). Enables the selection of participants who can answer the research questions (Shaneen *et al.* 2019:28).	Appropriate for qualitative and exploratory studies aimed at contributing new knowledge to a certain field of study (Salkind, 2010:924). Longer research (i.e. doctoral thesis) to reach conclusions (Etikan, et al. 2016:3).	Judgemental, expert and informant sampling (Daniels, 2012:88).
Quota	Quota sampling is a nonprobability sampling technique in which the targeted population gets divided into mutually exclusive subcategories (Daniel, 2012:102). Close to stratified random sampling (probability sampling) but excludes random selection of respondents from a population (Salkind, 2010:1396). Normally, researchers solicit participation from the subcategories until the targeted number of participants are recruited (Daniels, 2012:103).	Select quotas of participants that fit into a specific subcategory (i.e. number of men and women needed in the sample) (Salkind, 2010:1305). Combination of convenience and purposive sampling techniques because the researcher targets a specific number of participants with specific characteristics to satisfy the aim of a study (Daniels, 2012:103). Guarantees inclusion of participants of sub-population and less data errors (Daniels, 2012:106).	Short-term qualitative or quantitative research projects Surveys, educational and gender-based studies.	Accidental quota, purposive quota, stratified purposive quota, demographic balancing, purposive heterogeneity sampling (Daniels, 2012:103). Proportional and non-proportional quota sampling types (Daniels, 2012:104).
Snowball	Snowball sampling involves seeking information from key informants about details of other key informants that fit the purpose of a study (Suri, 2011:72). Snowball sampling often takes place during data collection (such as during interviewing) in which each person interviewed can become a source of new contacts to other potential participants (Gudkova, 2018:88).	Hard-to-reach populations (Leedy & Ormrod, 2021:272) Peers of hidden population are better equipped to locate and gain participation of other members of targeted population than the researcher (Daniels, 2012:111). Increases the initial sample (Cassell, 2015:34; Shaneen *et al.* 2019:34).	Qualitative research interviews	Referral, respondent/participant driven, nominated sampling (Daniels, 2012:111).

Source: Compiled by the researcher

Based on Table 7.2, purposive and snowball non-probability sampling designs were chosen for the interviews with industry experts. The specific *purposive sampling* used for this study, included judgemental sampling, expert and informant sampling. In *judgement sampling*, the researcher uses subjective judgement to select specific participants with qualities that fits the research aim of a study (Daniel, 2012:91; Etikan, *et al.* 2016:2; Saunders *et al.* 2019:321). In *expert sampling*, participants are selected because of their expertise, and in *informant sampling*, participants are selected for their special knowledge in a subject area (Daniel, 2012:91). The specific criteria used for identifying the industry experts with purposive sampling techniques will be discussed in section 7.3.4.2.

Snowball sampling was selected because industry experts can be *hard-to-reach* due to busy schedules (i.e. top managers and directors), absence of available contact details and access problems. Furthermore, snowball sampling can *complement purposive sampling*, which requires access to key informants/participants to satisfy the research objective(s) of a study (Suri, 2011:66). Evidently, snowball sampling can help the researcher to obtain additional interview data by asking potential participants and industry experts for contact details of other potential participants (Myer & Newman, 2007:14; Shaheen *et al.* 2019:34). Lastly, industry experts can be limited to a few individuals,

especially in specialised areas (such as RL in online retailing), which may result in a smaller sample. Using snowball sampling can address this problem by *increasing the sample size*.

More details on selecting industry experts using purposive and snowball sampling techniques will be given in the subsequent sections.

7.3.4.2 Inclusion and exclusion criteria to select industry experts

The inclusion and exclusion criteria, make up the selection or eligibility criteria that can be used to rule participants in or out from the target population and sample in a research study (Salkind, 2010:629). Therefore, inclusion and exclusion criteria set the stage for recruiting the most appropriate participants in a study (Hornberger & Rangu, 2020:2). Establishing inclusion and exclusion criteria for study participants is a standard and necessary practice for high-quality results and meaningful findings (Patino & Ferreira, 2018:84). Consequently, inclusion and exclusion criteria directly influence the recruitment and feasibility of a study (Hornberger & Rangu, 2020:3). Therefore, researchers must not only define the appropriate inclusion and exclusion criteria before recruitment but also evaluate the potential impact of the criteria on the validity of results (or trustworthiness of findings) of a study (Patino & Ferreira, 2018:84).

Some common pitfalls associated with inclusion and exclusion criteria include, (1) using opposite criteria to define the inclusion and exclusion criteria (for example, the inclusion criterion is participants that speak English and the exclusion criterion is participants that do not speak English), (2) selecting inclusion/exclusion criteria unrelated to answering the research question (for example, adding gender to a study that focusses on non-gender issues), and (3) not describing key inclusion/exclusion criteria that relates to the aim of study (for example, not defining the education level of participants that needs to be specialist in the field of study) (Patino & Ferreira, 2018:84).

Evidently, to screen the eligibility of participants, researchers must use valid and reliable criteria that must be applied in a consistent and repeatable manner (Salkind, 2010:629). In other words, well-defined and clear inclusion and exclusion criteria can ease replication for other researchers, which can enhance the significance and reliability of the findings (Hornberger & Rangu, 2020:3,4) (also see section 7.3.9).

The inclusion and exclusion criteria developed in this study aligned with the sampling techniques in terms of the criteria of judgement (judgemental sampling) and specialised knowledge (expert sampling and informant sampling) because the aim was to get input from individuals that qualify as industry experts in RL. In the subsequent sections, the inclusion and exclusion criteria of industry experts will be discussed.

7.3.4.2.1 Inclusion criteria of industry experts

Inclusion criteria are a set of predefined characteristics that can be used to identify participants to be included in a research study (Merriam & Grenier, 2019:14; Salkind, 2010:629). Therefore, inclusion criteria will explain the different requirements individuals must meet to participate in a study (Hornberger & Rangu, 2020:2).

Depending on the aim of a research study, typical inclusion criteria can relate to (1) technology requirements (e.g. the participant requires internet access and virtual meeting software), (2) education or experience requirements (e.g. the participant requires a postgraduate degree), (3) language requirements (e.g. participants must speak English), (4) demographical requirements (e.g. age, ethnicity, and gender), and (5) geographical requirements (e.g. reside in South Africa) (Hornberger & Rangu, 2020:6-7).

Inclusion criteria can provide a more comprehensive picture of the characteristics of a population and show readers the reasons for recruiting specific participants (Salkind, 2010:924). Additionally, clearly defined inclusion criteria can improve the reliability, validity and feasibility of a study, which can minimise selection bias and classification errors, as well as reduce the costs and resources needed to recruit participants (Salkind, 2010:629).

Nevertheless, stringent inclusion criteria may reduce the generalisability of the study, hamper recruitment and sampling of participants, and eliminate characteristics that may be theoretically or methodologically important (Salkind, 2010:629). Additionally, if the researcher fails to adhere to the inclusion criteria and recruit ineligible participants, it may not only lead to inaccurate data, but also skew the results/findings of a study, which ultimately, may lead to false conclusions (Hornberger & Rangu, 2020:8). Therefore, it is important that inclusion criteria respond to the scientific research objective of a study, necessary to ensure consistency of findings (Salkind, 2010:629).

Based on the abovementioned literature on inclusion criteria, *this study defines an industry expert in RLM as follows*:

An industry expert in RLM can include an owner/CEO/manager of an organisation that specialises in RL as a service for online retailers or possesses managerial experience in the RL processes and practices in online retailing.

Table 7.3 provide the inclusion criteria used for selecting participants in the sample of industry experts, including a description and justification for each criterion.

Table 7.3 Inclusion criteria for interviews with industry experts

Type	Description	Justification
Technology	The participant must have ***access to the Internet*** for email correspondence, ***social media networking*** and ***virtual meeting software*** (such as Microsoft Teams) and/or Internet/online calls (such as Skype).	Internet access was important due to the Corona Virus (Covid-19) pandemic and lockdown regulations in South Africa from March 2020, causing limitations to the interview techniques and methods of communication.
Experience/ education	The participant must have ***more than five years***' experience in RL or returns management and must be familiar with the return processes and practices of online retailers and knowledgeable about consumer returns. The participant must at least have some form of ***undergraduate qualification***.	Because the objective of the interviews was to gain input from industry on the RL processes, RL practices and RLM factors of consumer returns in online retailing, it was important to identify participants with the knowledge and expertise needed for trustworthy and contributory findings. Additionally, undergraduate qualifications may enhance the level of knowledge of the industry expert.
Language	The participant must be ***proficient in English*** (reading, speaking and writing).	Most South Africans can speak English as a first or second language. English was used for all communication, correspondence and interview meetings.
Demographic	The participant can be any race and gender but must have (or recently had) a ***job description*** of ***owner, director, chair of organisation or manager***.	Race and gender have no impact on the study and the only demographical inclusive requirement relates to job description. An industry expert as defined earlier must at least be in higher positions in firms. Lower order staff (e.g. supervisors and operational staff) may lack the necessary holistic expertise to provide meaningful input.
Geographic	The participant ***must reside in South Africa*** at the time of the interviews and have some degree of experience in the field of RLM in South Africa.	Because the unique contribution of the study lies with the lack of research of RL in South Africa and lower online shopping usage (pre-Covid), it was important to provide South African online retailers with a framework for the effective RLM of consumer returns. Evidently, the industry experts must be able to provide input appropriate for the South African market. However, the industry experts can also have work experience outside South Africa. The other requirement regarding "must reside in South Africa at the time of the interview" relates to the interview times and Internet connection speed.

Source: Compiled by the researcher

The inclusion criteria from Table 7.3 formed the foundation for recruiting the most appropriate participants (industry experts) with the ability to provide meaningful input into the RLM of consumer returns in online retailing. However, exclusion criteria can be important to avoid selecting participants that may negatively impact the accuracy/reliability of the findings. In the next section, the exclusion criteria of this study will be described.

7.3.4.2.2 Exclusion criteria of industry experts

Exclusion criteria can be described as specific features of potential participants who may meet the inclusion criteria of a study, but have additional characteristics that may influence the success of a study or increase the risk for an unfavourable result (Patino & Ferreira, 2018:84). Evidently, the exclusion criteria consist of qualities about potential participants or the external factors around them that may go against the purpose of a study or interfere with it (Hornberger & Rangu, 2020:2).

According to Patino and Ferreira (2018:84), common exclusion criteria involve potential participants that are likely to: (1) be lost to follow-up (e.g. not responding to follow-up emails), (2) miss scheduled appointments (such as a scheduled interview), (3) provide inaccurate data, and (4) have presuppositions that may bias the results of a study, or increase their risk for adverse events. Essentially, exclusion criteria must list the features of a potential participant that, if met, immediately deems that person

ineligible to participate in a study (Hornberger & Rangu 2020:2). Evidently, exclusion criteria should not be the opposite of predefined inclusion criteria but rather complement it with features that help a researcher select the most appropriate participants to reach the aim of a study.

Mostly, the *exclusion criteria* for this study related to participant conduct (or the lack thereof) and ethical requirements (see section 7.3.2). Table 7.4 provides an overview of the exclusion criteria of the study, including a description and justification of each.

Table 7.4 Exclusion criteria for interviews with industry experts

Type	Description	Justification
Unresponsiveness	A prospective participant who received the calls to participate in the study but ***fails to respond***.	Individuals who failed to respond to the first and second calls to participate might not be interested in the study and were excluded.
Failure to communicate	A potential participant who satisfies the inclusion criteria and shows interest in participation but ***fails to respond to follow-up communication***.	For ethical reasons no coercion or intimidation was used to recruit prospective participants. Failing to respond to follow-up correspondence means that the prospective participant showed no further willingness to participate.
Missed interviews	A participant who satisfies the inclusion criteria and agreed to participate and accepted a scheduled interview meeting but ***fails to attend the interview meeting*** and ***fails to respond to follow-up interviews*** or correspondence.	Participants that missed scheduled interviews without informing the researcher or failed to attend or respond to rescheduled interviews and follow-up communication indicated disinterest or unwillingness to participate and were excluded.
Timeframe problems	A participant who shows interest but ***cannot participate*** during the allocated primary data collection ***interview timeframe***.	Interviews were scheduled during August to November 2020. Prospective participants that were unavailable to participate (i.e. due to a busy schedule) during the allocated interview timeframe, were excluded from the study.
Informed consent	A participant who agreed to participate but ***refuses to give consent***.	According to the Policy on Research Ethics of the University of South Africa (2016) informed consent must be obtained from participants. Therefore, a participant who refused (or failed to provide) informed consent, was excluded from the sample.
Withdrawn	A participant who ***withdrawn from the study*** before or during the interviews.	Based on the ethical requirements, participants have the right to withdraw from the study, meaning that those that withdrew were excluded from the study sample.
Outside participation requirements	An individual who falls ***outside*** one or more of the ***inclusion criteria***.	Based on the inclusion requirements, individuals (1) with no to limited managerial experience or in non-managerial positions, (2) with no to limited experience in the field of RL, (3) without some form of qualification, and (4) without the necessary resources to participate in the study, were excluded from the study sample.

Source: Compiled by the researcher

Naturally, the sample must exclude any individual outside the inclusion criteria and within the exclusion criteria. Evidently, the criteria must be held to a high standard, meaning that a willing participant must be included/excluded in a study, if that participant meets the inclusion/exclusion criteria (Hornberger & Rangu 2020:2).

In the next section, the recruitment plan of participants that satisfy inclusion and exclusion criteria, will be discussed.

7.3.4.3 Recruitment process of industry experts

The recruitment of participants, based on inclusion and exclusion criteria (section 7.3.4.2), involved several strategies. In this research, purposive and snowball sampling techniques applied to the recruitment strategies of industry experts. The main recruitment strategies included, (1) SAPICS, (2) LinkedIn, (3) Google, and (4) interviews, which will be discussed in subsequent sections and summarised in Table 7.5.

7.3.4.3.1 Recruitment of industry experts through SAPICS

According to DeJonckheere and Vaughn (2019:3), gatekeepers or informants can be valuable sources to gain access to potential participants. As mentioned in section 7.3.2 (ethics application process), the researcher approached *two professional associations*, namely the Chartered Institute of Logistics and Transport (*CILTSA*) and South African Production and Inventory Control Society (*SAPICS*), to facilitate with the recruitment of targeted participants. Both associations agreed to forward the call to participate to their members via email (see Appendix E3). Unfortunately, the call to participate was hampered by the Covid-19 epidemic because South Africa was under full lockdown from March 2020 to August 2020. Apart from essential industries, all businesses were closed, resulting in CILTSA being non-operational during the recruitment stage of the study.

Nevertheless, *SAPICS* was operational during the recruitment stage, and on *23 July 2020*, SAPICS *forwarded the call to participate (via email) to their members*. Using SAPICS to disseminate the call to participate email to their members can be viewed as a combination of snowball and purposive sampling techniques. SAPICS sending the email message to their members can fit the *snowball (referral) sampling technique*, because prospective participants were recruited on behalf of the researcher. However, the prospective participants that responded to the initial call message from SAPICS, were instructed to email the researcher, who then *purposively identified industry experts* based on the *inclusive and exclusive* criteria. Using SAPICS as a recruitment strategy, resulted in the selection of *two participants* that satisfy the inclusion/exclusion criteria of this study.

Table 7.5 provides a brief overview of the SAPICS recruitment strategy and procedures and Appendix D.3 shows examples of the call messages.

7.3.4.3.2 Recruitment of industry experts through LinkedIn

The next recruitment strategy involves social networking. The researcher used *LinkedIn* (a social networking platform) to *purposively identify potential participants* and select industry experts. The key

terms “reverse logistics”, “reverse logistics manager”, “product return manager” and “online retailing logistics manager” were entered into the search function on LinkedIn to identify potential participants. The prospective participants outside the researcher’s contact list on LinkedIn received invites to connect.

All *prospective participants* (54 individuals) from the researcher’s contact list on *LinkedIn, received the call to participate* via the *messaging function* on LinkedIn *between 23 July 2020 to 31 August 2020*. Some prospective participants responded on LinkedIn’s messaging platform in the following ways: (1) showing disinterest (e.g. “not interested”, “too busy”, or “no thank you”), (2) indicating that they fall outside the inclusive/exclusive criteria of the study (e.g. “not a RL expert”, “not in managerial position”, or “limited experience in RL”), or (3) showing interest in the research (e.g. “I would like to participate”). Other prospective participants responded directly to the researcher via email, indicating an interest in the study. All respondents were thanked for their time, and those respondents that showed interest in the study received an email from the researcher (see Appendix D.3.1).

The researcher then *selected* the prospective *participants* that agreed to participate based on the *inclusion/exclusion criteria* of the study (section 7.3.4.2). However, like the SAPICS and interview recruitment strategies, LinkedIn recruitment included *snowball sampling* since all prospective participants on LinkedIn were asked for the contact details of or to forward the LinkedIn message (call to participate) to individuals in their network that may qualify to participate. A few prospective participants provided details of other individuals (10) that may qualify to participate, and these suggested participants received the standard LinkedIn call to participate message used to recruit industry experts. The LinkedIn recruitment method resulted in the selection of *eight participants* who satisfied the inclusion/exclusion criteria of this study.

Examples of all the messages and communication between the researcher and the LinkedIn participants (with personal identifiable information redacted) can be viewed in Appendix D.3.2. A summary of the LinkedIn recruitment strategy can be viewed in Table 7.5.

7.3.4.3.3 Recruitment of industry experts through Google

To further increase the sample size, the researcher used *Google* to search for organisations that offer RL as a service to online retailers or large online retailers (non-members of SAPICS and unavailable on LinkedIn), operating in South Africa. The key terms in the Google search included “reverse logistics and service”, “reverse logistics South Africa”, “reverse logistics firms”, “returns management service”, “consumer returns”, “online returns”, and “online retailer South Africa”. After visiting various websites, twenty-two *organisations* were identified and contacted *via email*, using the *contact details*

provided on their *websites*, or via their "contact-us" function. The email message to the organisations (see Appendix D.3.3) closely resembled the initial call to participate email sent to SAPICS members. From the twenty-two organisations, *one owner of a third-party RL (3PRL) provider* firm that specialises in RL services for retailers, responded and agreed to participate. Further details of the Google recruitment method can be viewed in Table 7.5.

7.3.4.3.4 Recruitment of industry experts through interviews

The final recruitment strategy entailed ***snowball sampling*,** which means that interview participants provide details of other individuals that may qualify to participate in the study (Eriksson & Kovalainen, 2008:65; Silverman & Patterson, 2021:75). Evidently, the final sample size was only determined after the last interview was completed. As explained in section 7.3.3.4, all industry experts were asked to recommend other industry experts based on the inclusion/exclusion criteria (section 7.3.4.2) in one of the closing questions in the interview protocol. Several interviewed industry experts suggested other industry experts (six individuals) and provided their contact details.

The researcher emailed all six snowballed suggested industry experts, providing the same information that other LinkedIn and SAPICS recruits received. Three prospective participants responded, and *two participants qualified* as industry experts according to the inclusion/exclusion criteria that agreed to be interviewed.

Table 7.5 provides and overview of the recruitment and sampling procedures of the interviews with industry experts.

Table 7.5 Recruitment and sampling of industry experts

Recruit	Communication method	Sample technique	Recruitment date/s	Targeted participants	Total responses	Participants selected
SAPICS	Email from SAPICS to members and emails received by researcher from prospective participants	Snowball /purposive	23 July 2020	Unknown	7	**2**
LinkedIn	Messaging function of LinkedIn and follow-up with emails	Purposive /snowball	23 July 2020 - 31 August 2020	Total 64 • 54 targeted • 10 referrals	36	**8**
Google	Website contact and email communication	Purposive	27 August 2020	22	1	**1**
Interview	Verbal and email communication	Snowball	August - October 2020	6	3	**2**

Source: Compiled by the researcher

Table 7.5 shows a summary of the recruitment process for SAPICS, LinkedIn, Google and Interviews, including the communication methods, sampling techniques, the recruitment dates, the number of

targeted participants, the total responses and the number of industry experts selected. The final sample will be described in section 7.3.4.5. In the next section, a theoretical and practical overview of sample size considerations in qualitative research will be given.

7.3.4.4 Sample size considerations

In quantitative research the underlying motivation behind selecting a sampling method is the desire for a sample that is representative of the population of interest (Salkind, 2010:1305). Calculating the adequacy of probabilistic samples size can be generally straightforward and estimated mathematically based on preselected parameters and objectives (Salkind, 2010:923). In contrast, qualitative research excludes calculations and statistical claims with limited or no guidelines to determine the sample size (Cassell, 2015:34; Saunders *et al.* 2019:315). However, sample size is less important in qualitative research (Klenke, 2016a:9) because the focus is on the depth of understanding and knowledge rather than the breadth of results (Boddy, 2012:430; Saunders *et al.* 2019:315).

Nevertheless, qualitative researchers can use various means to identify an appropriate sample size, including (1) research design and methodology, (2) sampling and characteristics of the population, (3) principle of saturation and (4) other factors. These ways of determining the sample size in qualitative research will be discussed in subsequent sections, followed by a summary of the sample size considerations employed for the interviews with industry experts.

7.3.4.4.1 Determining the sample size based on the research design and methodology

Researchers can base the sample size on the research design and the type of research. For instance, an in-depth study that focus on a particular phenomenon (e.g. RL in online retailing) only needs a small sample for an intensive investigation instead of a broad overview (generalised view) with a large sample (Forman & Damschroder, 2008:43; Shaneen *et al.* 2019:37). For example, an in-depth study with a single case study involving a single research participant can generate great insight, implying that the smallest sample size in this type of qualitative study can be a sample of one (Boddy, 2012:430; Saunders *et al.* 2019:317). Myers (2013:123) concurred, stating that no ideal sample size can be established in qualitative research, for example, in one journal, two qualitative articles were published, the one article contained a sample of two in-depths interviews and the other article contained a sample size of 65 email interviews.

Similarly, a researcher must consider the research methodology when determining the sample size (Salkind, 2010:1305). For example, an interview method that is part of a multimethod design, needs a small sample of interviews, alongside other data types (e.g. content analysis on literature), which can be

used in an exploratory or confirmatory (e.g. triangulation) way (Cassell, 2015:34-35). Furthermore, some methodologies (such as a mail questionnaire or an in-depth case study in a small organisation) may result in a lower response/participation rate, which can be used to justify smaller sample sizes. Evidently, researchers can consider the anticipated response/participation rate when determining the sample size (Salkind, 2010:1305).

7.3.4.4.2 Determining the sample size based on sampling and characteristics of the population

A researcher can determine and justify a sample size by referring to the sampling technique chosen for the study. According to Saunders *et al.* (2019:321), purposive sampling techniques can be more appropriate for smaller samples. For example, an expert sampling technique (see section 7.3.4.1) that involves a group of experts, specialising in a particular field (such as RL experts in online retailing), rarely exceeds a sample of 15 participants (Trotter, 2012:399). Similarly, the quality of the sample can be important, for instance, a smaller sample that consists of participants with the knowledge and expertise to address the research questions can be more valuable than a larger sample, consisting of participants with limited knowledge or interest to address the research questions (Cassell, 2015:35).

Additionally, the sample size depends on the extent to which key characteristics of a population vary. Therefore, if the population has homogeneous (similar) characteristics of interest, then a smaller sample can be representative of that population (Leedy & Ormrod, 2021:206; Salkind, 2010:1305). Accordingly, Boddy (2012:430) indicated that in a single organisation/market/country or in a relatively homogeneous population, any qualitative sample size over 12 focus groups or more than 30 in-depth interviews may be too extensive and may require justification. Essentially, if the population includes individuals with, for example, the same interest, occupation, background and demographics (e.g. RL managers of online retailers in South Africa), a smaller sample size can be justified (Salkind, 2010:1305).

7.3.4.4.3 Determining the sample size based on the principle of saturation

Determining the final sample size before interview data collection commences can be challenging (Merriam & Grenier, 2019:27) since many qualitative methods rely on the notion of saturation, meaning that any additional data adds nothing new to the findings (Klenke, 2016a:9; Myers, 2013:123). Consequently, saturation can be described as the point in a study when sufficient information was gathered to continue with the final analysis and reach meaningful conclusions (Glinka & Hensel, 2018:251). Nevertheless, based on qualitative research literature the principle of saturation can be determined through data collection, analysis and findings or conclusions.

Saturation in data collection means that no new data needs to be collected (Morse & Maddox, 2014:526; Suter, 2012:361) due to informational redundancy, implying that further data collection contributes little or nothing new to the study (Gentles *et al.* 2015:1781; Klenke, 2016a:9; Saunders *et al.* 2019:315). In other words, the researcher repeatedly sees and hears the same information during data collection (e.g. interviews) (Merriam & Grenier, 2019:27). However, the concept of data saturation depends on the nature of the data source and the interview questions, for example, the more purposive the sample is (i.e. specific inclusion criteria using expert sampling) and the more precise the interview questions (semi-structured or structured) are, the sooner data saturation can be reached (Suri, 2011:72). Likewise, data saturation can be influenced by the scope of a study, for instance, the narrower the scope of the study, the sooner the point of data saturation can be reached (Shaneen *et al.* 2019:37). Regardless, the researcher must be engaged with (or emerged in) data collection for long periods of time, to not only obtain an in-depth understanding of the subject, but also to identify the point of data saturation (Merriam & Grenier, 2019:27).

Like saturation in data collection, qualitative data analysis eventually reaches a point of saturation, which signals the completion of the study. Particularly, at this point, new data only confirms previously defined categories and themes, meaning further interviews add little to what is known about an emerging category, as evidenced by the same recurring code and category patterns in additional data (Suter, 2012:350, 361, 362). Evidently, saturation of data analysis (also known as theoretical saturation) means that analysis of subsequent cases (i.e. more interview transcripts) adds no new insight or deeper understanding about the analytical categories and the relationships between them (Stasik & Gendźwiłł, 2018:235).

Finally, saturation related to the findings means that the data and emerging findings appears saturated (Merriam & Grenier, 2019:27). Therefore, saturation is reached when the results/findings allow some degree of generalisation from the target population (Boddy, 2012:428). Nevertheless, it is important that researchers describe how and why saturation was reached, which can strengthen the findings and conclusions of a study (Suter, 2012:350).

In sum, data saturation involves the stage when further collection and analysis of evidence/data provides little or no new themes, insights, perspectives or information, findings and/or conclusions in a qualitative study (Suri, 2011:72).

7.3.4.4.4. Other factors to determine the sample size

The other factors to determine the sample size can relate to practical considerations, volume of data, type of analysis, level of study or the institutional/journal requirements. The practical considerations in

determining the sample size can relate to the time, budget and resources available to the researcher (Salkind, 2010:1305). Therefore, for a researcher with limited time, money and other resources, a smaller sample size may be the only feasible option. Additionally, the sheer volume of data can inhibit a meaningful and timely qualitative data analysis, for example, Boddy (2012:430) indicated that a qualitative sample size of over 30 participants can produce high volumes of data, which can become too unwieldy for a qualitative researcher to analyse.

Finally, the type of study or the institutional/journal requirements can play a role in determining the sample size for a qualitative study. For example, a master dissertation may require a smaller sample, while a doctorate thesis may require a larger sample, depending on the institutional (i.e. university) requirements. Evidently, a student can ask the supervisor, who may be more familiar with the demands required for a dissertation or an institution, for the minimum requirements of an acceptable sample (Cassell, 2015:35).

Regardless of these measures of determining an appropriate sample size, no clear answers can be given to establish how large a sample must be to represent the target population (Salkind, 2010:1305; Saunders *et al.* 2019:315). However, in qualitative research, this may be a nonsensical question that must be replaced with the question, "can the findings of this qualitative study bring something new to the understanding of the subject or research phenomenon?" (Stasik & Gendźwiłł, 2018:237). Consequently, a qualitative researcher must consider this question throughout data collection, analysis and write-up of the findings, ensuring meaningful conclusions and a contribution to the field of study.

7.3.4.4.5 Determining the sample size of interviews with industry experts

Based on the discussions on determining a sample size in qualitative research, a sample size of 13 industry experts was identified as appropriate for an in-depth investigation into the RL processes and practices for the RLM of consumer returns in online retailing.

The researcher identified the following elements to *justify the sample size of 13 industry experts*:

- ***Type of research***: The interviews with industry experts can be classified as an in-depth investigation into the RL of consumer returns in online retailing, which means that a smaller sample size can be appropriate.
- ***Research methodology***: The interviews with industry experts formed part of a multimethod qualitative study, which means that a smaller sample can be appropriate.
- ***Sampling technique***: The interviews with industry experts used purposive sampling (specifically expert sampling), and snowball sampling aimed at individuals with expertise in RL

in online retailing, which means that a smaller sample can be justified as fewer individuals can be classified as experts.

- ***Principle of saturation***: Saturation was identified during the data collection and analysis stages of the interviews with industry experts and the researcher determined that no new insights could be obtained from a higher sample size (i.e. 14 industry experts). Additionally, the average time duration for the interviews was 76 minutes and a total 16 hours of interview data was obtained, justifying the sample size of 13 participants.

Although ethics may be a less obvious measure to determine the sample size, the researcher also considered the ethics associated with the qualitative interview method. McGrath, Palmgren and Liljedahl (2018:1002) indicated that due to the time-consuming nature of interviews, researchers must only include as many participants as needed to provide meaningful insights and experiences to reach a study's objectives. Essentially, the researcher considered various aspects to determine the appropriateness of the final sample of RL industry experts, which will be summarised in the next section.

7.3.4.5 Final sample of industry experts

Based on the discussion of sampling techniques, inclusion and exclusion criteria, recruitment process and sample size considerations, the final sample of industry experts was determined. Table 7.6 provides details on the final sample of industry experts including participant pseudonyms, job position and area of expertise, business type or industry, recruitment and sample technique, interview technique and interview data and duration.

Table 7.6 Final sample of industry experts

Expert	Job position and area of expertise	Business type / industry	Recruited / sample technique	Interview technique	Interview date and duration
P1	**Operations manager** with expertise in online retailing and RL.	Third party RL provider	LinkedIn, purposive	Microsoft Teams	4 August 2020, 120 minutes
P2	**Supply chain professional / Owner** with extensive knowledge in various aspects of SCM, including RLM.	Supply chain and logistics consultancy firm	SAPICS, purposive / snowball	Microsoft Teams	5 August 2020, 90 minutes
P3	**Returns (RL) manager** with extensive knowledge in managing RL processes of an online retailer.	Large online retailer	LinkedIn, purposive	Skype	12 August 2020, 45 minutes
P4	**CEO/Owner** with expertise in RL in South Africa for all business types, including online retailers.	Third party RL provider	LinkedIn, purposive	Microsoft Teams	25 August 2020, 80 minutes
P5	**General manager** (former post) with experience in online retailing and expert in RLM of large online retailers.	Large online retailer	LinkedIn, purposive	Microsoft Teams	27 August 2020, 105 minutes

P6	**Logistics manager** with specialised knowledge about the logistics processes and operations in multichannel retailing, including RL processes.	Large multichannel retailer	LinkedIn, purposive	Microsoft Teams	28 August 2020, 90 minutes
P7	**CEO/Owner** that specialise in RL with expertise in the RLM of various industries in South Africa.	Third party RL provider	Google, purposive	Microsoft Teams	2 September 2020, 75 minutes
P8	**Logistics manager** with expertise in the SCM, logistics and RLM of last mile multichannel retailing.	Large multichannel retailer	Snowball	Microsoft Teams	14 September 2020, 45 minutes
P9	**Regional Manager** with expertise in the operations of online retailers and extensive knowledge in managing RL processes of online retailers.	Large online retailer	LinkedIn, purposive	Microsoft Teams	15 September 2020, 50 minutes
P10	**Head of sales and logistics** with extensive skills and expertise in the sales, logistics and RL of a large manufacturer with an online retailing channel.	Large manufacturer and multi-channel retailer	LinkedIn, purposive	Microsoft Teams	21 September 2020, 90 minutes
P11	**Demand planning and sales centre manager / Supply chain professional** with extensive knowledge of the SCM and RL processes.	Fast mover consumer goods (FMCG) distributor	SAPICS, purposive / snowball	Microsoft Teams	23 September 2020, 45 minutes
P12	**Head of Logistics** (former post) with extensive knowledge and experience in online retailer operations, specialising in the RLM of consumer returns.	Large online retailer	LinkedIn, purposive	Zoom	8 October 2020, 90 minutes
P13	**Supply chain manager** with extensive knowledge and expertise in the SCM and RLM of a large multichannel retailer in South Africa.	Large multichannel retailer	Snowball	Microsoft Teams	12 October 2020, 60 minutes
SUMMARY OF SAMPLE OF INDUSTRY EXPERTS					
13 experts	Owners/CEO, directors, managers with expertise in SCM, logistics and operations, RL processes and RLM	Online and multichannel retailer (or manufacturer), 3PRL providers and distributor	Purposive/ snowball	Microsoft Teams, Skype and Zoom	August to October 2020, 45 – 120 minutes (Average 76 minutes)

Source: Compile by the researcher

Essentially, Table 7.6 shows that the sample size included 13 industry experts with job positions ranging from CEOs and owners of 3PRL providers, 3PL providers and supply chain consultants to upper and middle management positions from online retailers, multichannel[21] retailers and even manufacturing multichannel retailers. From a RL perspective collective expertise included RL processes, RL practices and the RLM of organisations that sell products through an online platform to consumers. The sampling techniques included purposive and snowball sampling and the interview

[21] For presentation purposes the term multichannel was used to represent both multi- and omnichannel retailers. Therefore, multichannel retailers represent retailers with brick-and-mortar outlets and one or more online channel, which can include mobile and/or web-based channels.

techniques mostly included Microsoft Teams with one Skype and one Zoom interview. The interviews were conducted between August and October 2020 and lasted an average of 76 minutes.

In the next section, stage 5, pre-interview planning for interviews with industry experts will be discussed.

7.3.5 Stage 5: Pre-interview planning for interviews with industry experts

The qualitative interview can be viewed as a formal conversation (especially in the business field); therefore, every person (researcher and participant) must prepare for it (Gudkova, 2018:85). Careful planning around the technical aspects of interviews can be the difference between a successful interview and an unsuccessful interview (DeJonckheere & Vaughn, 2019:4).

In the preparation phase, the researcher must plan and make decisions about (1) familiarisation and piloting of the interview protocol (Salkind, 2010:634), (2) setting the stage and scheduling interview times and locations convenient for both participant and researcher (DeJonckheere & Vaughn, 2019:4; Myer & Newman, 2007:13), (3) reconfirming interviews (Salkind, 2010:634) and resending interview information (Cassell, 2015:37-38), and (4) preparation for using online video software as remote interview technique (Saarijärvi & Bratt, 2021:395).

In subsequent sections a theoretical and practical overview of the preparatory phase of interviews with industry experts will be given.

7.3.5.1 Familiarising and piloting the interview protocol

Prior to the interview, the researcher must be acquainted with the interview protocol and interview questions, which ensures a smooth interview process (Salkind, 2010:634). Familiarisation with the interview protocol took place during the pretesting and pilot study of the interview protocol. Pretesting provides an estimated time of the interview, so to provide the participants with some estimate of the interview duration (Adams, 2015:496). A pilot study refers to a trial run or pretesting of a particular research instrument or procedure (Salkind, 2010:1033). Evidently, the researcher practiced and evaluated the interview questions through a pilot study of the interview protocol (see section 7.3.3) (Cassell, 2015:35-36).

An interview pilot study helps with: (1) anticipating participant responses to questions (Cassell, 2015:35), (2) ensuring that the tools used during the interview are viable and workable, (3) ensuring that the instructions for the interview are understandable and clear (Billups, 2021:80), (4) discovering potential problems with the interview protocol, (5) saving time and money by avoiding logistical

design deficiencies prior to the real interviews, (6) taking corrective actions and adjusting the interview protocol, and (7) improving the overall interview process (Salkind, 2010:1033).

Ideally, a pilot study must be conducted with individuals that resemble the targeted participants of a study population (Cassell, 2015:35-36; Salkind, 2010:1033). However, Castillo-Montoya (2016:827) mentioned that finding individuals that closely resemble the targeted participants can be challenging in studies with smaller samples. Therefore, if the sample contains hard-to-access people (such as industry experts in RL), meaning that few individuals qualify to participate in the study, the second-best option includes individuals with similar characteristics to the target population (such as academics specialising in RL) (Cassell, 2015:36). Essentially, another researcher in the field, not directly involved in the research, can be used for the pilot interview to enhance the quality and trustworthiness of the interview protocol.

Since this study targeted highly specialised participants in the field of RL and online retailing (see section 7.3.4.2), the researcher conducted the *pilot study with a senior academic* (independent professor) specialising in supply chain management and RL. The pilot interview was conducted with the *professor in July 2020*, which involved a mock interview. The professor was asked to answer the questions but at the same time consider (take note of) problematic (hard-to-understand) questions or terms. The *pilot interview lasted 45 minutes*, which included the researcher's introduction, opening questions, main questions and closing questions and remarks. Once the mock interview was completed, the next step was to evaluate the results, which included interviewer debriefing (Salkind, 2010:1033).

The 45 minutes was determined as the minimum duration of the interviews, which was deemed appropriate to obtain meaningful insights from the participants. Although no questions were added or removed, it was determined through the pilot interview that the wording of some questions needed adjustments and that the focus should be more on the detailed questions within the main question category. For example, a general question is: "Can you tell me more about the general practices that should be implemented for reverse logistics?", while a specific question is "In your opinion should online retailers standardise or formalise reverse logistics?". Therefore, the researcher will briefly mention the focus of the section by referring to the main question, for example, "I would like us to talk about some of the general practices in RL" and then follow by asking the specific questions associated with the main question, like "should online retailers standardise or formalise their RL processes?"

Additionally, the professor suggested that the researcher must explain or give examples of certain terms to avoid potential confusion and uncertainties during the actual interviews. For example, the term "disposition" should include the disposition options as examples (such as reuse, repair or sell to third

parties) and "consumer integration" must include the example of "sharing information with consumers". Evidently, the interview protocol required minor adjustments, and once incorporated, the professor indicated that the interview questions, interview format and interview style can be used for the interviews with industry experts.

7.3.5.2 Setting the stage and scheduling of interview

Setting the stage as part of preparing for interviews begins in the recruitment phase (see section 7.3.4.3) and continues with scheduling the interviews (Myer & Newman, 2007:13). Although the action of building rapport usually takes place during interviews, establishing rapport can occur prior to the interview (McGrath *et al.* 2018:1003). In fact, all communication prior to the actual online interview builds upon the participants' impressions and trust of the researcher (Nehls, Smith & Schneider, 2015:149).

Managing expectations, early with transparent communication, can be essential for the foundation of a successful interview (Nehls *et al.* 2015:149). The researcher can establish early rapport by setting expectations, giving participants information about the interview and explaining the importance (or purpose) of the interviews (McGrath *et al.* 2018:1003; Myer & Newman, 2007:13). Providing information about the interview enable participants to: (1) understand the aims of the research study, (2) understand the purpose of the interview, (3) think more about the topic and their own goals for participating, (3) explore the nature of the relationship with the researcher, and (5) give informed consent to participate in the research (Nardon, Hari & Aarma, 2021:5). The *industry experts received the interview protocol* and *participant sheet* (see Appendix E.1) via email, detailing the purpose of the study, reasons for being selected as a participant, ethical implications, feedback on the findings, and contact details of the researcher and the researcher's supervisor.

Next, the *scheduling phase of the interviews with industry experts* commenced. Cassell (2015:41) commented that arranging interviews in the field of business and management can be challenging due to the busy diaries of owners/managers in organisations, which makes time an important factor when scheduling interviews. Nevertheless, in remote online interviewing it can be important to add extra time to the interview schedule to account for potential connectivity issues and slower internet speed, which may result in slower conversations (IPA, 2020:18). Since the minimum duration of the interview was determined to be 45 minutes (see section 7.3.5.1), the researcher *scheduled* the interviews with industry experts for *60 minutes* to mitigate potential network issues.

Due to the Covid-19 pandemic and lockdown measures, scheduling the interviews with industry experts entailed sending emails to the industry experts, requesting them to *select a date and time*

between August and October 2020 and the *online video platform* (Microsoft Teams, Skype or Zoom) that will suite them for remote online interviewing. Once the industry expert indicated a date, time and platform, the researcher used the *scheduling tool* of the relevant *application* (e.g. Microsoft Teams create a team option) to schedule the interviews (also see section 7.3.6.1.4). Next, the industry expert received an *interview invite via email* from the relevant application requesting acceptance of the invite.

Upon *accepting the invite* the email calendar of the industry expert automatically reflected the date, time and online discussion platform. The *diarised entry into the calendars* of the industry expert and researcher aided as a reminder of the event, ensuring that both parties remember the date, time and online video platform of the interview. Some screenshots of the scheduling tools and interview scheduling emails with participants can be viewed in Appendix D.4. More details on using online video software as an interview technique will be given in section 7.3.6.1.

7.3.5.3 Reconfirming interviews and resending interview information

A few days before the interview, the researcher must either telephone or send an official letter to the participant to confirm the scheduled time, date, and place of the interview (Salkind, 2010:634). However, the researcher reconfirmed the online meeting platform instead of "the place" (location) of the interview since all interviews were scheduled to take place remotely. Evidently, *each industry expert was contacted via email a few days before their scheduled interview to confirm the date, time and online meeting platform*. Appendix D.4. demonstrates an example of the confirmation email before the interview date. Two industry experts requested new dates and times due to unforeseen circumstance, which the researcher rescheduled using the same scheduling method as the original interview (section 7.3.5.2). However, all interview online platforms remained unchanged based on the original selections made by the industry experts.

Due to the time duration between the recruitment phase (July 2020), which involved sending the interview protocol and participant information sheet to each selected participant, and *the scheduled interviews* (August/October 2020), each *industry expert received*, via email, *the participant information sheet and interview protocol* a *few days before the scheduled interview*. Providing the participation information sheet and interview protocol prior to the interview can be important to remind the industry expert about the purpose of the interview and reiterate the expectations (Cassell, 2015:37), equipping them with adequate information to prepare for the interview.

7.3.5.4 Preparation for using online video software for interviews with industry experts

Since the study involved remote interviewing with online video software (Microsoft Teams, Zoom and Skype), which will be discussed in section 7.3.6, preparation can be important for a successful online interview. Online video interviews require few practical considerations prior to the formal interview, which involve (1) familiarisation of online video software (Irani, 2019:6), (2) preparation of the environment, (3) testing equipment, (4) testing online video software (Saarijärvi & Bratt, 2021:395), (5) testing internet connection and (6) preparing for internet connection problems (IPA, 2020:5).

Familiarisation of *online video software* helps the researcher to be comfortable with the functionality and features of the software (Irani, 2019:6; Silverman & Patterson, 2021:106), avoiding potential distractions during the interview and troubleshooting any technical problems (Irani, 2019:6). Accordingly, the researcher *studied the user manuals* and explored the functionalities and features of Microsoft Teams, Zoom and Skype to troubleshoot technical problems prior to the interviews and avoid potential user errors that may disrupt the interview conversation.

Preparing the environment can eliminate or reduce potential environmental distractions during the interviews. For example, for a remote interview conducted in a home environment it may be advisable to use a private room where children, pets, and other environmental interruptions can be avoided (Nehl *et al*. 2015:150). Evidently, the lockdown restrictions resulted in conducting the interviews with industry experts from home, and the researcher prepared the environment by *informing other household members* about the need for *privacy and silence during the interviews*.

Testing equipment and technology shortly (e.g. 15 minutes) before the actual interview can be important to ensure functional equipment and online video software and a stable internet connection, reducing the possibility of unnecessary delays in the interview (Nehl *et al*. 2015:149). Equipment testing can involve *testing of recording devices*, *computer and other accessories* used for the interviews. Although Microsoft Teams, Zoom and Skype all include built-in recording functions, the researcher used an additional recording device as a backup and tested it before the interview to ensure a quality recording (Irani, 2019:6; Silverman & Patterson, 2021:107). Additionally, *the* researcher *updated all software* to prevent forced restarts and problems with computer performance (e.g. full memory) that may interrupt the interview conversation.

Likewise, the *online vide software application* (Microsoft Teams, Zoom or Skype) *was opened and tested shortly before the scheduled interview*, ensuring that all functionalities and features work, including built-in audio, microphone and recording functions. For example, in Microsoft Teams the

researcher used the “test call” function, which facilitated in testing the audio, speakers and the microphone, important for quality recordings and smooth conversation flows.

Finally, to reduce potential *internet connectivity* problems, the researcher (1) used a *reliable internet connection* (2) *connected* to the online video software *15 minutes before the scheduled interview*, (3) allowed *additional time for each interview* (see section 7.3.5.2) to provide buffer time in anticipation of network problems, (4) *prepared a contingency plan* for severe connectivity issues (IPA, 2020:5) and (5) *forfeited the video option* to optimise the audio recording (Oliffe, Kelly, Montaner & Yu Ko, 2021:5). Specifically, the *contingency plan* included contacting the industry expert via SMS to decide on either rescheduling the interview, trying another online video platform or continuing the interview telephonically. Additionally, the *audio-only (camera-off) option* not only aligned with the ethics requirements of the interviews with industry experts (see section 7.3.2) but also helped address the standard internet connection problems experienced in South Africa. Fortunately, minor network problems occurred without the need to implement the additional contingency measures.

The abovementioned preparatory measures will also be explored in section 7.3.6.1.3, which discusses the mitigating factors for the potential problems of using online video software as an interview technique. In the next section stage 6, conducting the interviews with industry experts, will be discussed.

7.3.6 Stage 6: Conducting the interviews with industry experts

In stage 6, the primary data collection of the *interviews with industry experts commenced*, taking place during *August and October 2020*. The dates, times and duration of the interviews can be viewed in Table 7.6. In this section, the interview data collection techniques used for the interviews with industry experts will be discussed, followed by a discussion on the actual interviews with industry experts, involving building rapport, questioning, time management and recording.

7.3.6.1 Data collection techniques of interviews with industry experts

The data collection techniques in interviewing can include face-to-face (in-person), telephone, videophone or through the Internet, and e-mail (Merriam & Grenier, 2019:14; Salkind, 2010:633). Nevertheless, in the Covid-19 era, face-to-face interview data collection has been complicated by the constraints of lockdown, social distancing and the prioritisation of the safety of participants and researchers (Roberts, Pavlakis & Richards, 2021:1). Evidently, the lockdown restrictions limited the interview techniques to remote interviewing, which means that the options available for the interviews

with industry experts included email interviews (asynchronous method), telephonic interviews and online meeting/video software interviews (real-time or synchronous method).

Remote interviews, including e-mail, telephone, or internet, can be used to interview participants in a familiar environment, which may allow them to be more comfortable expressing their opinions (Bolderston, 2012:72) and complete the interview at their convenience (Salkind, 2010:636). Furthermore, remote interviews can increase access to hard-to-reach participants (e.g. participants from different geographic regions), the scope of the study and reduce data collection costs (Silverman & Patterson, 2021:110). Consequently, remote interviews can potentially reduce reactive bias and can be more efficient in terms of time and cost (Bolderston, 2012:73). Nevertheless, for e-mail or internet interviewing, the use of technology can be restricted to those participants who own and can use the necessary hardware and software (Bolderston, 2012:73). Therefore, to promote equity and equality in research, Saarijärvi and Bratt (2021:396) suggested that researchers use *preference-based interview techniques*, whereby participants can select from a variety of options. (Saarijärvi & Bratt, 2021:396). For this reason, industry experts were given the opportunity *to choose the remote interview technique and online meeting software* that they are comfortable with and have access to (see section 7.3.5.2).

Although any type of remote interview technique (email, telephone or online) was a possibility for this study, the industry experts received a choice between telephone and online video software needed for real-time synchronous conversation and engagement purposes. *All participants chose online video software* as their preferred interview technique. Consequently, the discussion below focusses on remote interviewing using online video software as the interview data collection technique chosen for this study.

7.3.6.1.1 Overview of remote interviewing with online video software

New technology, social distancing, travel bans, and other restrictions have had practical implications for the traditional face-to-face interview methods, resulting in researchers exploring and switching to alternative data collection technique, including online video interviews (Saarijärvi & Bratt, 2021:392). Additionally, the Covid-19 pandemic increased usage of online video platforms (such as Zoom and Microsoft Teams) by academics and practitioners to perform work and communicate with others (De Villiers, Farooq & Molinari, 2021:2; Lobe, Morgan & Hoffman, 2020:2). Consequently, with digitisation and the Covid-19 pandemic, online data collection, such as video/remote interviews, will continue to grow in the future (De Villiers *et al.* 2021:2).

Online video interviews closely resemble a traditional face-to-face interview in that it takes place in real time using online video software (Hine, 2015:507). Nevertheless, online video interviews can be

characterised by synchronous communication in time, but asynchronous communication in place, as opposed to traditional face-to-face interviews, characterised by synchronous communication in time in place (Saarijärvi & Bratt, 2021:393). De Villiers *et al.* (2021:2) describe online video interviews as "*qualitative research interviews (i.e. semi-structured and unstructured in-depth interviews) conducted using online video communication technologies, including hardware (such as computers and smartphones) and software (such as Skype, Zoom and WhatsApp), which allow the interviewer and interviewee to see (video) and talk (audio) to each other in real-time*."

This study used remote interviewing using online video software as the data collection tool, not only due to the Covid-19 pandemic but also for the following reasons (Roller, 2016:22):

- Natural setting – ability to adopt a natural, social conversation environment.
- Rapport building – ability to promote rapport between the researcher and participant.
- Technological functions – ability to use applications that can share content, schedule interviews and recording of interviews.
- Verbal and non-verbal cues – ability to obtain insights from synchronous real-time communication.
- Extended coverage – greater expansion and access to participants beyond the immediate region of the researcher.
- Cost efficiency – exclude travel and accommodation costs, which lower the total cost of a study.

Clearly remote online interviews can be a viable option to conduct qualitative interviews for a variety of reasons. However, some limitations must be considered for online video interviews, including access to reliable and stable internet and technology, good hardware (e.g. microphone and camera) and privacy and confidentiality concerns (Saarijärvi & Bratt, 2021:393). In the sections below some of the motivating factors and key consideration of using online video software as a data collection technique will be explored, followed be a brief description of the online video software platforms used for the interviews with industry experts.

7.3.6.1.2 Motivating factors for remote interviewing with online video software

Online video interviews as a qualitative data collection technique, offer various advantages, especially, in terms of time, costs, and access to a geographically diverse participant pool (Archibald, Ambagtsheer, Casey & Lawless, 2019:4; Silverman & Patterson, 2021:110; Van Zeeland *et al.* 2021:14), comfort and privacy (Archibald *et al.* 2019:3), data quality and health and safety matters (IPA, 2020:15).

- *Time efficiency and logistical factors*

Before the Covid-19 pandemic, Irani *et al.* (2019:3) identified that online video software for qualitative interviewing gained increasing attention among researchers because of logistical convenience. Consequently, remote interviewing enables logistical ease of arranging compatible interview times (Nehls *et al.* 2015:146) and improves flexibility in task management because neither the researcher nor the participants need to allocate time for travelling (IPA, 2020:13).

Furthermore, scheduling remote interviews may be easier than traditional in-person interviews (Nehls *et al.* 2015:148) since it not only allows for flexibility in scheduling time and venue choice (i.e. office or home, or other) (IPA, 2020:14) but also provide participants with more options to fit the interview in their busy work schedules (Irani *et al.* 2019:3). Therefore, the researcher and participants can easily shift between other meetings or tasks before/after the online interview (IPA, 2020:13), making remote interviewing a more time efficient data collection technique. Other time savings may relate to the features of online video platforms (like Zoom and Microsoft Teams), including electronic scheduling, built-in recording feature and download options to save video/audio versions of the interviews (Oliffe *et al.* 2021:4).

Essentially, using online video interviews was ***beneficial*** for both the researcher and the industry *experts* ***due to greater time efficiency***, *eliminating* the need for *complicated logistical arrangements*.

- *Cost efficiency*

Related to the time efficiency, Nehls *et al.* (2015:146) identified that remote video interviews can be a cost-effective way of conducting research. In fact, various researchers found that remote interviews associate with cost savings through eliminated travel expenses (e.g. airfare, lodging or vehicle hire) and venue hire expenses (e.g. expenses for meeting rooms and catering) (Archibald *et al.* 2019:4; De Villiers *et al.* 2021:6; IPA, 2020:14; Oliffe *et al.* 2021:4; Roberts *et al.* 2021:9).

Essentially, ***the researcher avoided travel expenses***, including airfare, vehicle hire expenses, accommodation costs and other related expenses because many industry experts resided in the Western Cape, 1200 kilometres away from the researcher's location in Johannesburg, South Africa.

- *Greater access to participants*

Associated with the benefits of eliminated travel time and expenses, online video interviews overcome geographical barriers, serving to increase the sample size of a study (Nehls *et al.* 2015:146; Silverman & Patterson, 2021:110). Subsequently, remote interviewing creates opportunities to include participants

residing in an array of geographical dispersed locations (e.g. rural areas, cross-border locations, overseas locations or long-distance locations) to participate in a research study (Archibald *et al.* 2019:4; De Villiers *et al.* 2021:14; Irani *et al.* 2019:3; Oliffe *et al.* 2021:4; Saarijärvi & Bratt, 2021:396).

Essentially, the researcher was able to send the call to participate *to any potential industry expert, regardless of their location in South Africa*, which likely increased the sample size.

- *Comfort and privacy*

Online remote interviewing creates a neutral place for data collection, allowing participants to be in the comfort of their own space (Silverman & Patterson, 2021:111). In fact, Irani (2019:5) found that participants prefer remote interviewing due to its convenience, flexibility, and ease of use. Furthermore, managers/business owners may be more willing to participate and talk openly and honestly in remote interviews because of greater privacy and the comfort of familiar surroundings (e.g. office or home) (De Villiers *et al.* 2021:11; Irani *et al.* 2019:3; Nehls *et al.* 2015:148). Some participants might be more apprehensive to be seen in a public location with the researcher, meaning that remote interviews alleviate privacy concerns (Nehls *et al.* 2015:146). Likewise, the privacy of remote interviews enables uninhibited discussion of sensitive or confidential topics (e.g. trade secrets), which allows the researcher to obtain richer information (Hine, 2015:507).

Additionally, remote interviews afford participants and the researcher the opportunity to access computer files and documents, which would not be possible in a traditional face-to-face interview in a restaurant or conference room (De Villiers *et al.* 2021:11). Essentially, remote online interviews allowed both the researcher and industry experts to *converse in a comfortable and private setting*, without concerns of discussing confidential topics in a public setting.

- *Improved data quality*

Van Zeeland *et al.* (2021:4) and IPA (2020:16) indicated that using online video software for interviewing, ensures easy and high-quality recording. While face-to-face interviews may result in recording imbalances in terms of clarity of voices (due to changes in the proximity to the recorder/microphone) and background noises (such as wind, tapping, or chatter) that may affect the transcription quality, remote interviews with online video software ensures clarity in the audio-recording and the subsequent transcription quality (IPA, 2020:16).

Essentially, the quality of video software recordings allows for fast and clear transcription, meaning that researchers can use technology applications or online services that offer instant artificial intelligence (AI) transcription given the clarity of the audio (IPA, 2020:16). *This clarity of audio*

recordings allowed the researcher to utilise an online transcription service, namely Sonix, ensuring *efficient transcription* of the interview data obtained from industry experts (see section 7.3.8.2.1).

- *Compliance with health and safety requirements*

The final motivating factor relates to the Covid-19 pandemic, which allowed the researcher to continue with data collection, while complying with the government-mandated lockdown and social-distance measures (IPA, 2020:15). Therefore, conducting interviews remotely via online video software, *eliminated the risk of exposing* the researcher and industry experts to the *Corona virus* and *comply with the health and safety requirements* implemented during the Covid-19 pandemic.

7.3.6.1.3 Key considerations for remote interviewing with online video software

Despite the advantages of remote interviews, researchers must be aware of some concerns about using online video software as a data collection technique (Lobe *et al.* 2020:1). Some drawbacks of using online video software for interviewing include (1) technology requirements, (2) costs, (3) technical issues, (4) confidentiality and privacy concerns, (5) environmental distractions and (6) non-verbal communication concerns. Nevertheless, some mitigating factors can be implemented to reduce these drawbacks, which will be mentioned in the discussion below.

- *Technology requirements*

Before using online video software as a data collection method, researchers must consider whether their potential participants have access to the technology and equipment needed to participate, as well as possess the ability and skill to use the software (Irani, 2019:6). Consequently, remote interviews using video software can exclude participants without access to computers or smart devices (with camera and microphone), Internet connection, or that lack the necessary skills to use these technologies (Van Zeeland *et al.* 2021:2).

Therefore, the researcher and participants need access to a computer (desktop computer, laptop or tablet) or smartphone, with the functionality and compatibility to support video calls (De Villiers *et al.* 2021:6; Nehls *et al.* 2015:147). Compatibility can be evaluated by visiting the application software website (e.g. Skype, Zoom or Ms Teams), which provides the hardware requirements to use the software with additional functionality for testing the equipment (De Villiers *et al.* 2021:6-7). Additionally, the quality of the internet connection must be considered, as both parties need good internet connections (Nehls *et al.* 2015:147). However, Lobe *et al.* (2020:2) indicated that an average internet connection may be sufficient for online video software interviews.

Researchers using video software for remote interviews may under-represent participants who may not feel comfortable or possess the skill to use video technology (Irani, 2019:5). Although Oliffe *et al.* (2021:3) and Zeeland *et al.* (2021:13) found that the social distancing and lockdown measures imposed during Covid-19 resulted in participants with more experience using online video software (also see section 7.3.5.4), lowering the barriers related to technology requirements.

Essentially, technological challenges of online video interviewing associate with a lack of technology and a lack of digital skills (Van Zeeland *et al.* 2021:4). However, in addition to the standard of using video software for communication due to Covid-19 restrictions, the *participants in this study were educated, professionals and technologically competent industry experts* (inclusion criteria) (section 7.3.4.2), which *mitigated the technology challenges* associated with online video interviews.

- *Cost considerations*

Closely related to the technology requirements can be cost considerations because researchers and participants may incur additional costs for the required hardware, software and internet connection for remote video interviewing (De Villiers *et al.* 2021:6-7). Consequently, researchers must determine if participants are willing to use their personal internet data for the interviews (De Villiers *et al.* 2021:7). Other potential costs, associate with Covid-19 restrictions and working from home arrangements, which involve indirect costs like electricity and printing (Oliffe *et al.* 2021:4). One solution can be to offer participants financial compensation, whilst following ethical requirements (De Villiers *et al.* 2021:7; IPA, 2020:14).

Due to the ethical restrictions imposed on the study, no incentives were given to the industry experts to participate in the study. However, in the participation information sheet, the researcher disclosed that participants may be responsible for internet data and other related costs associated with online video software interviews. Nevertheless, the researcher *mitigated the cost implications* by giving the *participants the choice between telephonic interviews* (free for participants) and *online video interviews*.

- *Technical issues*

Like the cost considerations, technical challenges relate to the technology requirements of online video software. The greatest challenge of online video interviews can be unstable and unpredictable internet connection (IPA, 2020:15), which can cause several problems. For instance, connectivity problems can disrupt the conversation flow with pauses or uneven breaks during the interviews (Nehl *et al.* 2015:152;

Van Zeeland *et al.* 2021:2), which can impact the quality and recording of the interview data (IPA, 2020:15; Irani, 2019:5; Van Zeeland *et al.* 2021:2).

Additionally, technical interruptions and longer response times may create impressions of impoliteness or hesitation (Van Zeeland *et al.* 2021:2), which may reduce the ability to build/maintain rapport (De Villiers *et al.* 2021:14). Furthermore, connectivity issues can distract the researcher and participants, focussing on fixing the technical problems, instead of focussing on the original purpose of the interview (Irani, 2019:5). However, Van Zeeland *et al.* (2021:13) found that interview participants experienced in using online video software, tend to be less bothered with technical issues and delays.

Regardless, several *mitigation strategies* can help address or *prevent potential technical issues* during the online video interviews (also see section 7.3.5.4), which include (1) *testing the hardware* (i.e. computer, headsets, mic and camera), (2) *testing the software* and the recording function of the online software to avoid an unrecorded interview, (3) *plug in all equipment* that may runout of battery power (De Villiers *et al.* 2021:7), (4) *add time to the interview schedule* to make room for technical delays (Nehl *et al.* 2015:150), (5) *forfeiting the video option* (or camera-on option) to optimise the audio recording for slower internet connections (Oliffe *et al.* 2021:5).

- *Ethical considerations*

Despite the comfort and privacy advantages associated with remote interviews (see section 7.3.6.1.2), online video interviews may involve ethical issues related to confidentiality and privacy of the interview data (IPA, 2020:15). For instance, an uninvited person can be present in the room or others can overhear the conversation, hampering information disclosure or confidentiality of the data (Lobe *et al.* 2020:1-2; Saarijärvi & Bratt, 2021:393). However, Lobe *et al.* (2020:2) suggested that using headsets or earphones may be useful to add more privacy during the interview conversation.

Other ethical considerations relate to using the video or camera-on option during the remote interview. Some participants may be uncomfortable with showing their home environments, specifically without dedicated offices or professional looking backgrounds, while other participants may be more introverted and less confident in front of a camera talking to a stranger (De Villiers *et al.* 2021:13). Although the researcher had limited control over the confidentiality of the interview data on the participant's side (IPA, 2020:15), the researcher *mitigated the privacy and discomfort* problems through *audio-only recording* of interviews (also see section 7.3.2.2)

- *Environmental distractions*

Like the abovementioned ethical considerations, online video interviews may involve environmental distractions, outside the control of the researcher (Lobe *et al.* 2020:2; Van Zeeland *et al.* 2021:2). Particularly, working from home (because of lockdown restrictions) may impact the researcher's ability to maintain a professional approach, due to distractions and background noises (e.g. pets barking or family members talking) (De Villiers *et al.* 2021:7; Van Zeeland *et al.* 2021:2). Likewise, environmental distractions and noise can originate from the participant's home or work environment, impacting the quality of the interview recording (also see technical issues).

To mitigate these environmental distractions, the researcher can use and suggest the that participants use headset or earphones during the interviews (De Villiers *et al.* 2021:7). Alternatively, the researcher can suggest that participants find a quiet place with the least interruptions and disturbance (Lobe *et al.* 2020:2). However, De Villiers *et al.* (2021:7) suggested that when a distraction occurs, it may be beneficial to be open and honest about being home-based and apologise for background disturbances, which may build rapport between the researcher and participant.

As mentioned in the pre-interview planning phase (section 7.3.5.4), the researcher prepared the environment with a *private room and requesting household members to keep noise levels down*, which may *alleviate* some of the *environmental distractions*. Furthermore, at the beginning of each interview, the researcher apologised for potential background noises and distractions due to conducting the remote interview from home.

- *Non-verbal communication considerations*

Remote interviews can impact the ability to capture non-verbal communications, especially using audio-only recordings (IPA, 2020:16). Evidently, online video software may reduce the ability to observe and assess a participant's environment, which can be important for rich contextual data useful for qualitative data analysis (Irani, 2019:4-5). Additionally, the lack of physical proximity between the researcher and participant can hamper support and expression of compassion necessary for research studies that involve sensitive topics (Irani, 2019:4). Consequently, a lack of non-verbal communication and physical distance between researcher and participant may create emotional distance (Van Zeeland *et al.* 2021:2), which may affect interviewer/interviewee rapport. Nevertheless, this study seeks in-depth information from industry experts about the RL processes, RL practices and RLM factors of consumer returns in online retailing, excluding the need for non-verbal communication and emotional connection between the researcher and the industry expert.

Table 7.7 summarise the motivating factors, considerations and mitigating strategies for using online video software as a data collection technique.

Table 7.7 Summary of factors important for online video software interviews

Elements	Motivating factors	Key considerations	Mitigating factors
Time and scheduling	• Time efficiency because of no travel requirements for researcher and participants • Flexibility and ability to adapt environment (i.e. home or work) and easy rescheduling capability	• None	• None
Costs	• Cost efficient because of no travel and venue-hire costs	• Participants must use own internet data expenses to participate	• Give options to participant to choose interview technique • Disclose cost implications beforehand
Access to participants	• Greater access to participants residing in geographical dispersed locations	• Underrepresent participants that may not feel comfortable or possess the skill to use online video software	• COVID-19 increase the use of video software as communication tools that overcome problems with skill and comfort of using video software
Technology and technical matters	• Suitable for tech-savvy participants that can easily navigate the platform and troubleshoot issues	• Requires internet connection, compatible devices and installation of video software • Requires knowledge and skill to use online video software • Internet connectivity issues and technical glitches cause delays and disruptions in the interview conversation	• Give options to participants to choose remote interview technique • Test equipment and software prior to interviews • Schedule additional time for interviews • Audio-only interviews
Documentation and data quality	• High quality recordings due to the built-in recording capabilities of online video software • Improved data and recording quality allow for AI transcription software or online services • Faster transcription due to clarity in voices	• Environmental distraction and background noise may influence data quality	• Prepare environment to reduce noise and distractions • Share interview setting with participants (i.e. interview from home) • Use headsets or earphones during recording
Ethical and safety considerations	• Greater privacy and comfort of familiar surroundings • Compliance with health and safety requirements – compliance with lockdown and quarantine protocols	• Other parties may be present in the interviews. • Researcher has no control over the confidentiality of the data • Privacy problems with video recordings	• Request private locations • Use of headsets or earphones to ensure privacy of information • Audio-only option (keep camera/video switched of) during the interviews

Source: Compiled by researcher and adapted from IPA (2020:11-13)

Essentially, online interviewing via software meeting platforms provides a valuable opportunity to address the challenges of social distancing while maintaining efficient and effective qualitative data collection (Lobe *et al.* 2020:6). Although remote online video interviewing can be an efficient and effective method for qualitative data collection, several considerations or potential drawback must be considered, including the environment, nature of participants in the sample, the type of interaction needed and the purpose of the data collection method (IPA, 2020:19). In the next section a brief overview of the online video software used for the interviews with industry experts will be given.

7.3.6.1.4 Online video software used for remote interviews with industry experts

Several online video software can be used for conducting qualitative research interviews (Saarijärvi & Bratt, 2021:394), including digital video-conferencing tools, like Zoom, Skype and Microsoft (Ms) Teams (Van Zeeland *et al.* 2021:1). Roberts *et al.* (2021:6) suggested that researchers must carefully consider the features of the online video platforms in planning their research. For example, Roberts *et al.* (2021:6) selected Zoom for remote interviews, due to the institutional license to the software, however discovered that their participants mostly used Ms Teams, which complicated their interviews. Consequently, in this study the researcher asked the industry experts early in the interview process (recruitment and scheduling) to *choose the online interview software* that they are comfortable with, giving the researcher the opportunity to *learn the features and functionality* of the different software (also see section 7.3.5.4).

Industry experts chose three online interview platforms, including *Zoom, Skype* and *Ms Teams*. Although most of the industry experts (11) selected Ms Teams for their online interviews, the researcher discovered no literature (apart from mentioning it) on using Ms Teams for online interviews. In contrast, researchers discussed Zoom and Skype as online tools for interviewing extensively. However, some researchers discussed older versions of Skype (i.e. 2012 to 2016), compared Skype with traditional face-to-face interviews and/or described experiences of using Skype as a research tool, excluding a discussion on the specific features of Skype.

In subsequent sections, the features, advantages and disadvantages of Zoom will be discussed based on recent literature, the features, advantages and disadvantages of Skype will be discussed based on recent literature and internet sources, and the features, advantages and disadvantages of Ms Teams will be discussed based on internet sources.

- *Using Zoom for online interviews*

Zoom can be described as a unified communication platform that supports real-time audio, video conferencing and chat functionality (Lobe *et al.* 2020:2; Qureshi, 2020:2). Additionally, Zoom offers several features that can be important for remote interviewing, which include sending e-schedule compatible interview invites, a built-in recording feature and download options for saving audio and/or video recordings of the interview (Oliffe *et al.*, 2021:4). Furthermore, Zoom offers a free basic plan, enabling users to download the Zoom App or sign in on the web-based version (Lobe *et al.* 2020:2).

Various researchers indicated that Zoom can be distinguished from other online video software programmes in terms of its user-friendliness, requiring little training and set-up (Lobe *et al.* 2020:2;

Qureshi, 2020:4). For example, Archibald *et al.* (2019:4) found that the Zoom secure log-in function, using a standard username, was less frustrating to the participants in their study, compared to the login difficulties of Skype. Additionally, Zoom provides additional security in terms of the access to the interviews and the recording function.

Particularly, the researcher can set a password to control entrance to the Zoom interview session, avoiding the possibility of unauthorised persons to gain access to the interview. This can be critical for adhering to the ethical principles of anonymity and privacy of participants (Lobe *et al.* 2020:3). Moreover, Zoom offers the researcher the ability to record and store interview data without the need for third-party software, which can be significant for sensitive data (Archibald *et al.* 2019:2).

Researchers that utilise the paid option of Zoom can gain access to additional features, which include automatic transcription that allows researchers to refine the transcription during the playback of the original recording (Lobe *et al.* 2020:3). Subsequently, researchers can avoid the use of third-party transcription services, enhancing the security of data. In this study, only one participant selected Zoom for remote interviewing, which meant that the researcher used the *basic version of Zoom*, without the high-quality transcription option. Nevertheless, the other advantages, like e-scheduling of the interview, securing access to the interview, built-in recording function and secure recording of the interview data, allowed the researcher to conduct the remote interview Zoom securely and efficiently.

Despite the numerous advantages, using Zoom for remote interviewing involve some drawbacks, in terms of connectivity issues and technical difficulties. For instance, in Archibald *et al.* (2019:4) both researchers and participants experienced challenges in establishing an initial connection on Zoom. Additionally, participants with slow Internet speed and outdated computer features (i.e. webcam and microphone functionalities), experienced technical difficulties, like dropped calls and poor audio/video quality (Archibald *et al.* 2019:5).

Consequently, to use Zoom for online interviewing effectively means that both the researcher and participant requires high Internet speed and access to cell phones, tablets or computers with good audio and video capabilities. Fortunately, in this *study neither the researcher nor participant experienced connectivity issues, drop-calls or other technical difficulties before or during* the *interview session on Zoom*.

Essentially, Archibald *et al.* (2019:5) found that the benefits of using Zoom for data collection significantly outweighed the challenges encountered. This means that using Zoom as an online video/meeting software can be a valuable technique to collect interview data, adhering to ethical principles and adding to the trustworthiness of interviews with industry experts.

- *Using Skype for online interviews*

Even prior to the Covid pandemic, the use of Skype as a video-calling tool for remote interviewing is discussed in literature (Van Zeeland *et al.* 2021:4). Anderson (2021b:1-2) described Skype as one of the most popular video conferencing software worldwide, offering free HD video and audio calling, through various devices. Particularly, Skype software can be installed on desktop, phone, tablet and Alexa devices or can be used through Microsoft Edge or Chrome Web browsers (Anderson, 2021b:5). However, unlike Zoom, both researchers and participants must sign into an established (free or paid) Skype account, which can be problematic for participants without Skype accounts (Lobe *et al.* 2020:4). Nevertheless, since this study *offered participants a choice* of *online video software, no Skype account issue occurred*.

Like Zoom, Skype offers free and paid subscription plans (Lobe *et al.* 2020:4), however, in this study the *basic free version of Skype was used* since the paid version offers less expensive Skype to landline local/international calls (Anderson, 2021b:4). Additionally, the basic version of Skype offers all the necessary features for effective online remote interviews, including scheduling of calls, reminder notifications on cell phone or desktop, instant messaging, file transfers, screen sharing (Anderson, 2021b:7), and audio/video recording (Lobe *et al.* 2020:4).

The audio/video recording feature of Skype gives the researcher (interviewer) a legal warning about acquiring consent from the participant (interviewee) when activating the recording function. The audio/video recording remains accessible for 30 days in the Skype session Cloud and can be downloaded by the researcher to a local device (Lobe *et al.* 2020:4). Subsequently, Like Zoom, Skype allows researchers to conduct remote interviews with privacy features, secure video and audio functionalities and hassle-free recording (Lobe *et al.* 2020:4; Zeeland *et al.* 2021:4).

Nevertheless, the drawbacks of Skype relate to connectivity issues and security concerns (Anderson, 2021b:10). Like Zoom, the quality of calls over Skype depends on the Internet speed of both researcher and participant. Subsequently, with slow or intermittent Internet connection speed, the interview may be interrupted by dropped calls (Anderson, 2021b:10). Nevertheless, this study *mitigated the possibility of dropped calls* during the interview, through some suggestions by other researchers. Particularly, Lobe *et al.* (2020:4) suggested that *one-to-one calls* (interviewer and interviewee) and *disabling the video functionality* can reduce connectivity issues in Skype and Cassell (2015:26) suggested that keeping Internet traffic to a minimum during the Skype interview can reduce Internet bandwidth problems.

In terms of potential security concerns, Anderson (2021b:10) explained the popularity of Skype across the world drawn some hackers to steal personal information. Although Microsoft offers end-to-end encryption and new updates, the possibility remains that a Skype account can be hacked without proper security measures (Anderson, 2021b:10). In this study, *the researcher downloaded the cloud recording of the Skype interview* immediately after the interview and *deleted the call history*. Additionally, the researcher ensured that the *latest Antivirus software was installed* on the device and the *latest Skype version was utilised* for the Skype interview with the one industry expert.

- *Using Ms Teams for online interviews*

Ms Teams can be described as a cloud-based team collaboration software that is part of the Microsoft 365 and Office 365 suite of applications (O'Neill, 2021:1). Ms Teams was launched in 2017, intended to be an upgraded replacement of Skype Business, has proven to be one of Microsoft's most popular and fastest growing business application (Anderson, 2021a:4; IPA, 2020:7; Perry, 2019:2).

While Ms Teams offers a basic free version, users can access the full version by upgrading to the Office 365 suite, which means that organisations can receive high-quality communication software for free (Anderson, 2021a:4). Furthermore, the Covid-19 pandemic compelled organisations worldwide to make use Ms Teams as a communication platform for remote working (O'Neill, 2021:1), which increased its popularity. Consequently, *the researcher and most industry experts* (11) had *access* to the *full Ms Teams version* and were familiar with using Ms Teams for remote meetings and collaborative efforts during the Covid-19 pandemic.

The core capabilities in Ms Teams include messaging, voice calling, video meetings, real-time file sharing and editing, team management and cloud storage (Anderson, 2021a:4; IPA, 2020:7; O'Neill, 2021:1; Qureshi, 2020:1). This means that a researcher can use Ms Teams for sophisticated online interviews using audio and/or video, with the added benefits of scheduling and recording the interviews (Perry, 2019:3). Another important factor for remote interviewing is that Ms Teams can be installed on any operating system, including Android, iOS, macOS and Windows systems and works in various web browsers, including Chrome, Firefox, Safari and Microsoft Edge, making it widely available to a variety of users (O'Neill, 2021:3).

For this study the *most important features* of Ms Teams included the video meeting, calendar, external collaboration and integration functionalities. Although audio-only interviews were conducted, the *video meetings function* of Teams allowed for virtual interviews with *recording and transcription functionalities* (O'Neill, 2021:2). Additionally, fully integrated with Ms Outlook the ***c****alendar function* of Ms Teams can help users to keep track of schedules and appointments (O'Neill, 2021:2), which was

beneficial to remind the researcher and industry experts of scheduled interviews. The *external collaboration function* enables users to invite people outside their organisations to join internal channels for messaging, meetings and file sharing (O'Neill, 2021:2), meaning that the researcher could schedule remote interviews with the industry experts regardless of the organisation they belonged to.

In terms of the *integration functionality*, Ms Teams integrates with many other applications including internal applications like Excel, OneDrive, PowerPoint, SharePoint and Word, external applications, like Cisco Webex Meetings and Zoom (O'Neill, 2021:3) and custom integrations, making Ms Teams a convenient platform for using multiple applications (Perry, 2019:3). Since the researcher made use of transcription software Sonix (see section 7.3.8.2.1) and the qualitative analysis software of ATLAS.ti, the integration capability of Ms Teams proved to be valuable for the interviews with industry experts.

Other advantages of using Ms Teams for the remote interviews with industry experts related to stable connections and ethical considerations. A study by IPA (2020:10) indicated that in comparison to Zoom and Google Meets, Ms Teams performed the best for remote online interviewing with the least difficulties in establishing a connection and the least occurrences in disconnection. Therefore, using Ms Teams for remote interviewing reduced the likelihood of Internet connectivity problems during the interviews with industry experts. Nevertheless, since eleven interviews were conducted using Ms Teams, some *minor connectivity issues* were experienced due to unstable networks, which included one *dropped call, time lags and* a few *scattered sentences* but to a limited extent (also see section 7.3.7).

In terms of ethical considerations related to data protection, privacy and confidentiality, Ms Teams offers several security features and allow the researcher to control interview data (O'Neill, 2021:5). Specific security features of Ms Teams include, (1) Advanced Threat Protection (ATP), (2) private channels, (3) end-to-end encryption (E2EE) for one-to-one ad hoc VoIP call, (4) meeting controls (O'Neill, 2021:5), (5) multi-factor authentications, (6) Rights Management Services, (7) single sign on (SSO), and (8) secure Real-time Transport Protocol technology for audio and video data (Qureshi, 2020:4). Along with data encryption capabilities, private channels may be the most important security feature of Ms Teams for remote interviewing as it keeps conversations private, meaning that only the invited members (researcher and participant) can access the channel (O'Neill, 2021:5).

Although Ms Teams provides many features and benefits for remote interviewing, the variety of features may be *challenging for first-time users* and may require some training (Qureshi, 2020:3). Nevertheless, the researcher addressed this challenge by allowing the *industry experts to choose the online video software that they feel comfortable with*.

Despite the difference in features, advantages and disadvantages, Zoom, Skype and Ms Teams proofed to be valuable research tools for the interviews with industry experts, allowing the researcher to conduct remote interviews with industry experts across South Africa, securely and efficiently. In the next section, the actual interviews with industry experts will be discussed.

7.3.6.2 Actual interviews with industry experts

In this section, the actual or physical interview process with industry experts will be discussed with some literature to motivate the procedures adopted by the researcher. Conducting the actual interviews with industry experts (hereafter participants) involved important elements, including (1) introduction and building rapport, (2) interview conversation and questioning, (3) closing the interview conversation, (4) managing the interview time, and (5) recording the interview, which will be discussed in subsequent sections.

7.3.6.2.1 Introduction and building rapport with the industry expert

De Villiers *et al.* (2021:12) observed that business practitioners and managers can be busy and often like to dive straight into the research interview. Nevertheless, before questioning the participant an introduction of the researcher and the purpose of the interview can be important in building rapport and establishing trust. Evidently, critical to the success of qualitative research and interview experiences can be a relationship of trust between participants and the researcher (Nardon *et al.* 2021:6). According to Klenke (2016c:126), building rapport early in an interview can involve providing an overview of the study, intended use of the data, confidentiality and anonymity measures, and obtaining permission to record the interview.

Subsequently, at the beginning of each interview conducted in this study, *the researcher greeted the participant* in a friendly manner, followed by a *brief self-introduction* (Salkind, 2010:634). Next, since the interviews were conducted remotely without video functionality, the researcher *confirmed the identity of the participant* (Bolderston, 2012:72), followed by *thanking the participant* for taking the time to participate in the study (Salkind, 2010:634). As part of developing rapport, the researcher *introduced the participant to the study* (Klenke 2016c:126) by mentioning the key elements of the interview protocol (see Appendix D.1).

Particularly, the researcher explained that the *purpose of the interview* was to determine the RL processes, RL practices and management factors for the effective RLM of consumer returns in online retailing and explained that *the reason for recruiting the participant* was because of their knowledge

and expertise in the field of RLM. Moreover, the researcher explained that the *interview was expected to last* at a *minimum of 45 minutes* and *requested an open and informal discussion* (Salkind, 2010:634).

Following the expectations, the *ethics implications* were briefly described. Specifically, the matter of confidentiality was addressed (Adams, 2015:501) by explaining that the information will be regarded *as strictly confidential*, and that the *participant's identity and details will not be revealed* in the findings of the study. Moreover, the participant was assured that they can *opt out to answer any question* and *may stop the interview at any stage without consequence*. Then the researcher asked the participant for *permission to record the interview* and explained the reason to do so was for accuracy and quality of the findings (Bolderston, 2012:70; DeJonckheere & Vaughn, 2019:4; Salkind, 2010:634). Lastly, a *confirmation on the informed consent* was given since all participants signed the consent forms prior to the actual interview.

The researcher *concluded the introduction* of the interview, by *asking the participant if they have any questions* before the start of the interview. Once the researcher introduced the study, discussed all elements of the interview protocol introduction and established rapport with the participant, the main interview conversation can start (Klenke 2016c:128), which will be described in the next section.

7.3.6.2.2 Main interview conversation and questioning

Since the researcher's stance during the interviews can be critical for successful data gathering, the researcher adopted the following approaches as recommended by DeJonckheere and Vaughn (2019:7) for the interviews with industry experts: (1) *prioritise listening over talking*, (2) *use clear English* without jargon, (3) engage in the interview process through *active listening*, (4) express *empathy*, (5) demonstrate *openness*, and (6) demonstrate *gratitude*.

Although the introduction of the interview can be critical for establishing rapport, the interview conversation and questioning can continue with rapport building. For instance, Klenke (2016c:126) and Billups (2021:45) indicated that a useful *opening question to establish rapport* can be to ask the participant about themselves. Subsequently, the first question that the researcher asked the participant was "*can you please tell me more about your background and level of expertise in the field of reverse logistics*?". This proved to be valuable since most participants demonstrated their passion for RL and enjoyed sharing their experiences with the researcher, which allowed for the natural conversational flow from their background and experience to answering the research-related questions.

For the research-related questions, the approach used for questioning the participants can be described as *solution-focused questioning*, which involve *respecting the participant's expertise* and leverage the

responses to improve business practices while also informing research (Nardon *et al.* 2021:8). The interview protocol, discussed in section 7.3.3 and provided in Appendix D.1, formed a basis for the conversation between the researcher and participants. The *research-related questioning* started with asking the participant about the *reasons and types of consumer returns, RL processes, the facilities* used for consumer returns *and the roles and responsibilities of parties* involved in the RL processes for consumer returns in online retailing.

Many participants demonstrated their knowledge of the RL processes in online retailing and provided in-depth knowledge about different return processes, activities, parties and facilities. Although these questions focused on triangulating the interview and QCA findings through a deductive approach and descriptive analysis, most participants discussed various practices to manage each process effectively, providing valuable data for the inductive and reflexive thematic analysis (see sections 7.3.1 and 7.3.8).

Thereafter, the participant was asked various questions about *RL practices* that can contribute to the effective RLM of consumer returns in online retailing. The questions covered all RL practices discussed in chapter 6, including IT, integration, RL in/outsourcing, disposition practices, performance measurement (PM), facility/location strategies, resource commitment (RC), financial management (FM), return prevention and avoidance (RPA), strategic planning and procedures (SPP), including standardisation and formalisation of RL, and management and staff practices (see Appendix D.1). The participants provided valuable inputs to not only triangulate the interview and QCA findings on important RL practices for managing consumer returns but also emphasised various problems, solutions, considerations and benefits as important *management factors* for the effective RLM of consumer returns in online retailing.

Part of the questioning included several *probing questions* to elicit more details from the participants (DeJonckheere & Vaughn, 2019:6; Klenke, 2016c:132). Mostly, the *planned probes* as outlined in the interview protocol (see Appendix D.1) was sufficient to obtain more details from the participant. These probing questions included *"can you tell me more about that?", "why do you say so?",* and *"why do you feel this way?"*.

Nevertheless, as discussed in section 7.3.3, *unplanned probes* and questions can be added to the interview protocol to obtain greater details and more information from participant-specific responses (DeJonckheere & Vaughn, 2019:5; Roberts, 2020:3201). Therefore, an interview protocol can be modified during interviews by adding new probes or even whole topics based on participant responses (King, 2004a:15). The researcher adapted the questions and included unplanned probes/prompts and questions, depending on the response of the participant. These unplanned prompts in the interview

conversation with participants included (1) *waiting time* to give the participant some time to formulate their answer, (2) *echoing* by summarising the participant's words, and (3) *expansion* by asking the participant to elaborate more (DeJonckheere & Vaughn, 2019:6).

Additionally, in some cases the questions in the interview protocol were altered. For instance, a question that was modified related to the description of the RL processes, the researcher originally required more information on the facility processes, however, some participants started with the customer, logging a return (outside the facility, prior to receipt), which resulted in adapting the question "can you maybe tell me about the RL processes and activities that take place in facilities?", to "can you maybe tell me about the RL processes and activities in online retailing, from the consumer to disposal/redistribution?".

Furthermore, to engage in *active listening*, from time-to-time the researcher *restated the participant's words*, showing interest and providing assurance to the participant that the researcher understands their answers (Adams, 2015:502). According to Nardon *et al.* (2021:6), active listening can be the most important element of the interview conversation to establishing a relationship of trust between the researcher and participant.

7.3.6.2.3 Closing the interview conversation

At the closure of the interview conversation, the researcher asked the participant if they *want to add anything to the discussion*, which can be important for the effective RLM of consumer returns in online retailing. However, due to the comprehensiveness of the questions on the RL processes and practices *most participants were satisfied that the questions covered everything*. Furthermore, following the *snowball sampling* technique adopted in the study (see sections 7.3.3.4 and 7.3.4.3) the participants were asked for *details of other individuals* who may qualify to participate in the study (Cassell, 2015:31). As mentioned in 7.3.4.5, two experts were recruited following this technique, which demonstrated the importance of this question.

Finally, the researcher *thanked the participant* for their time, stating that their input was highly valued (Cassell, 2015:31), but was also *asked to contact the researcher* if they *think of anything else* they would like *to share related to the study*. Section 7.3.3 provides more details on the type of questions and the format of the interview protocol, which were used to drive the interview conversation with industry experts.

7.3.6.2.4 Managing interview time

Since the participants volunteered their own time, the researcher ensured that the interviews started at the scheduled time (Bolderston, 2012:72). However, as can be seen from Table 7.6 the average interview time of 76 minutes with participants were beyond the scheduled 60 minutes. According to Gudkova (2018:89) qualitative research interviews can be relatively long, lasting between several hours or even days. Additionally, Bolderston (2012:70) explained that the timing of interviews can depend on the complexity of questions, number of questions, the level of discussion and the availability of the participant and researcher.

Although the aim was to avoid lengthy interviews because of participants' busy schedules, *most participants were open to talk about topics that they were clearly enthusiastic about*. The *researcher apologised* if the *interviews lasted longer than the scheduled 60 minutes but none of the participants indicated that this was a problem*. However, the shorter interviews (within or closely to the aimed timeframe) were mostly due to faster conversation, less detailed answers or a participant with other obligations.

Since two interviews lasted 45 minutes, the pilot test estimate of 45 minutes was accurate for a normal question and answer session. Essentially, the *durations of the interviews depended* on the *depth of the participant's answers* and their *availability and willingness to engage in longer conversations* than the scheduled 60 minutes.

7.3.6.2.5 Interview recording method

According to Salkind (2010:1161), qualitative research interviews are often audio or videotaped to aid in data analysis. However, Cassell (2015:42) stated that video-recordings must only be used if video data will be used for analysis. In this study only *audio recordings* were utilised for the interviews with industry experts because of (1) *the irrelevance of visual data*, (2) *ethics implications* (e.g. permission was granted for audio-only recording) (see section 7.3.2.1), (3) potential *connectivity issues* with using online video software for remote interviewing (see section 7.3.6.1.4) and (4) potential *privacy concerns* using remote video recordings (see section 7.3.6.1.3). Fortunately, *all participants consented* that their *interviews may be recorded* (see section 7.3.6.2.1), which allowed the researcher to focus on the conversation and gain access to the exact words of participants for effective data analysis (DeJonckheere & Vaughn, 2019:4).

As discussed in sections 7.3.5.4 and 7.3.6.1.4, all online video software platforms (Zoom, Skype and Ms Teams) used for the interviews with industry experts included *built-in recording functionalities*,

which was tested before the scheduled interviews to ensure proper recording (Nehl *et al.* 2015:150). However, as suggested by Saarijärvi and Bratt (2021:394), *computer audio speaker* instead of head or earphones was used during the interviews and the *cell phone voice recorder* of the researcher was *used as a backup* in case the integrated recording functionality of the video software failed. Additionally, the researcher *used handwritten notes* during the interviews for *additional backup*, as suggested by DeJonckheere and Vaughn (2019:4), Salkind (2010:635) and Silverman and Patterson (2021:77).

Fortunately, the *integrated recording functions of the online video software worked well for all interviews*, albeit some technical glitches with connectivity issues (i.e. drop calls, time lags and scattered sentences), which will be elaborated upon in the post-interview reflection (section 7.3.7). As soon as possible *after each interview* the researcher *downloaded the recordings from the video software applications* and *saved the recordings in a secure folder* on the researcher's laptop for transcription (discussed in section 7.3.8.2).

Specific experiences during the interviews with industry experts and other phases, like the recruitment and preparation phases, will be discussed in the next section.

7.3.7 Stage 7: Post-interview reflection

Qualitative research can be strengthened by the inclusion of the researcher's perspective (Nehl *et al.* 2015:151). Nardon *et al.* (2021:9) found that researchers must exercise reflexivity and continually consider the impacts of interviews on participants and on themselves. *Reflection* can be defined as reviewing and reliving interview data collection to gain insights and *reflexivity* can be defined as the active role that a researcher plays in shaping surroundings, circumstances and relationships (Nardon *et al.* 2021:2). According to DeJonckheere and Vaughn (2019:7), post-interview reflection can form the basis of qualitative data analysis, enhancing the quality of interview data. Moreover, reflection can be a powerful tool, allowing the researcher the opportunity to gain experience, revisit assumptions, make sense of problems, and find new solutions (Nardon *et al.* 2021:2).

However, post-interview reflection involves many valuable learning opportunities for researchers. According to Nehl *et al.* (2015:151), researchers' reflection on the process of remote interviews can enhance both the study and the field, even providing suggestions for future research. For the interviews with industry experts, the researcher reflected on the impact of remote interviewing on the sampling procedures, including inclusion criteria, recruitment and sample size, and the use of online video software for the remote interviews with industry experts, which will be discussed in subsequent sections.

7.3.7.1 Reflection on the sampling procedures for remote interviews

Due to the Covid-19 pandemic, the research had to alter the interview options by excluding face-to-face interviews. Subsequently, potential participants that may be uncomfortable with the use of technology (such as online video software) may be reluctant to participate in the study. To mitigate this possibility, the researcher provided telephonic interviews as an option for the remote interviews. Nevertheless, potential participants that shown interest in the study preferred the use of online video software, which may be attributed to an increase in familiarity with using online video software, like Ms Teams, for remote working (see section 7.3.6.1). Additionally, the researcher altered the inclusion/exclusion sampling selection criteria by including technology as an inclusion criterion, restricting the sample to participants with access to the Internet for email correspondence, social media networking, online video software and online calls (see section 7.3.4.2).

Although the additional inclusion criterion may impact the sample size, the researcher found that industry experts in the field of SC and logistics management are tech-savvy and educated individuals all with access to the Internet and online video software for remote interviews. Subsequently, if the researcher selected operational RL staff as potential participants in the study, the Covid-19 pandemic might have restricted the sample size. In fact, like Archibald *et al.* (2019:4), the researcher reflected on using remote interviews to gain access to various participants (i.e. across South Africa) with the added benefits of cost and time savings. Particularly, industry experts are busy individuals with limited time to attend physical meetings under normal circumstances, but due to the Covid-19 pandemic and the use of online video software for remote interviewing, the researcher gained access to industry experts across South Africa.

In terms of the recruitment of potential participants, the Covid-19 pandemic hampered the planned recruitment of participants through CILTSA being non-operational during full lockdown (from March 2020). Subsequently, the researcher relied on other unplanned recruitment strategies, like Google and social networking, to gain access to professional individuals (see section 7.3.4.3). Therefore, the effort and time to recruit industry experts was a challenging part of the remote interview process.

7.3.7.2 Reflection on using online video software for remote interviews with industry experts

The most insightful part of the remote interview process was the experience of using online video software for the interviews with industry experts. Given the diversity of users' experiences and capacities and the continuous innovations in digital technologies, Archibald *et al.* (2019:5) encourage researchers using digital and online data collection methods to include an evaluation of their experiences. For example, Archibald *et al.* (2019:3) evaluated their experiences with using Zoom as an

interviewing platform, particularly noting the benefits of using online video interviews. Likewise, in the lockdown contexts of Covid-19 and using online meeting software for interviews, Oliffe *et al.* (2021:3) found that their participants seemed more relaxed talking in their living rooms and home offices, sensing a spontaneity with participants talking frankly and freely about their experiences and feelings. Moreover, a study conducted by IPA (2020:18) using remote interviews and online video software as a data collection technique, found that their participants were comfortable, eager to answer questions, volunteered information without prompts, provided insight and supported responses with detailed experiences.

In this study, the researcher reflected on the benefits of using Ms Teams, Skype and Zoom for interviewing industry experts during the lockdown period in South Africa Like the studies by Archibald *et al.* (2019:3), IPA (2020:18) and Oliffe *et al.* (2021:3), the researcher noted that the participants were comfortable and relaxed and freely shared their expertise and knowledge about RL. Although some participants had limited time, due to other engagements, the researcher found that even with less-detailed discussions valuable insight was gained into the RLM of consumer returns in online retailing. Furthermore, participants' openness, willingness to share expertise and passion in the field of RL, helped the researcher to gain insight into the value and importance of the study and identify key focus-areas for data analysis.

Nevertheless, Roberts (2020:3198) indicated that researchers must also reflect on the challenges that occurred during the interviews. In this study, the researcher reflected on the few technical difficulties and other challenges experienced during the remote interviews with industry experts. Since online interviews can be barred by technical problems, like unreliable Internet connection or use of older machines or mobile devices, resulting in dropped calls, lost call connection, or lag (Archibald *et al.* 2019:5), Archibald *et al.* (2019:4) found that the technical difficulties experienced in their online interviews resulted in the unintended benefit of establishing rapport, through a collaborative problem-solving process. Likewise, in this study the researcher experienced "bonding" and rapport building opportunities with the participants because of a few technical difficulties. For example, one participant enjoyed sharing their experience to such an extent that the interview conversation was continued while fetching a child from school. However, by doing so, the participant switched applications from desktop to cell phone Ms Teams, which eventually resulted in a dropped call. Although this interrupted the conversation flow, the participant eagerly continued with the conversation once the connection was re-established, and the experience resulted in further rapport building. In another interview, the researcher could not find the recording option on Ms Teams, even after ten interviews. This resulted in a light-hearted discussion in which the participant attempted to assist the researcher in finding the recording

option. The researcher found that this experience added to the rapport-building with the participant, which provided the foundation of a valuable interview conversation.

However, the researcher observed unavoidable challenges associated with remote interviews, using online video software (also see section 7.3.6.1.3). For example, like Oliffe *et al.* (2021:4), the researcher had no control over the comings and goings of the participants, where one participant continued the discussion while driving to pick up a child from school and another accepted a parcel from a courier while working from home. Evidently, these factors increased the length of the interviews and disrupted the flow of the conversation. Without criticising the participants, these examples demonstrated the problems associated with online interviewing using Ms Teams, Skype or Zoom (Oliffe *et al.* 2021:4). Other problems of online interviews associated with background noise interruptions from both the researcher's environment, (i.e. building construction activities), and the participants' environments (i.e. noisy warehouse activities), which influenced the quality of the recording or the inability to hear the person speaking. Nevertheless, using appropriate transcription software (see section 7.3.8.2) enabled the researcher to address these problems.

Despite some of the challenges, the researcher gained valuable experience while using online video software for remote interviewing. Additionally, reflecting on the challenges and other experiences during the remote interviews helped the researcher with the familiarisation process in data analysis (section 7.3.8.2) by recalling the interview conversations.

While the preceding discussion focused on reflection, in the next section will focus on reflexivity, continuing the active role of the researcher in analysing the interview data through a reflexive thematic analysis.

7.3.8 Stage 8: Data analysis of interviews with industry experts

Qualitative analysis emphasises the importance of remaining open to the data, rather than simply applying concepts imported from the literature (Roulston, 2014:305). Some common methods of qualitative analysis include *thematic analysis (hereafter TA)*, constant comparative methods, discourse analysis, content analysis, and narrative analysis (Salkind, 2010:1162). A good qualitative analysis discovers patterns, coherent themes, meaningful categories and new ideas (Suter, 2012:352).

The qualitative data analyst can choose from various approaches based on the philosophical assumptions, methodology, theory development (Saunders *et al.* 2019:642), research objectives and the preferences and experiences of the researcher (Schutt & Chambliss, 2014:333). According to Myers (2013:166), qualitative researchers can either follow a top-down approach (deductive) to test theory, or

a bottom-up approach (inductive) to build theory. Specifically, a deductive approach in qualitative data analysis means that data gets analysed based on an existing theoretical framework (Thornberg, 2022:246). In contrast, an inductive approach to qualitative data analysis involves the interpretation of data by exploring patterns, themes, concepts and theories with limited engagement in existing theory (Thornberg, 2022:248). However, Thornberg (2022:245) and Myers (2013:166) indicated that qualitative researchers can use a combination of deduction (top-down) and induction (bottom-up) approaches.

While some qualitative data analysis methods fit a more inductive approach (such as grounded theory) or a more deductive approach (content analysis), TA can be used across the continuum of deductive, inductive (Kiger & Varpio, 2020:3) and abductive approaches (Saunders *et al.* 2019:652). Evidently, Braun and Clarke (2006:86)[22] mentioned that a combination of a more inductive approach and theoretical/deductive approach can be used in TA. Since the research approaches of this study for theory development included a combination of deduction, induction and abduction (see section 3.2.4), the qualitative data analysis method used for the interviews with industry experts was a *combination of deductive and inductive approaches to TA*.

In subsequent sections an overview of TA will be provided, followed by the six phases of TA in terms of theory and practical application for the interviews with industry experts.

7.3.8.1 Overview using thematic analysis for interview data

King and Brooks (2019:2) define TA as "*forms of qualitative data analysis that principally focus on identifying, organising and interpreting themes in textual data*." In other words, a TA systematically identifies, organises, and offers insight into patterns of meaning (themes) across a dataset in relation to the topic and research questions being explored (Braun & Clarke, 2012:2; Maguire & Delahun, 2017:3353). Subsequently, a TA can be a flexible and useful research tool appropriate for researchers that seek to examine texts (interviews, field notes, documents), apply codes and develop themes, which can potentially provide a rich, detailed and complex account of the data (Braun & Clarke 2006:78; Salkind, 2010:1162).

The reason for using TA to analyse the data obtained from the interviews with industry experts was four-fold. *Firstly*, unlike other approaches (such as grounded theory or discourse analysis), TA requires no detailed theoretical and technological knowledge, offering a more accessible form of analysis for

[22] Braun and Clarke (2006) can be described as seminal authors cited by most researchers (post 2006) that used thematic analysis as a qualitative data analysis method.

novice qualitative researchers (Braun & Clarke, 2006:80; Braun & Clarke, 2012:3). *Secondly*, TA can be used for any approach to theory development, including deductive, inductive and/or abductive (Saunders *et al.* 2019:652). *Thirdly*, the flexibility of TA allows for a wide range of theoretical and epistemological frameworks, study questions, designs, and sample sizes (Kiger & Varpio, 2020:2), which fits multimethod qualitative studies (Braun & Clarke, 2012:3). *Finally*, TA is often used in qualitative organisational research (King, Brooks & Tabari, 2017:180), which fits the field of this study (RLM in online retailing).

The flexibility of TA as a method means it can be undertaken with different guiding theories, coding practices and theme development (Braun & Clarke, 2021:331). Nevertheless, the theoretical position of a TA must be made clear, and researchers must always reflect on the philosophical and theoretical assumptions (Braun & Clarke 2006:81; Braun & Clarke, 2021:338), which can be essential for high-quality qualitative data analysis (Terry & Hayfield, 2020:433).

Braun and Clarke (2021:331) mentioned that a TA can be used for a more deductive or more inductive analytic process (grounded in the data). As mentioned in the introduction of section 7.3.8, a combination of deductive and inductive approaches was used to analyse the interview data. The deductive approach was necessary to triangulate the findings from the QCA (testing theory), and the inductive approach was necessary to seek and identify new patterns and themes that can contribute to theory (creating new theory). Accordingly, the study used two approaches (or types) of TA described by Braun and Clarke (2021), namely a codebook TA and a reflexive TA.

According to Braun and Clarke (2021:331) a 'codebook' TA represents a group of methods that broadly sit within a qualitative paradigm with some pragmatic compromises, starting with a semi-structured coding framework for developing the analysis. Evidently, the *codebook method* of TA involve a deductive approach, using *deductive codes, constructed from*: (1) *theoretical frameworks* or themes drawn from the *existing literature* and converted into a coding framework (Linneberg & Korsgaard, 2019:264), (2) relevant *empirical work* (Forman & Damschroder, 2008:48) derived *from other research methods* (such as QCA method) employed in a study (Bowen, 2009:32), and (3) *research questions* and *data collection categories* (such as the interview protocol) (Forman & Damschroder, 2008:48). This codebook approach was used during the initial coding phase of the TA (see section 7.3.8.3), using similar techniques and processes employed in QCA method (see section 3.3).

To discover new themes and patterns from the interview data, the researcher moved beyond a codebook approach and incorporated a *reflexive TA*. The reflexive method of TA involves an *inductive approach*

where coding forms an essential part of theme development, which includes immersion in the data, reading, reflecting, questioning, imagining, wondering, writing, retreating and returning (Braun & Clarke, 2021:332). Unique to a reflexive TA is the equal status of the researcher, the research questions (or objectives) and the data (i.e. interview transcripts), contrasting other approaches (e.g. content analysis) of objective distance between the researcher and the data (Terry & Hayfield, 2020:433). Evidently, a reflexive TA embraces more *subjective skills and qualitative research values*, where a code can be used as an analytic tool to develop new themes (Braun & Clarke, 2021:340, 344).

TA builds around six iterative phases, which facilitates continuous engagement with the dataset (Terry & Hayfield, 2020:434). These six phases originally created by Braun and Clarke (2006) and adapted by Braun and Clarke (2021:331) include (1) familiarisation of data and writing notes, (2) generating codes and systematic coding of data, (3) generating themes from coded data, (4) developing and reviewing themes, (5) refining, defining and naming themes, and (6) writing the report (see Table 7.**8** for the description).

Nevertheless, Braun and Clarke (2021:331) commented that the six-phase approach can be used as a guideline where researchers can blend the phases together, allowing for a recursive analysis. Evidently, each phase can only be as useful as the quality of engagement it produces, so moving backward or forward between phases can be conducive to a TA (Terry & Hayfield, 2020:434). Nonetheless, the most important aspects of a TA must be the finished product, regardless of the specific steps to follow (Braun & Clarke, 2006:86).

As indicated in section 7.3.3, the interviews with industry experts focussed initially on consumer returns, RL processes, parties and facilities (Part B of interview questions), followed by more detailed questions on RL practices for the effective RLM of consumer returns (Part C of interview questions). Since *practices can change* and be specific to industries, organisational types and positions in the supply chain, the *RL practices* identified in the QCA findings and discussed in the interviews *formed part of the reflexive TA*. In contrast, *consumer returns, RL processes, parties and facilities can be more standard*, which can be more suitable for a deductive *codebook approach*. Subsequently, the aim of the deductive approach was to identify if the consumer returns, RL processes, parties and facilities identified in the QCA of RL literature (chapters 4 and 5) applied to online retailing, while the reflexive approach was used to supplement and support the QCA findings, which focused on important RL practices for RLM (chapter 6). In terms of the final research question (section 7.3.1), a *reflexive TA* was used to identify *important RLM factors* for the effective management of consumer returns in online retailing, which involved theory development.

Subsequently, the TA of this study involved *two types of analysis*, namely a *descriptive analysis* (using the deductive codebook approach) *and reflexive TA* (using an inductive approach). Although a descriptive analysis is different from a TA in terms of the development of themes, the descriptive analysis was derived from the first two phases of the TA. Evidently, the *codebook approach strictly applied to the first few phases of the TA*, and the *reflexive approach applied to all phases of the TA*.

Table 7.**8** provides an overview of the six phases of the TA that was adopted for the interviews with industry experts, including the descriptions from Braun and Clarke (2006:87), the type of analysis and research questions (RQs).

Table 7.8 Phases of a thematic analysis for interviews with industry experts

Phase	Name	Brief description	Type of analysis	Applicable RQs
1	Familiarisation of data and writing notes	Involves transcribing of interview data, reading and re-reading the transcripts and jotting down notes.	• Descriptive analysis • Reflexive TA	• What are the reasons and types of consumer returns in online retailing? • What are the RL processes of consumer returns in online retailing? • What are important RL practices for managing consumer returns in online retailing? • What are important factors for the effective RLM of consumer returns in online retailing?
2	Generating initial codes and systematic coding process	Systematically coding the interview data across the entire data set and organising interview data relevant to each code.	• Descriptive analysis • Reflexive TA	• What are the reasons and types of consumer returns in online retailing? • What are the RL processes of consumer returns in online retailing? • What are important RL practices for managing consumer returns in online retailing? • What are important factors for the effective RLM of consumer returns in online retailing?
3	Generating themes	Grouping initial codes into themes and gathering all interview data relevant to the themes.	• Reflexive TA	• What are important RL practices for managing consumer returns in online retailing? • What are important factors for the effective RLM of consumer returns in online retailing?
4	Developing and reviewing themes	Determining the appropriateness of the themes in relation to the coded interview data extracts and the entire interview data set and producing a thematic map of the analysis.	• Reflexive TA	• What are important RL practices for managing consumer returns in online retailing? • What are important factors for the effective RLM of consumer returns in online retailing?
5	Refining, defining and naming themes	Ongoing analysis to refine each theme and the overall narrative that the analysis conveys and producing clear definitions and names for each theme.	• Reflexive TA	• What are important RL practices for managing consumer returns in online retailing? • What are important factors for the effective RLM of consumer returns in online retailing?
6	Writing the report	Selecting vivid, compelling interview extract examples, final analysis of selected interview extracts, relating analysis back to the research questions and	• Reflexive TA	• What are important RL practices for managing consumer returns in online retailing? • What are important factors for the effective RLM of consumer returns in

		literature, and providing a research report (write-up of findings) of the analysis.		online retailing?

Source: Researchers own compilation from Braun and Clarke (2006:87)

Before discussing the phases, it should be noted that like the QCA of RL literature, *ATLAS.ti was used to facilitate the analysis* process of the interviews with industry experts. Since the process of adding documents, importing a codebook, creating a coding frame, assigning codes to passages (or quotations) and related functionalities in ATLAS.ti was extensively discussed in section 3.3.2, using ATLAS.ti for the interview data will be limited to a brief description and references to sections and appendices for chapter 3. Evidently, to avoid unnecessary repetition, the following procedure from the QCA of RL literature also applied to the interview data:

- ***Preparing the project and adding the documents*** (see section 3.3.2.6.1 and Appendix B.1)
- ***Preparing the codes*** in ATLAS.ti (see section 3.3.2.6.2 and Appendix B.2 and B.3)
- ***Coding the documents*** in ATLAS.ti (see section 3.3.2.6.3 and Appendices B.4 and B.5)
- ***Generating output reports*** in ATLAS.ti (see section 3.3.2.6.4 and Appendices B.6 and B.7)
- ***Inductive coding*** on code categories (see section 3.3.2.6.5 and Appendix B.8)

The subsequent sections provide more details on the theory and practical application of the TA phases (Table 7.**8**) for the interviews with industry experts.

7.3.8.2 Phase 1: Familiarisation of data from interviews with industry experts

The first phase in the TA process is becoming familiar with the entire data set (Kiger & Varpio, 2020:4). Evidently, the aim of this phase is to become intimately familiar with the collected data content and noticing aspects that might be relevant to the research question (Braun & Clarke, 2012:6). Additionally, the researcher needs to engage with the data, to become familiar with the depth and breadth of the content (Braun & Clarke, 2006:87).

While it may be tempting to begin the coding of data and searching for themes immediately, familiarisation of the entire data set provides a valuable orientation to the raw data and can be foundational for all subsequent steps (Kiger & Varpio, 2020:5). Nevertheless, with interview data, the researcher comes into the analysis with prior knowledge, obtained while interviewing participants, and some initial analytic interests or thoughts (Braun & Clarke, 2006:87).

Phase 1 consists of transcribing of interview recordings, editing of transcripts, reading, re-reading transcripts, listening to audio-recordings and taking initial notes (Braun & Clarke, 2012:5), which will be described in subsequent sections.

7.3.8.2.1 Transcription of data recordings from interviews with industry experts

Research that involves interviews also involves the transcription of audio recordings into text to facilitate the analysis process (Nascimento & Steinbruch, 2019:2). Therefore, the verbal data from the interviews with industry experts required transcription to conduct the TA (Braun & Clarke, 2006:87). If researchers use voice-recognition software (applicable to this study) or transcription services to facilitate this step, it can be important to compare the transcripts against the original audio recordings for accuracy (Kiger & Varpio, 2020:5). Although transcription can be a time-consuming process, the time spent transcribing the data can be valuable as it informs the early stages of the analysis and serves as an excellent way to become familiar with the data (Braun & Clarke, 2006:88; Kiger & Varpio, 2020:5). Evidently, transcription can be used as a form of familiarisation as the researcher develops a greater understanding of the data (Braun & Clarke, 2006:88; Saunders *et al.* 2019:653).

The use of voice recognition software can greatly facilitate the task and accuracy of transcription (Klenke 2016c:141). However, the best approach after transcription is to verify the accuracy of the transcript (Forman & Damschroder, 2008:46). In this study, the *online software service provider Sonix* was *used to initially transcribe the audio*. The transcription platform, provided by *Sonix, allowed the researcher to edit and further transcribe* the written text by listening for the accuracy of the interview transcripts. Therefore, the researcher played a key role in the transcription process of the interviews with industry experts, especially, since the software was developed by a US-based company, affecting the level of accuracy of South African dialect. Evidently, *each transcript was listened to and edited*, ensuring that the *"speech-to-text" transcription of Sonix was accurate*.

Although a denaturalised approach to transcription was followed (e.g. removing unnecessary spoken words) (see section 7.3.8.2.2), at this stage of transcription, the researcher focussed more on the accuracy of speech and not on the grammatical problems. Essentially, the first part of the *transcription process* involved *reviewing of the transcripts* for each interview to not only *obtain a high level of accuracy* for data analysis but also to *become familiar with the data*. Appendix D.5 provides an example of using the transcription platform of Sonix, to edit the transcripts from the interviews with industry experts.

After establishing the accuracy of the transcripts, each transcript was exported, from the Sonix platform, and saved as a Microsoft Word document in a secure folder (on the researcher's laptop), ready for the next stage of editing and reading of transcripts.

7.3.8.2.2 Editing and reading of transcripts and initials notes from interviews with industry experts

In this step, the researcher needs to refine, read and re-read (or immerse in) the entire dataset until a thorough understanding of the content can be established (Braun & Clarke, 2012:6; Maguire & Delahun, 2017:3356). Evidently, *familiarisation of the interview data* continued with the *editing of interview transcripts*, followed by the *reading and re-reading* of the *edited transcripts*.

Because TA is a less prescriptive form of qualitative data analysis, no set of guidelines can be followed when producing a transcript (Braun & Clarke, 2006:88). Unlike narrative and discourse analysis, the transcribed conversation in TA requires less details (e.g. adding repeated words and verbal utterance). Nevertheless, transcripts must retain information from the verbal account in a way to reflect the true meaning of its original nature (e.g. punctuation added can alter the meaning of data) (Braun & Clarke, 2006:88).

The approach of transcription involves the decision to either include the written text as it was spoken (naturalised approach) or making adaptations between what was said and what was written (denaturalised approach) (Nascimento & Steinbruch, 2019:6). A naturalised approach involves notations, including duration, pitch and loudness, to analyse the behaviour of participants, and paralinguistic components, which include audible breathing, crying, aspiration and laughter (Kowal & O'Connell, 2014:68, 73). Because these features can be difficult to transcribe, they are usually omitted from transcripts in qualitative research (Kowal & O'Connell, 2014:73).

Consequently, the researcher used a *denaturalised approach* to transcription, which means that grammatical errors, repeated (or unnecessary) words, paralinguistic elements, cultural accents (Nascimento & Steinbruch, 2019:7), and other utterances that cannot contribute to the topics of talk (e.g., 'um,' 'uh,' 'yeah,' and so forth) are removed (Roulston, 2014:299). Because the focus of the TA was not on the way things were said and more about what was said, a spelling and grammar check was performed. Evidently, the researcher *deleted all repeated words*, for example, "the the" changed to "the", *corrected spelling mistakes* (from the original transcripts), for example, "center" was changed to "centre", *addressed grammatical problems* (mostly punctuation issues) and *removed utterances* (such as "um" and "uh").

Additionally, if the participant speaks English as a second language (mostly the case in South Africa), Nascimento and Steinbruch (2019:11) mentioned it may be better to demonstrate the words correctly in the transcripts and leaving the text concise and clear to readers. Since *English was the second language of most participants*, the researcher *added context using brackets* to the discussions that might be unclear to readers unfamiliar with South African dialect. For example, the participant can refer to the

online retailer and the consumer in the same sentence using the word "I" or "they" for both, which can be confusing to the reader. Therefore, in these instances, the researcher emphasised the meaning in brackets, like "they [the online retailer] said to them [the consumer] …", to clarify the meaning. Nevertheless, the researcher ensured that the information provided by the industry experts remained accurate and authentic, ensuring that the TA produced accurate findings.

While editing involved reading of transcripts, which adds to the familiarisation stage, the researcher must at least *read the entire data set once before coding begins* (in phase 2). Braun and Clarke, (2006:87) and Braun and Clarke (2012:5) described the type of reading needed for the TA as actively, analytically and critically reading the words, searching for meanings and patterns and starting to think about the meaning of the data.

Furthermore, making notes while reading and listening to the interview data can be important for familiarisation (Braun & Clarke, 2012:5). However, notetaking at this stage must be observational and casual rather than systematic and inclusive, which associates with coding (Braun & Clarke, 2012:6; Terry & Hayfield, 2020:436). Regardless, notes aid in the process of analysis and can be viewed as memory aids and triggers for coding and analysis, during the next phase (generating codes and coding) (Braun & Clarke, 2006:88; Braun & Clarke, 2012:6). While initial notes can be important in familiarisation, the researcher mostly focussed on creating notes in the subsequent phases (phases 2 to 5), which aided in the development of inductive codes and themes.

Phase 1 concluded with creating a project named "Interviews with industry experts" in ATLAS.ti and *adding the transcripts* to ATLAS.ti. Therefore, thirteen transcripts were imported into ATLAS.ti and the details of each interview and any other notes were added to the document comment function. ATLAS.ti automatically numbered the documents (D1, D2, D3 and so forth), which corresponded with the interview participants pseudonyms of (P1, P2, P3 and so forth). Next, *each document was named* according to the *quotation identifier* that was used during the writeup (presentation of analysis in chapter 8), for example, "(P1, operations manager, 3PRL provider)", referring to the participant identifier, job description and type of business (see Appendix B.1 – preparing materials to be imported in ATLAS.ti).

Essentially, familiarisation can be important because it provides a foundation for the rest of the TA (Braun & Clarke, 2006:87). At the end of this phase, the researcher must be thoroughly familiar with the entire body of data or data corpus (e.g. all the interview transcripts and notes) (Maguire & Delahun, 2017:3356).

7.3.8.3 Phase 2: Generating codes and coding process of data from interviews with industry experts

After familiarisation (transcribing, listening, reading and notetaking) of the data, phase 2 begins with the systematic analysis of the data, through coding (Braun & Clarke, 2012:6). Coding can be viewed as an important step in moving from raw data to findings, while maintaining coherence between the research objective(s) and the findings (Linneberg & Korsgaard, 2019:262). Evidently, the researcher starts with organising the interview data in a meaningful and systematic way (Maguire & Delahun, 2017:3355) by generating codes (inductively or deductively) and coding the transcripts with the identified codes. Phase 2 of this study also involved a descriptive analysis based on the coding process, comparing the QCA of RL literature findings with the interview findings for consumer returns and RL processes.

In the subsequent sections the processes for generating codes, coding of interview data and the descriptive analysis will be explained.

7.3.8.3.1 Generating codes of data from interviews with industry experts

Generating codes deepens the researcher's level of engagement with the data, affording greater clarity about the data (Terry & Hayfield, 2020:436). Codes identify and provide a label for a feature of the data (semantic or latent) relevant to the research question or interesting to the analyst (Braun & Clarke 2006:88; Braun & Clarke, 2012:6). Codes can be distinguished from themes in terms of width (Braun & Clarke, 2006:88), for example, in a brick-built house, themes represent walls and the roof (broader than codes), and codes represent individual bricks and tiles (narrower than themes) (Braun & Clarke, 2012:6).

Some codes can mirror participants' language and concepts (e.g. returns logistics activities), while other codes can reflect the researchers' conceptual and theoretical frameworks (e.g. RL process) (Braun & Clarke, 2012:6). Evidently, codes can be a mixture of *descriptive codes* (semantic codes), which describe the content of the data, remaining close to a participant's words and the meanings they ascribe to those words, and *interpretative codes* (latent codes), which provide an interpretation about the data content based on the researcher's theoretical knowledge, extending beyond a participant's words or meaning (Maguire & Delahun, 2017:3355; Terry & Hayfield, 2020:436). Nevertheless, all codes must be well-defined, relevant to answering the research question(s) and fit logically into a larger coding framework (Braun & Clarke, 2012:6; Kiger & Varpio, 2020:5).

Code development can be based on inductive and deductive reasoning, which often starts with deductively developed codes but remains open to new topics suggested by the data (inductive codes)

(Forman & Damschroder, 2008:49). As indicated in section 7.3.8.1, this study used a *combination of a deductive and inductive approach*, meaning that initial codes were created from theory, using a pre-established code framework, while inductive codes were added during the coding process (identified from the data) (Braun & Clarke, 2006:89; Nowell *et al.* 2017:2). *Deductive codes* aimed at *triangulating the interview findings with the QCA findings for consumer return types and RL processes*, which required a predetermined coding frame. Evidently, parts of the *coding frame developed during the QCA* of RL *literature also applied to the initial coding* of the *interview data* (see Appendix A.2). Additionally, the TA required *inductive codes to identify RL practices* and *RLM factors* that can be important for the effective RLM of consumer returns in online retailing.

7.3.8.3.2 Coding process for interviews with industry experts

Coding enables researchers to make sense of their data and helps with a rigorous process of analysis (Terry & Hayfield, 2020:436). Coding reduces data into smaller chunks of meaning (Maguire & Delahun, 2017:3355), allowing the researcher to simplify and focus on specific characteristics of the data (Nowell *et al.* 2017:5). Like familiarisation (phase 1), the coding process involves reading all the transcripts and assigning codes to each data extract/quotation (such as a sentence or paragraph in a transcript) relevant to the research question (Braun & Clarke, 2012:6).

Evidently, coding involves working systematically through the entire data set, giving full attention to each data item (e.g. each transcript and each interview question), and identifying interesting aspects in the data relevant to the research question (Braun & Clarke, 2006:89; Maguire & Delahun, 2017:3355). This process can be repeated throughout each data item in the entire dataset and as the coding progresses, data extracts can be uncoded, coded once, or coded many times, as relevant to the research objectives (Braun & Clarke, 2006:89; Braun & Clarke, 2012:7).

The *coding process* followed *for the interviews with industry experts was completed in several steps* based on the *researcher's interpretation of theory*. These steps will be described in subsequent paragraphs.

- *Step 1: Preparing for coding*

Coding can be done manually or electronically with the assistance of a computer program (Kiger & Varpio, 2020:5). As mentioned in section 7.3.8.1, *ATLAS.ti software was used for the coding process*. The initial coding frame from the QCA of RL literature (Appendix A.2) that involved pre-receipt RL processes, post-receipt RL process and consumer return codes was imported from Microsoft Excel to start initial coding of the interview transcripts in ATLAS.ti. All deductive codes with descriptions were

reviewed, ensuring that the initial code categories and subcategories were successfully imported into ATLAS.ti (see Appendix B.2). Subsequently, the preparation for the coding of interview data commenced with deductive codes as part of the codebook approach in TA (see section 7.3.8.1).

- *Step 2: Coding of interview transcripts*

Initial coding of the interview data in ATLAS.ti started in *September 2021*, which involved meticulous coding of each transcript with pre-established codes by the researcher. As the interview data was coded with the deductive codes, inductive codes were identified and added to the coding list, using the "apply code" function of ATLAS.ti. Evidently, several coding rounds were required to ensure that all the interview data was coded with the same codes.

- *Step 3: Creating notes for inductive codes*

After the first coding round, the researcher *created memos (or notes) in ATLAS.ti for each inductive code*. The researcher commented on the quotations for the applicable code during the second coding round to get an overall understanding of the data, which can assist with theme development. Appendix D.6 provides an example of commenting on the quotations for each quotation, using the memo function of ATLAS.ti.

- *Step 4: Recoding broad inductive codes*

Commenting on the quotations for each code, the researcher noted that *some codes contained data too diverse* to be classified as codes, which *required further inductive coding*. For example, the inductive code "RL drivers" contained too many data extracts, which meant that "RL drivers" may be too broad as a code and could possibly be a theme or subtheme.

The researcher used the *ATLAS.ti functionality* of *assigning new inductive codes* to the *quotations* (data extracts) *originally assigned* to the *broad inductive code*, eliminating the need to recode the entire dataset (i.e. all interview transcripts). Appendix D.6 provides an example of assigning additional inductive codes to broad inductive codes, using ATLAS.ti. The same process was followed for all broad inductive codes, resulting in an extensive coding framework. Nevertheless, the original inductive codes were used as code categories, which could help with generating themes (in phase 3).

- *Step 5: Recoding transcripts and finalising the coding framework*

According to Braun and Clarke (2012:7) the number of codes depends on the topic, dataset and precision in coding, meaning that any number of codes can be produced in stage 2. Additionally, Terry

and Hayfield (2020:437) mentioned that coding must continue until sufficient codes and assigned quotations can be used to build some candidate themes.

Evidently, step 5 involved *coding the interview transcripts in several rounds* to ensure that (1) deductive codes were thoroughly applied to relevant quotations for the descriptive analysis, and (2) an extensive list of inductive codes can be used for the development of themes. Additionally, the researcher focused on the research questions during the coding process, ensuring that (1) quotations assigned to deductive codes can be used for effective comparison between QCA of RL literature findings and interview findings, and (2) quotations assigned to the inductive codes can be used for the reflexive TA, development of themes and answering of research questions related to RL practices and factors for RLM.

At the conclusion of the coding process, *phase 2* resulted in a *code list consisting of 19 deductive codes* (pre-established from the QCA of RL literature) and *58 inductive codes* (identified from the interview data), which can be viewed in Appendix D.6. Following the coding process, the researcher initiated the descriptive analysis part of phase 2, described next.

7.3.8.3.3 Descriptive analysis based on the deductive coding of interview data

Since the researcher used a deductive approach to compare the QCA findings with the interview findings for consumer returns and RL processes (discussed in chapters 4 and 5) *phase 2 concluded with a descriptive analysis*. Subsequently, the descriptive analysis excluded theme development and essentially, ended the codebook approach to the TA.

As indicated in Table 7.**8**, the descriptive analysis associated with the first two research questions, namely (1) *"what are the reasons and types of consumer returns in online retailing?",* and (2) *"what are the RL processes of consumer returns in online retailing?".* Subsequently, output reports were created (see section 3.5.6.4) for deductive codes related to the research questions, including customer return request (CRR), gatekeeping, collection, transportation, receiving, inspection, sorting, disposition (including reuse, repair, refurbish, exit options), redistribution and consumer returns (see Appendix D.6 for deductive codes).

Since the output reports are in docx. format, the researcher used the *navigation pane in Ms Word* to enter key terms from the QCA findings for an initial quick comparison. For example, in the interview findings output report for the code "consumer returns", the keyword "unwanted" was entered in the navigation pane to identify matching quotations about unwanted returns between the interviews and QCA of RL literature findings. Evidently, *each subcategory identified in the QCA* of RL literature *was*

entered as keywords for *quick comparison with the interview data*. Additionally, the researcher initially *used the quotation tables* from the *QCA findings* (chapters 4 and 5) and *added an additional column to match interview quotations* with *QCA of RL literature quotations* for effective comparison. Appendix D.6 provides examples of using the navigation pane in Ms Word to enter keywords and using the data tables from the QCA of RL literature chapters for the descriptive analysis.

The *presentation of findings* for the descriptive analysis involved a *comparative approach*. According to Saunders *et al.* (2019:712), in a comparative approach the structure of the presentation of findings involves different but related qualitative datasets that are analysed and presented for easy comparison. Subsequently, for an effective comparison, the presentation style for the descriptive analysis includes a combination of the quotation tables used for the presentation of the QCA findings (see chapters 4 and 5), containing the inductive categories and subcategories from the QCA findings, with the addition of categories identified in the interviews. Additionally, the tables for the descriptive analysis include a simplified matrix, comparing the two sets of data (QCA versus interviews) per category/subcategory. However, the descriptive analysis tables exclude quotations from the QCA (which can be viewed in chapters 4 and 5) to avoid unnecessary cluttering and duplication of findings. Instead, the final column in the descriptive analysis tables include some quotations from the interview findings to support the comparison and discussion of findings.

In chapters 4 and 5, a description was created for each main category based on the QCA of RL literature findings. Based on the descriptive analysis findings for the interviews with industry experts, the description for each main category is redefined to answer the research questions (RQ1 and RQ2). Based on the recreated descriptions, each main section concludes with a descriptive analysis summary in the form of a data matrix, containing overlapping categories and subcategories between the different consumer return types, different pre-receipt RL processes and different post-receipt RL processes. Following the data matrix some key findings are discussed with important implications and RLM considerations for online retailers

Essentially, at the end of phase 2, all interview transcripts were thoroughly coded, the quotations relevant to each code was collated in preparation for generating themes (Braun & Clarke, 2012:7; Kiger & Varpio, 2020:5) and a descriptive analysis was performed on the deductive codes to compare interview findings with QCA of RL literature findings. In the next section, phase 3 focuses on the reflexive TA part of this study, which involves generating themes from the inductive codes produced in phase 2.

7.3.8.4 Phase 3: Generating themes from coded data of interviews with industry experts

Originally phase 3 of the TA was named "searching for themes" (Braun & Clarke 2006), which was renamed "generating themes" by Braun and Clarke (2021) because of confusion around the conceptualisation of themes as pre-existing entities that reside in data (i.e. themes that emerged from the data). Evidently, generating themes highlight the active role of the researcher in theme creation, to avoid the claims of themes "emerging" from the data (Braun & Clarke, 2021:343).

Phase 3 starts after the initial coding process (phase 2), shifting the analysis from codes to themes (Braun & Clarke 2006:89; Braun & Clarke, 2012:7). A theme can be defined as a pattern that captures something significant or interesting about the data and/or research question (Braun & Clarke, 2006:82; Maguire & Delahun, 2017:3356). Basically, a theme represents a broad category involving multiple codes that seem to be related to each other and that points to an idea important to the research question (Saunders *et al.* 2019:657). Themes can be constructed by analysing, combining, comparing and visually mapping the relationship between codes (Kiger & Varpio, 2020:5).

The flexibility of TA allows researchers to determine themes in several ways (Braun & Clarke, 2006:82). Some inductive codes (identified in phase 2) can form main themes and subthemes or can be sorted into a miscellaneous theme category (all codes without an applicable theme category), which may end up as part of new themes, or being discarded (Braun & Clarke, 2006:90; Braun & Clarke, 2012:8; Nowell *et al.* 2017:8). Furthermore, important questions that must be answered at this stage of the TA includes, "what counts as a pattern or theme?", and "how large must a theme be?", which relates to prevalence within the data items and across the entire data set (Braun & Clarke, 2006:82).

Nevertheless, no clear method exists for determining the prevalence of a theme, and the researcher's own judgement must be used. However, Braun and Clarke (2006:82) emphasised that the significance of a theme must rather depend on capturing something important in relation to the research questions (Braun & Clarke, 2006:82). Therefore, the focus must be on the research aim and only the data, codes and themes that can answer the research question(s) must be included in the analysis of the study (Braun & Clarke, 2012:8). As mentioned in phase 2 (see section 7.3.8.3), *the research questions* were used to *guide the identification of inductive codes and assigning appropriate quotations to the codes*. Subsequently, focussing on the research questions in earlier phases simplified the process of generating themes in line with the research questions.

Furthermore, Braun and Clarke (2021:342) warned that "themes" developed prior to any analysis and coding, may result in topic summaries, which can impede true analytic work. For themes to be patterns of shared meaning underpinned by a central concept, means that themes must be analytic outputs, not

inputs (Braun & Clarke, 2021:342). Evidently, the researcher *generated initial themes and subthemes based on the following criteria*: (1) *sufficiently supported by the interview data* (multifaceted) (Braun & Clarke, 2021:341), (2) *answering research questions* (Braun & Clarke, 2012:8), (3) representing something *significant of the data* (Maguire & Delahun, 2017:3356) and (4) *excluding deductive topic summaries* from categories identified in the QCA of RL literature (e.g. IT practices, integration practices and RL in/outsourcing practices).

Generating themes can be an active and creative process (Braun & Clarke, 2021:343), which involves (1) reviewing the coded data to identify areas of similarity and overlap between codes, (2) sorting codes into potential themes, (3) collating and clustering codes that share some unifying feature within the identified themes, and (4) exploring the relationship between codes, themes, and different levels of themes, like main themes and subthemes (Braun & Clarke 2006:89; Braun & Clarke, 2012:7-8). The subsequent paragraphs provide an overview of the steps that the researcher followed, based on suggestions from Braun and Clark (2006:89) and Braun and Clark (2012:7-8), to generate themes from coded interview data.

- *Step 1: Returning to coded interview data*

At this stage of phase 3, the researcher reviewed all coded interview transcripts to identify overlaps and similarities between codes. For example, the researcher noted that RL problems and RL drivers can both be problematic for the effective RLM of consumer returns, which means that RL problems and RL drivers must be grouped into a potential theme. Like phase 2 (step 3), the *researcher used the memo function of ATLAS.ti to record observations related to the overlaps and similarities between codes*, which can be used to explore the relationships between codes.

- *Step 2: Explore code relationships and sort related codes into potential themes*

Based on the initial notes created during the coding phase (step 3 of phase 2) and notes created in step 1of phase 3, the researcher used the *network function of ATLAS.ti* to *explore code relationships*. The network function in ATLAS.ti, enables linking of codes through a "relations manager". For example, the code "RL driver" is a part of "RL problems", "RL benefits and importance of RLM" is important for "RLP – Poor RLM" and "RLD – Management inefficiencies", and "RLD – Lenient returns" can cause problems with "RLP – cost-related problems".

Based on the relationships between codes and notes, additional networks were created to sort the codes with significant relationships into potential themes. Appendix D.7 shows examples of studying the

relationships between codes and sorting codes into potential themes, using the network function in ATLAS.ti.

- *Step 3: Creating summaries for potential themes*

After grouping codes into potential themes, a *new memo was created in ATLAS.ti* to *summarise each potential theme*. Specifically, based on observations from notes (phase 2, step 3 and phase 3, step 1) and identification of relationships between codes (phase 3, step 2), each potential theme was summarised, which involved mentioning *key factors important to the theme*, asking *questions about the codes and contents of the theme*, and *listing codes* associated with the theme.

For example, "*Understanding the significance of RLM - consequences of mismanagement, problems, costs, drivers, benefits. Why is it important to manage RL? What are the implications if ignored? [Codes: RL drivers, RL problems, RL benefits and importance]. Subthemes - RL drivers, RL problems and RL benefits and importance".* Appendix D.7 shows the memo for generating themes, with the comments, questions, codes applicable to each theme and identified subthemes.

- *Step 4: Create a thematic map for generated themes in phase 3*

In the final step of phase 3, a *thematic map* was created to *provide an overview* of generated candidate (main) *themes and subthemes*. Five candidate themes were generated, namely (1) significance of RLM, (2) decision-making factors in RLM, (3) relationships and information for RLM, (4) RL reduction and recovery and (5) business management for RLM. Additionally, each theme included several subthemes (12 in total), some of which were broad codes (e.g. RL drivers), while others represented a combination of several codes. Although phase 3 resulted in a thematic map of generated themes, the researcher may be uncertain about keeping, discarding, or modifying the thematic map and themes for final analysis (Kiger & Varpio, 2020:6). Subsequently, Figure 7.4 represents an initial thematic map outlining the themes and related subthemes generated in phase 3 of the TA.

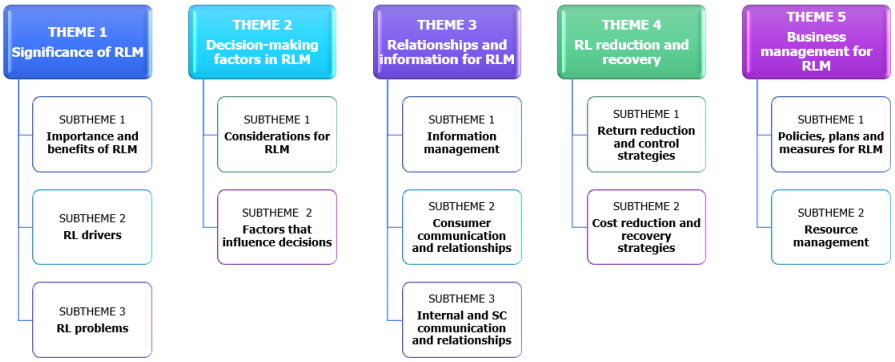


Figure 7.4 Initial thematic map generated in phase 3 of the TA
Source: Compiled by the researcher

Essentially, at the end of phase 3, all codes were organised into broader themes using a thematic map (Figure 7.4) outlining the candidate themes and subthemes in preparation of reviewing the themes in phase 4 of the reflexive TA (Braun & Clarke 2006:90; Braun & Clarke, 2012:8; Maguire & Delahun, 2017:3356), which will be discussed in next section.

7.3.8.5 Phase 4: Developing and reviewing themes of data from interviews with industry experts

Phase 4 can be a time consuming and recursive process of reviewing and refining candidate themes, including re-coding of the entire data set (Braun & Clarke 2006:90; Braun & Clarke, 2012:8; Terry & Hayfield, 2020:438). In this phase, the researcher may find that some candidate themes cannot be classified as themes (i.e. themes without sufficient data to support them, or data that may be too diverse), while others can be collapsed into one theme (i.e. two separate themes might form one theme) or be broken down into separate themes (Braun & Clarke 2006:90).

Phase 4 involves two levels of analysis, including reviewing themes against coded data extracts and reviewing the themes in relation to the entire dataset (Braun & Clarke, 2012:8). Since this phase involved significant effort and time, the section starts with a theoretical overview on developing and reviewing themes and concludes with a practical overview of the process the researcher followed to develop a thematic map from reviewed themes.

7.3.8.5.1 Theoretical overview of developing and reviewing themes

In this section, the theory of the two levels of analysis, namely reviewing themes against coded data extracts and reviewing the themes in relation to the entire dataset (Braun & Clarke 2006:90), will be briefly described.

The first level, *reviewing themes in coded data extracts*, involves reading collated extracts (i.e. ATLAS.ti output reports) for each theme and determining if collated extracts form a coherent pattern (Braun & Clarke 2006:91; Nowell *et al.* 2017:9). Reviewing themes can be guided by asking the following questions (Braun & Clarke, 2012:8):

- Is this a theme or rather a code?
- How valuable is this theme (does it explain something useful about the dataset and the research question)?
- What are the boundaries of this theme (what does it include and exclude)?
- Is this theme adequately supported by the data (are there enough data to support the theme)?
- Does this theme lack coherence (are the data too diverse in this theme)?

Additionally, other questions that may be asked include, (1) “Are overlapping themes, separate themes?”, (2) “Are there themes within themes (subthemes)?”, and (3) “Are there other themes within the data?” (Maguire & Delahun, 2017:3358).

Based on the questions, the researcher can review themes in the coded data extracts to (1) identify problematic candidate themes, determining if the theme itself is problematic, or if the theme includes irrelevant data extracts (Braun & Clarke 2006:91), (2) rework and recreate themes (e.g. combining some themes or splitting broader themes), (3) move inappropriate codes within initial themes to other more relevant themes, and (4) discard initial themes and initial codes from the analysis (Braun & Clarke 2006:91; Braun & Clarke, 2012:8; Kiger & Varpio, 2020:6).

Reviewing themes in the entire data set involves considering the validity of individual themes in relation to the data set and determining if the candidate thematic map/table reflects the meanings evident in the data set as a whole (Braun & Clarke 2006:91). Evidently, reviewing themes in the entire data set, enables further engagement with the data and returning to the data with the redeveloped candidate themes as an interpretative framework (Terry & Hayfield, 2020:438).

Level two involves a similar set of questions asked for level one but relates to the entire data set (Kiger & Varpio, 2020:6). Evidently, level two requires rereading of the entire data set to (1) determine if the themes ‘work’ in relation to the data set (i.e. all interview transcripts), (2) code any additional data within themes missed in earlier coding stages (Braun & Clarke, 2006:91) and (3) review and refine problematic themes until a satisfactory thematic map/table can be realised (Braun & Clarke, 2006:91-92). Nevertheless, Braun and Clarke (2006:92) warns that coding and generating themes can be an endless process, which means that the researcher must avoid over-enthusiasm with endless re-coding and reviewing of themes.

7.3.8.5.2 Practical overview of developing and reviewing themes

As described in the preceding section, the process of developing and reviewing themes involve creating new themes, adapting pre-established themes (see Figure 7.4 the thematic map for phase 3) and discarding irrelevant themes (Braun & Clarke, 2012:9). Phase 4 proved to be valuable as new ideas formed by recognising that the boundaries of some themes needed to be altered (Terry & Hayfield, 2020:439).

Based on the researcher’s interpretation of the theoretical suggestions, discussed in section 7.3.8.5.1, a ***five-step approach*** was followed, documenting the process of ***reviewing themes in the coded data*** extracts (level one) and ***entire data set*** (level two).

- *Step 1: Creating output reports and read quotations for themes from phase 3.*

Step 1 involves the first level of analysis in phase 4, namely reviewing themes in coded data extracts. *In ATLAS.ti, an output report was created for each theme*, which contained all the codes and related quotations associated with the theme. Appendix D.8 shows an example of the output report created in ATLAS.ti for Theme 1 "Significance of RLM". Next, each output report was read, to consider if a theme lacks coherence, contains sufficient quotations or contains too much data, must be combined with another theme or must be divided into separate themes.

- *Step 2: Asking and answering questions for each theme from phase 3*

Like step 1, step 2 involved the first level of analysis in phase 4, namely reviewing themes in coded data extracts. While reading the quotations for each theme, the researcher asked the questions identified by Braun and Clarke (2012:8) and Maguire and Delahun (2017:3358). The researcher again used the *memo function of ATLAS.ti to record observations* for each theme in relation to these questions, as well as more detailed comments on quotations for further analysis. Appendix D.8 provides an example of the detailed comments created from reading the quotations of each candidate theme.

After reading all quotations from each theme, a *table was compiled to answer the questions proposed by Braun and Clarke (2012:8) and Maguire and Delahun (2017:3358)*. Table 7.9 provides an overview of the questions, answers and conclusions/findings for each theme.

Table 7.9 Questions and answers for reviewing themes in coded data extracts in phase 4

QUESTIONS	THEME ANSWERS	CONCLUSIONS/FINDINGS
Braun and Clarke (2012:8): *1. Is this a theme or rather a code?* *2. How valuable is this theme (does it explain something useful about*	**Theme 1 – Significance or RLM** 1. This theme is not a code as was established in the coding process. 2. The theme is important, but not sufficiently on its own to answer the research question. 3. This theme includes problems of poor practices and management, drivers of returns as well as the outcomes of RLM. It excludes practices to improve RLM. 4. This theme includes insufficient quotations, in comparison to other themes. The same quotations applied to several codes, reducing the data. 5. The data of this theme can apply to several themes, which may indicate that it is too diverse. 6. This theme associates with other themes, which indicates that it must form part of other themes. 7. Yes, the subthemes identified are still valid. 8. Not in theme 1	Theme 1 is valuable in terms of emphasising of "how not to manage returns". However, the research questions cannot be answered by this theme alone. Additionally, this theme involves insufficient quotations, and the data is diverse in terms of problems versus benefits. However, the importance of the data indicates that this theme can apply or be combined with other themes. The subthemes remain valid, indicating that these subthemes can be adopted in other themes.
	Theme 2 – Decision-making factors for RLM 1. This theme is not a code because it contains too many elements. 2. The theme is important, but not sufficiently on its own to answer the research question. It is important to help with the implementation of practices for RLM but cannot function as a separate theme. 3. This theme lacks clear boundaries since it applies to various practices. The RLM considerations and decision-making elements of this theme apply to other themes. 4. Although this theme contains many quotations, it is insufficient,	Theme 2 can be valuable for effective RLM. However, this theme cannot answer the research questions separately. While this theme consists of many quotations, the number of quotations is insufficient in comparison to other themes. The data is coherent to a degree, but this

QUESTIONS	THEME ANSWERS	CONCLUSIONS/FINDINGS
the dataset and the research question)? *3. What are the boundaries of this theme (what does it include and exclude)?* *4. Is this theme adequately supported by the data (are there enough data to support the theme)?* *5. Does this theme lack coherence (are the data too diverse in this theme)?* **Maguire and Delahun (2017:3358):** *6. Are overlapping themes, separate themes?* *7. Are there themes within themes (subthemes)?* *8. Are there other themes within the data?*	in comparison to other themes. 5. The data of this theme can be useful to other themes, but the quotations mostly focus on considerations that can be important for practices, implying that the theme can be considered coherent. 6. This theme associates with other themes, which indicates that it must form part of other themes. 7. The subthemes are too broad, which means that more subthemes are needed. Or data in the subthemes can be included in other themes. 8. Some data can apply to other themes, which implies that the data can be included in other themes.	theme might be more valuable as a subtheme and part of other candidate themes. The subthemes are too broad and can apply to other themes. Essentially, this theme must be separated, and quotations can be used for several subthemes in other potential themes.
	Theme 3 – Relationships and information management for RLM 1. This theme is not a code it contains a high number of quotations and several code categories. 2. The theme is especially important, consisting of several practices that can help answer the research questions. 3. This theme focuses on relationships, information, communication and consumer service. This theme mostly involves practices that can be important for the consumer service performance of online retailers. However, data from other themes can be included in this theme. 4. This theme is adequately supported by the data. 5. The data is coherent to some extent but quotations for some subthemes can apply to other themes. 6. The only overlapping is with other Themes 1 and 2 that can apply to this theme. 7. Some subthemes are too narrow, with limited quotations, while others are too broad to be subthemes. 8. Yes, one subtheme can be a separate theme, and the quotations from subthemes can apply to other themes.	Theme 3 is extremely valuable and can be important for effective RLM. This theme contains many practices that can address the problems identified in Theme 1. This theme also associates with Theme 2, requiring considerations. While this theme is adequately supported by the data, some data can apply to other themes. Therefore, some categories and quotations can be moved to other themes and a separate candidate theme can be created from the data in Theme 3.
	Theme 4 – Reduction and recovery 1. This theme is not a code since it contains a high number of quotations and several code categories. 2. The theme is especially important, consisting of various practices that can help answer the research questions. 3. This theme focuses on product return prevention, cost savings, accounting, cost management and cost recovery. This theme mostly involves practices that can be important for financial performance and self-preservation of online retailers, excluding consumer centrism. However, data from other themes can apply to this theme. 4. This theme is adequately supported by the data 5. The data is coherent to some extent 6. Since the quotations of this theme can be important to other themes, this theme might need separation. 7. The subthemes in this theme are especially broad, indicating that these subthemes can potentially be separate themes. 8. Yes, both subthemes can potentially be separate themes.	Theme 4 is extremely valuable and can be important for effective RLM. This theme contains many practices that can address the problems identified in Theme 1. This theme also associates with Theme 2, requiring considerations. This theme can be divided because of high numbers of coded quotations and applicable quotations from other themes (1-3). Essentially, the two subthemes can potentially become two candidate themes, which include some data from other themes.
	Theme 5 – Business Management for RLM 1. This theme is not a code because it contains several code categories. 2. The theme is important, consisting of several practices that can help answer the research questions. 3. This theme focuses on business management practices, which can be general organisational practices that can be applied to RL. Specifically, this theme focusses on resources and the management of resources through measurement and control. However, data from this theme can apply to other themes, which makes exclusion difficult. 4. This theme is adequately supported by the data but not sufficiently as a stand-alone theme. 5. The data is coherent to some extent but can apply to several themes. 6. Since the quotations of this theme can be important to other themes, this theme could potentially form part of other themes. 7. Most subthemes are too narrow to be subthemes but too broad to	Theme 5 is valuable, but it can be viewed as requirements for effective RLM. Some practices can be valuable in addressing the problems identified in Theme 1. While this theme involves various quotations that can be important for RLM, the data might be better served in other themes. Therefore, this theme must be removed as a theme, but the quotations must be added to other themes.

QUESTIONS	THEME ANSWERS	CONCLUSIONS/FINDINGS
	be codes. However, this theme involves several code categories, which can be added to other themes. 8. No, not in this theme. However, the data of this theme can apply to other themes.	

Source: Compiled by the researcher

Answering the questions proposed by Braun and Clarke (2012:8) and Maguire and Delahun (2017:3358) proved to be valuable in reviewing the themes. The *result of this step* means that (1) *Themes 1 and 2 can be added as subthemes in other themes*, (2) the *quotations from Theme 3* can be included *in other themes* but data within the theme can justify *a new theme*, (3) *Theme 4 can be split into two new themes*, and (4) the quotations of *Theme 5 can be added to other themes*.

Consequently, the researcher developed *three new themes*, which included (1) *prevention and control* (contents from original Theme 4), (2) *service* (contents from original Theme 3) and (3) *costs* (contents from original Theme 4) for the effective RLM of consumer returns. Additionally, the *subthemes* involved *problems* (content from original Theme 1), *solutions* (content from original Themes 3 – 5), *considerations* (content from original Theme 2) and *benefits* (content from original Theme 1).

- *Step 3: Develop visualisations for redeveloped themes, subthemes and related categories*

Step 3 concludes level one of reviewing themes in coded data extracts, allowing the researcher to initiate level two of reviewing themes in the entire data set. Researchers may be different in their approaches to generate, review and finalise their themes. In this study, the researcher used visualisation to review themes, subthemes and related categories. The *visualisations* were created in *Ms PowerPoint*, which helped the researcher to gain a *clear picture* of the themes, subthemes and potential categories within the subthemes.

Before developing the visualisations, the researcher *returned to the notes from step 2 (phase 4)* and assigned codes to comments, for each theme. For example, for the data extracts, adding “PC” for prevention and control, “S” for service and “C” for costs. This enabled the researcher to focus only on the comments and quotations related to each theme, Appendix D.8 provides an example of adding these theme codes to the initial comments from step 2.

Several diagrams were created to explore each new theme, including Theme 1 – prevention and control, Theme 2 – service and Theme 3 – costs. The visualisations created for Theme 3 were used as examples

to support to explain the development of visualisation for each theme. Figure 7.5[23] shows the diagrams developed for the cost theme to aid in the subsequent discussions.

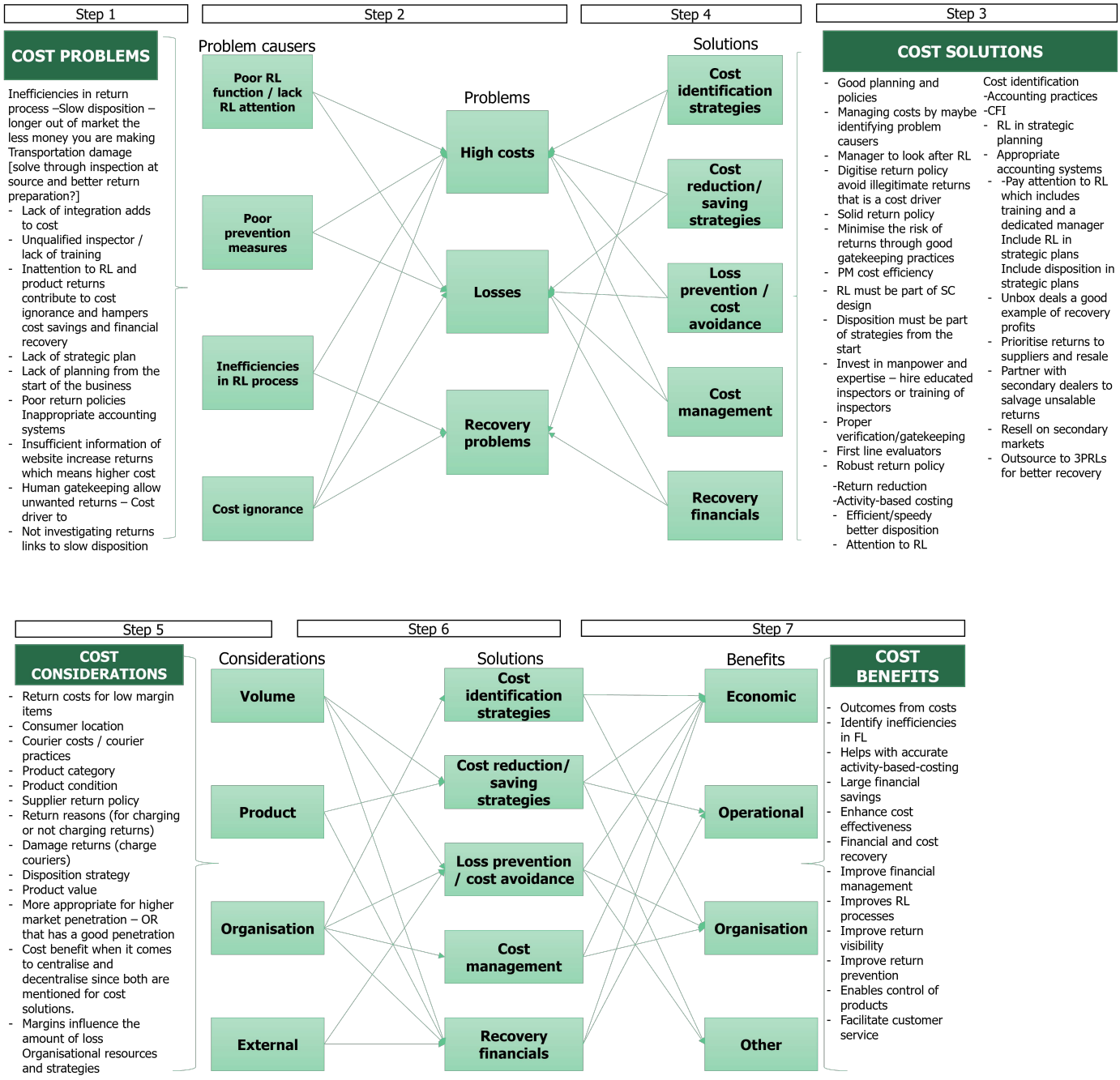


Figure 7.5 Visualisation for phase 4 - reviewing themes in coded data extracts
Source: Compiled by the researcher

[23] This diagram is rough work that the researcher used to get a better understanding of the themes. Attention was not paid to the editing of the content. It can be viewed as a rough sketch, representing the actual visualisations created in PowerPoint. The written content represents a summary from the notes developed in step 2 in phase 4.

The diagram *initially started* with a shape, named *"cost problems"*, and a textbox, containing key points derived from researcher's notes (see *diagram step 1*). From the key points, the researcher noted that cost problems include cost problem causers, which can be classified as a poor RL function, poor preventative measures, inefficiencies in the RL process and cost ignorance. Subsequently, four additional shapes were added to the diagram for each *problem causer* category. Furthermore, in reviewing the comments and quotations the researcher noted that the *problem causers* can *contribute to common cost problems*, which included high costs, losses and cost recovery problems (added as additional shapes to the diagram). Additionally, the *links* between the *problem causers and common problems* were indicated with *arrows* (see *diagram step 2*).

Consequently, the subthemes from the original theme 1 "significance of RLM", formed a subtheme "cost problems" in the new theme "costs". Once the problems were identified, the researcher returned to the comments and quotations, searching for *solutions to the problem causers* and *problems*. Repeating step 1 of the diagram, a new shape was added to the diagram, named *"cost solutions"* and a textbox, containing key points from the notes (see *diagram step 3*). Subsequently, like step 2 of the diagram, *solution categories*, including cost identification strategies, cost saving/reduction strategies, loss prevention and cost avoidance, cost management and recovery financials, were identified and added as shapes. Additionally, the *links between the solutions* and the *problems*, derived from the notes and quotations, were indicated with *arrows* (see *diagram step 4*).

Since, the researcher identified in step 2 that the original Theme 2 "decision-making factors for RLM" can apply to other themes, a new shape was added named "*cost considerations*" (on a separate diagram due to space limitations in PowerPoint). Additionally, like other diagram steps, the key points derived from the notes were added to a textbox below the cost considerations shape (see *diagram step 5)*, enabling the identification of categories, including volume, product, organisation and external considerations. Additionally, as noted in step 2 of reviewing the themes, the "considerations" can be important for the implementation of solutions, which required a *linking* between the cost *consideration categories* and cost *solution categories* (see *diagram step 6*).

Likewise, from the original Theme 1 "significance of RLM", a new subtheme was created for "*cost benefits*", with listed key points for the identification of benefit categories. Since the benefits can be viewed as the results of implementing the solutions, the visualisation was concluded with *arrows, linking* the *benefit categories* to the *solution categories* (see *diagram step 7*).

The same steps for developing visualisations for Theme 3 were applied to prevention and control (theme 1) and service (theme 2) themes, which resulted in the same subthemes, including problem

causers, problems, solutions, considerations and benefits. Essentially, developing visualisations for each theme provided a clear view of the themes, including subthemes and identified categories, the relationships between the subtheme categories and the boundaries of each theme.

- *Step 4: Returning to the entire data set and asking and answering questions for redeveloped themes*

Step 4 involves the second level of analysis in phase 4, namely *reviewing themes in the entire data* set (section 7.3.8.5.1). The second level of analysis in phase 4 means returning to the entire data set, reading quotations and asking and answering questions for redeveloped themes. Subsequently, the same approach was followed for step 2 of phase 4, but involved *reading all transcripts*, not only the output reports that contained coded data for each theme. Reading of transcripts enabled the researcher to *code any quotations missed* during the coding process (phase 2) and *determine if the redeveloped themes* can *apply to the entire data set*.

As indicated in section 7.3.8.5.1, the questions used in level one (reviewing themes in coded data extracts) can be used for level two of reviewing themes in the entire data set. Subsequently, following the approach in step 2 (asking and answering questions for each theme from phase 3), the *researcher created a table to ask and answer questions* in level two of phase 4. Table 7.10 provides an overview of the questions, answers and conclusions/findings for redeveloped themes (identified in steps 2 and 3).

Table 7.10 Questions and answers for reviewing theme in the entire data set in phase 4

PHASE 4 - QUESTIONS	PHASE 4 - THEME ANSWERS	CONCLUSIONS/FINDINGS
Braun and Clarke (2012:8): *1. Is this a theme or rather a code?* *2. How valuable is this theme (does it explain something useful about the dataset and the research question)?* *3. What are the boundaries of this theme (what does it include and exclude)?*	**Theme 1 – Prevention and control** 1. This theme is not a code as was established in level one of phase 4. 2. The theme is extremely valuable, and all participants mentioned the importance of prevention and control for RLM. 3. This theme includes prevention and control problem causers, problems, solutions, considerations and benefits related to return prevention and control of product returns, products and people. 4. Yes, this theme is adequately supported by the entire data set. 5. No, the content of this theme is coherent. 6. While all themes include the same subthemes, the quotations/content separate Theme 1 from other themes. It will not be feasible to combine this theme with another theme, which can cause a lack of cohesion. 7. Yes, the subthemes identified are still valid. 8. No, in reading all transcripts no other themes can be applied to the entire data set.	Theme 1 is highly significant for the effective RLM of consumer returns. Therefore, prevention and control can be viewed as RLM factors, answering the research question "what are the factors for the effective RLM of consumer returns?". Additionally, the theme can answer the research question "what are the RL practices of consumer returns in online retailing?", which can represent prevention and control solutions and considerations. The problem causers and problems, emphasise what to avoid for effective prevention and control, while the benefits emphasise the rewards of implementing prevention and control solutions and related considerations for successful return prevention and control. Essentially, Theme 1 represents the entire data set since all participants emphasised that prevention and control can be important for RLM.
	Theme 2 – Service 1. This theme is not a code as was established in level one of phase 4. 2. The theme is extremely valuable, and all participants mentioned the importance of focusing on consumer service for RLM.	Theme 2 is highly significant for the effective RLM of consumer returns. Therefore, service can be viewed as a RLM factor, answering the research question "what are the factors for the effective RLM of consumer returns in online retailing?".

4. Is this theme adequately supported by the data (are there enough data to support the theme)? *5. Does this theme lack coherence (are the data too diverse in this theme)?* **Maguire and Delahun (2017:3358):** *6. Are overlapping themes, separate themes?* *7. Are there themes within themes (subthemes)?* *8. Are there other themes within the data?*	3. This theme includes service problem causers, problems, solutions, considerations and benefits related to consumer service. 4. Yes, this theme is adequately supported by the entire data set. 5. No, the content of this theme is coherent. 6. While all themes include the same subthemes, this theme is different from other themes in terms of consumer centrism. Therefore, it cannot be combined with other themes. 7. Yes, the subthemes identified are still valid. 8. No, in reading all transcripts no other themes can be applied to the entire data set.	Additionally, the theme can answer the research question "what are the RL practices of consumer returns in online retailing?", which can represent service solutions and considerations. The problem causers and problems, emphasise what to avoid for effective consumer service, while the benefits emphasise the rewards of implementing the solutions and related considerations for successful consumer service in RLM. Essentially, Theme 2 represents the entire data set since all participants emphasised that service can be important for RLM.
	Theme 3 – Costs 1. This theme is not a code as was established in level one of phase 4. 2. The theme is extremely valuable, and all participants mentioned the importance of managing costs to effectively manage RL. 3. This theme includes cost problem causers, problems, solutions, considerations and benefits related to cost savings, cost management and recovery. 4. Yes, this theme is adequately supported by the entire data set. 5. No, the content of this theme is coherent. 6. While cost associates with prevention (since poor prevention can increase costs), combining cost and prevention and control themes can cause the service theme to be limited in terms of quotations and scope. Additionally, not all cost categories can apply to prevention and control and vice versa, which can cause a lack of coherence. 7. Yes, the subthemes identified are still valid. 8. No, in reading all transcripts no other themes can be applied to the entire data set.	Theme 3 is highly significant for the effective RLM of consumer returns. Therefore, cost can be viewed as a RLM factor, answering the research question "what are the factors for the effective RLM of consumer returns?". Additionally, the theme can answer the research question "what are the RL practices of consumer returns in online retailing?", which can represent cost solutions and considerations. The problem causers and problems, emphasise what to avoid for effective cost savings, cost management and cost recovery, while the benefits emphasise the rewards of implementing cost solutions and related considerations for cost-effective management of consumer returns. Essentially, Theme 3 represents the entire data set since all participants emphasised that cost savings, cost management and cost recovery can be important for RLM.

Source: Compiled by the researcher

Reading all transcripts and answering the questions proposed by Braun and Clarke (2012:8) and Maguire and Delahun (2017:3358) confirmed that the *themes identified in level one of phase 4 applied to the entire dataset*. Essentially, no new themes or changes were made to the redeveloped themes, allowing the researcher to conclude phase 4 with a thematic map.

- *Step 5: Developing a thematic map for phase 4 of the reflexive TA*

Although phase 5 involves naming of candidate themes (section 7.3.8.6), the researcher considered creative names to finalise the subthemes of all candidate themes. Particularly, the researcher used *wordplay* with the letter *"P"* for each subtheme, which involved renaming (1) *"problem causers"* to *"pitfalls"*, (2) *"solutions"* to *"practices"*, (3) *"considerations"* to *"parameters*" and (4) *"benefits"* to *"profits"*. Only "*problems" remained unchanged*.

Additionally, studying the quotations to review the breadth of each subtheme and using the visualisations (developed in step 2 of phase 4) to explore relationships between subthemes, the researcher *combined* some *subthemes*. Specifically, "*pitfalls and problems*" represented the first subtheme because (1) both requires the implementation of practices (solutions) and parameters

(considerations) and (2) participants discussed pitfalls and problems concurrently, meaning that pitfalls and problems shared the same quotations.

Additionally, it was noted that the parameters cannot only be import for the implementation of practices but also for addressing pitfalls and problems and realising profits. Consequently, the researcher *combined the practices and parameters*, and renamed subtheme 2, "*propositions*". Nevertheless, within the proposition theme, parameters still represent important factors for the effective implementation of practices. Evidently, both practices and parameters are needed for addressing pitfalls/problems and realising benefits to effectively manage consumer returns.

Figure 7.6 represents the thematic map for the reflexive TA developed in phase 4.

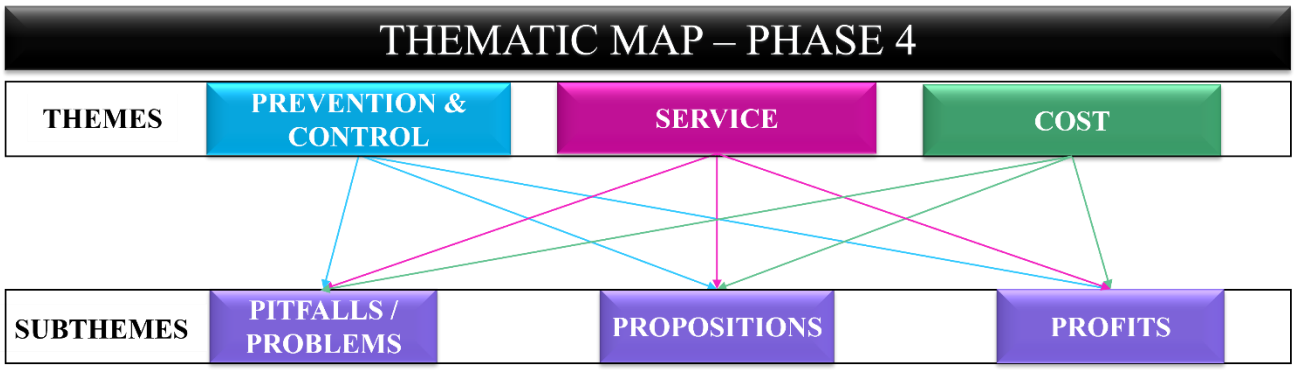


Figure 7.6 Thematic map for revised themes in phase 4 of reflexive TA
Source: Compiled by the researcher

The thematic map demonstrates the links between the candidate themes and subthemes, derived from phase 4 of the reflexive TA. Essentially, phase 4 ended with a thematic map representative of the entire dataset (Braun & Clarke, 2006:92), including themes that captured the most important and relevant elements of the data in relation to the research question (Braun & Clarke, 2012:9; Kiger & Varpio, 2020:6). In the next phase, the process of refining, defining and naming (candidate) themes for the interviews with industry experts will be described.

7.3.8.6 Phase 5: Refining, defining and naming themes of data from interviews with industry experts

Once the thematic map adequately represented the data, phase 5 of the TA commenced. Phase 5 represented the deep analytic work necessary in a TA, which involves shaping the analysis into specific detail (Braun & Clarke, 2012:9). This phase involved refining, defining and naming themes for the final analysis (Braun & Clarke 2006:92). Refining and defining a theme mean identifying the essence of each theme and determining the aspects of data that captures the theme or stating the uniqueness of each theme (Braun & Clarke 2006:92; Braun & Clarke, 2012:9). As themes are refined and

redeveloped, appropriate names for the themes can be created. Naming each theme involves giving a short but informative, concise and catchy title to the theme (Braun & Clarke, 2006:93; Braun & Clarke, 2012:9; Nowell *et al.* 2017:10).

In terms of the procedures in phase 5, Braun and Clarke (2006:92) and Braun and Clarke (2012:9) indicated that phase 5 involves revisiting the collated data extracts (quotations) for each theme, selecting appropriate quotations and organising these quotations to support a comprehensible narrative or story about the theme. Each extract (consisting of one or more quotations) must provide vivid and compelling examples that clearly illustrates the analytic points, demonstrating the interpretation of the data and providing structure to the analysis (Braun & Clarke, 2006:92).

Furthermore, the narratives must answer the key questions for phase 5, including "what is the theme saying?", "how do the subthemes interact and relate to the main theme?", and "how do the themes relate to each other?" (Maguire & Delahun, 2017:33511). Finally, the analytic narrative, created for each theme, must explain the significance of the extracts in relation to other themes and the research question (Braun & Clarke, 2012:10).

Like previous phases, the researcher created a few steps to complete phase 5 based on the suggestions from Braun and Clarke (2006:92), Braun and Clarke (2012:9-10) and Maguire and Delahun (2017:33511), which will be described in subsequent paragraphs.

- *Step 1: Revisiting data and selecting and organising quotations to support theme narratives*

Before the essence of each theme can be captured, Braun and Clarke (2006:92) and (2012:9) indicated that phase 5 involves revisiting the collated data extracts (quotations) for each theme, selecting and organising one or two quotations to support a comprehensible narrative or story about the theme.

Firstly, the researcher identified the *importance of each theme* by revisiting the quotations assigned to the original inductive code "benefits and importance of RLM" (see step 2 in section 7.3.8.3.2) to identify the importance of each theme. From these quotations, the researcher *identified* several *quotations to support the justification of each theme*, which will be used to introduce each theme in chapter 8 (findings of interviews with industry experts). Next, from the quotations of each theme, the researcher *identified one or two* (if needed three) quotations *representing the subthemes*, including pitfalls and problems, practices and parameters (propositions), and profits of each theme.

The researcher referred to the *visualisations developed in phase 4* (see step 3 in section 7.3.8.5.2), to identify categories and related quotations *to develop the quotations tables*. Due to the

comprehensiveness of quotations, Appendix D.9 only shows the selection of quotations for Theme 1, which was also applied to Themes 2 and 3. These quotation tables were also used as the foundation for selecting quotations in phase 6 of the analysis, which will be discussed in section 7.3.8.7.

Essentially, revisiting the interview data and selecting key quotations from the coded data extracts for each theme enabled the researcher to explore the essence and uniqueness of each theme and develop narratives for each theme, which will be described in subsequent steps.

- *Step 2: Exploring the essence and uniqueness of themes for refining, defining and naming themes*

Following the selection and organisation of quotations, the researcher explored the essence and uniqueness of themes. Studying the content related to the subthemes of pitfalls and problems, propositions and profits for each theme, helped the researcher to identify the essence of each theme and determining the aspects of data that captures the theme or stating the uniqueness of each theme (Braun & Clarke 2006:92; Braun & Clarke, 2012:9).

Following the same approach of using visualisations in phase 4 of the analysis (step 3 in section 7.3.8.5.2), the researcher created *illustrations in Ms PowerPoint* to *identify the essence and uniqueness of each theme*. Using the key elements from the quotation tables created in step 1 of phase 5, the researcher compared the themes, listing the key elements of each subtheme for all candidate themes.

Figure 7.7 shows an example of using a visualisation to explore the essence and uniqueness of themes based on key points for the subtheme "profits".

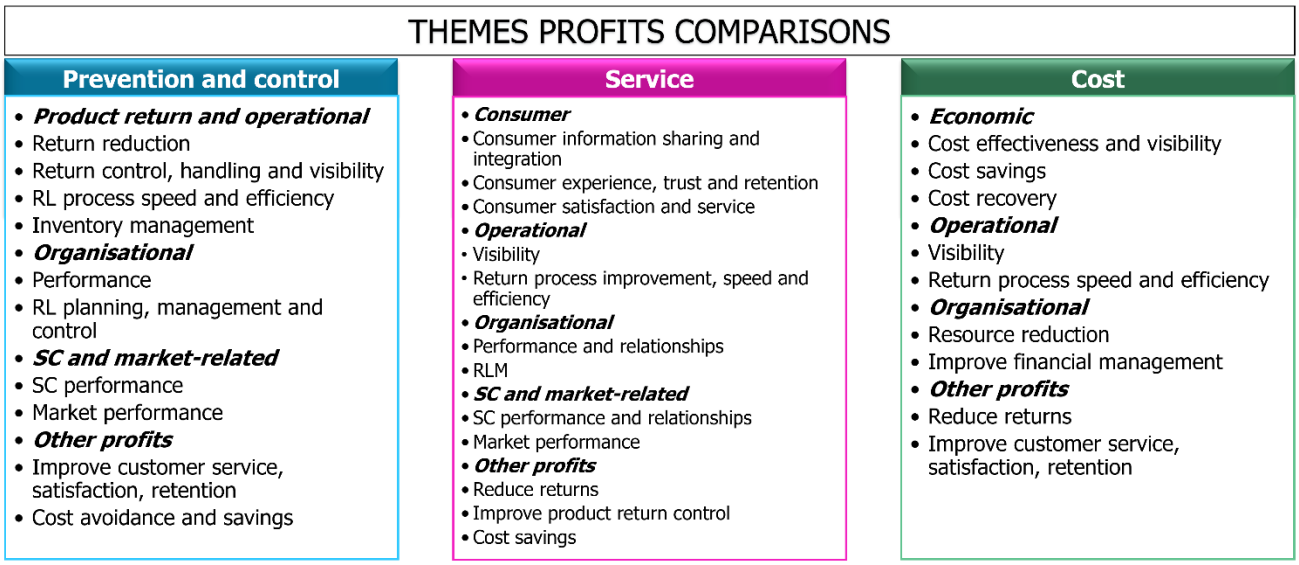


Figure 7.7 Comparison of themes in phase 5 of the reflexive TA
Source: Compiled by the researcher

Consequently, the researcher created visualisations for the pitfalls and problems, propositions and profits, which enabled the development of comprehensive narratives, describing the essence and uniqueness of each theme, discussed in the next step.

- *Step 3: Narratives for capturing the essence and uniqueness of themes*

After revisiting data extracts, selecting and organising quotations, and exploring the essence and uniqueness of themes through visualisations, the researcher *developed narratives for each theme*. Since the candidate themes shared common subthemes, the researcher started with describing the subthemes to articulate the relationship between themes.

Based on selecting and organising quotations (step 1, phase 5) and exploring the essence and uniqueness of themes (step 2, phase 5), the *subthemes of this study were described as follows*:

- ***Subtheme 1 – Pitfalls and problems*** *represent poor practices and related problems that can hamper the effective RLM of consumer returns in online retailing. The problems can be viewed as the consequences of pitfalls, which means that pitfalls must be used as a starting point for addressing problems in RLM.*
- ***Subtheme 2 – Propositions*** *involve various* ***practices*** *and* ***parameters*** *that online retailers can implement to address pitfalls and problems and realise profits (benefits). The parameters can be important for the effective implementation of practices, which means that both parameters and practices contribute to the efficient and effective RLM of consumer returns in online retailing.*
- ***Subtheme 3 – Profits*** *represent the benefits or outcomes of successfully implementing propositions and demonstrate the importance of implementing/considering appropriate practices/parameters for the effective RLM of consumer returns in online retailing.*

Subsequently, *based on the quotation tables* (created in step 1 of phase 5) and *comparative visualisations* (developed in step 2 of phase 5), *a table was compiled to answer the questions* proposed by Maguire and Delahun (2017:33511), including "what is the theme saying", "how do the subthemes interact and relate to the main theme?" and "how do the themes relate to each other?", enabling the researcher to develop a narrative for each candidate theme. Additionally, the narrative involved *stating the essence, uniqueness* (Braun & Clarke, 2006:92; Braun & Clarke, 2012:9) *and significance of each theme* in relation *to the research questions* (Braun & Clarke, 2012:10).

Table 7.11 provides an overview of the questions and theme narratives description of the essence and uniqueness of each theme.

Table 7.11 Theme narratives in phase 5 of reflexive TA

THEME NARRATIVES - ESSENSE AND UNIQUENESS
THEME 1 – PREVENTION AND CONTROL
Theme 1 involves return prevention and control initiatives for the effective RLM of consumer returns in online retailing. While online retailers can reduce consumer returns and implement preventative measures, they can never eliminate it; hence, they need to implement RL process, returned product and RL function control measures to manage consumer returns effectively and efficiently. Theme 1 involves three subthemes, namely prevention and control pitfalls and problems (subtheme1), propositions (subtheme 2) and profits (subtheme 3). The subtheme "***prevention and control pitfalls and problems***" involve operational inefficiencies, poor RLM, poor systems and websites and poor return prevention practices that can result in problems with product returns, (e.g. high or unnecessary consumer returns), inventory problems (e.g. counterfeit stock or loss of product) and other problems for online retailers (e.g. consumer dissatisfaction, brand damages and loss of managerial control), impacting the performance and sustainability of the online retailer. The subtheme "***prevention and control propositions***" involves various practices and parameters that online retailers can implement to address prevention and control pitfalls/problems and realise prevention and control profits (benefits), contributing to the efficient and effective RLM of consumer returns. Specifically, prevention and control propositions include proactive prevention, reactive prevention, product return control practices and prevention and control parameters, including, volume, product, organisational, cost versus benefit and external parameters (e.g. SC, market, legislation and environmental). Additionally, the subtheme involves key practices/parameters and support practices that associate with the RL practices identified as important in the QCA of RL literature findings. The final subtheme, "***prevention and control profits***" represents the benefits or outcomes of successfully implementing prevention and control propositions in RL. Therefore, prevention and control profits demonstrate the importance of implementing appropriate prevention and control practices and parameters for the effective RLM of consumer returns in online retailing. The profits associated with prevention and control include product return and operational profits, organisational profits, SC and market-related and other theme profits. The ***prevention and control theme*** (theme 1) ***links to other themes*** (themes 2 and 3) in terms of the common subthemes of pitfalls and problems, propositions and profits. Moreover, the prevention and control theme relate to other themes in terms of specific (1) pitfalls, including operational inefficiencies, poor prevention, inattention to RL, poor RL planning, lack of resources, poor systems, a lack of integration, (2) problems, including loss of products, consumer dissatisfaction and uncertainty and a loss in sales, (3) support practices, including IT, integration, RL in/outsourcing, disposition, performance measurement (PM), facility/locations, resource commitment (RC), financial management (FM), return prevention and avoidance (RPA), strategic planning and procedures (SPP) and management and staff practices, (4) parameters, including volume, products, organisational, cost versus benefit, SC and market, legislation and environmental parameters, and (5) profits, including reducing product returns, visibility, RL process speed and efficiency, organisational performance, RLM, SC and market performance, improvements in customer service, satisfaction and retention and costs savings/avoidance. The ***prevention and control theme is unique*** in terms of specific (1) pitfalls, including poor performance measurement and poor information sharing with consumers, (2) problems, including high and fraudulent returns, disorganised and contaminated inventory, liabilities, loss of managerial control and poor reporting, (3) practices, including FL proactive prevention and RL proactive prevention, reactive prevention examination and investigations, return process and product control, including enhancement of product return visibility, product segregation and inventory management, and RL function control, including establishing control mechanisms and maintaining RL function control, and (4) profits, including improvements in inventory management, RL planning and control. In essence, the ***prevention and control theme can be significant*** in answering the following research questions: • ***"What are important RL practices for managing consumer returns in online retailing?"*** Prevention and control propositions, including proactive prevention, reactive prevention and return control practices and prevention and control parameters with related key practices/parameters can be important RL practices for managing consumer returns in online retailing. Additionally, the support RL practices for the effective implementation of prevention and control propositions, including IT, integration, RL in/outsourcing, disposition, PM, facility/location, RC, FM, RPA, SPP and management and staff practices, identified in the QCA of RL findings and confirmed by the interview findings, can be important RL practices for managing consumer returns in online retailing. • ***"What are important factors for the effective RLM of consumer returns in online retailing?"*** Return prevention and control are important factors that require the identification and mitigation of prevention and control pitfalls and problems, implementation of prevention and control practices, consideration of prevention and control parameters and the subsequent realisation of prevention and control profits for the effective RLM of consumer returns in online retailing.
THEME 2 – SERVICE
Theme 2 involves service initiatives for the effective RLM of consumer returns in online retailing. All participants mentioned throughout their discussions the importance of consumer service to manage consumer returns effectively and efficiently. Therefore, "service" was identified as an important factor in RLM, which means that online retailers must pay attention to service for the effective RLM of consumer returns. Theme 2 involves three subthemes, namely service pitfalls and problems (subtheme1), propositions (subtheme 2) and profits (subtheme 3).

The subtheme "***service pitfalls and problems*"** involves operational culture, poor RLM and information-related pitfalls that can result in consumer problems (e.g. poor experience, frustration, dissatisfaction and uncertainty) and online retailer problems (e.g. poor communication, poor return processes, service failures, and a loss of trust, sales and consumer), impacting consumer relationships and the service performance and sustainability of the online retailer.

The subtheme "***service propositions***" involves various practices and parameters that online retailers can implement to address service pitfalls/problems and realise service profits, contributing to the efficient and effective RLM of consumer returns. Specifically, service propositions include service-orientated return practices, including service-orientated communication and return processes, service performance practices, including service evaluation, improvements and management, and service parameters, including, volume, product, organisational, cost versus benefit and external parameters (e.g. SC, market and legislation). Additionally, the subtheme involves key practices/parameters and support practices that associate with the RL practices identified as important in the QCA of RL literature findings.

The final subtheme, "***service profits***" represents the benefits or outcomes of successfully implementing service propositions in RL. Therefore, service profits demonstrate the importance of implementing appropriate service practices and parameters for the effective RLM of consumer returns in online retailing. The service profits include consumer-related profits, operational profits, organisational profits, SC and market-related profits and other theme profits.

The ***service theme*** (theme 2) ***links to other themes*** (themes 1 and 3) in terms of the common subthemes of pitfalls and problems, propositions and profits. Moreover, the service theme relate to other themes in terms of specific (1) pitfalls, including inattention to RL, poor RL planning, lack of resources, poor systems and a lack of integration, (2) problems, including consumer dissatisfaction and uncertainty and a loss in sales, (3) support practices, including IT, integration, RL in/outsourcing, PM, facility/locations, RC, FM, RPA, SPP and management and staff practices (4) parameters, including volume, products, organisational, cost versus benefit, SC and market and legislation parameters, and (4) profits, including customer service, satisfaction and retention, visibility, RL process speed and efficiency, organisational performance, RLM, SC and market performance, reducing product returns, improving product return control and costs savings.

The ***service theme is unique*** in terms of specific (1) pitfalls and problems, including organisational preservation pitfall, and poor return experience, unmet expectations, consumer frustration and anger, poor communication, poor return processes problems, service failures, and a loss of consumer trust and consumers/market share problems, (2) practices, including service-orientated return communication, service-orientated return processes, and service performance evaluation, improvements and management, and (3) profits, including consumer information sharing and integration, and improved consumer experience and trust, profitability, organisational relationships and SC relationships.

In essence, the ***service theme can be significant*** in answering the following research questions:

- ***"What are important RL practices for managing consumer returns in online retailing?"***

Service propositions, including service-oriented return practices, service performance practices and service parameters with related key practices/parameters can be important RL practices for managing consumer returns in online retailing. Additionally, the support RL practices for the effective implementation of service propositions, including IT, integration, RL in/outsourcing, PM, facility/location, RC, FM, RPA, SPP and management and staff practices, identified in the QCA of RL findings and confirmed by the interview findings, can be important RL practices for managing consumer returns in online retailing.

- ***"What are important factors for the effective RLM of consumer returns in online retailing?"***

Service is an important factor that requires the identification and mitigation of service pitfalls and problems, implementation of service practices, consideration of service parameters and the subsequent realisation of service profits for the effective RLM of consumer returns in online retailing.

THEME 3 – COSTS

Theme 3 involves cost effectiveness, savings, recovery and management for the effective RLM of consumer return in online retailing. All participants mentioned throughout their discussions the importance of costs. Therefore, "cost" was identified as a RLM factor, which means that online retailers must pay attention to costs for the effective RLM of consumer returns.

Theme 3 involves three subthemes, namely cost pitfalls and problems (subtheme1), propositions (subtheme 2) and profits (subtheme 3). The subtheme "***cost pitfalls and problems***" involves operational inefficiencies, poor RLM, poor financial practices and poor integration that can result in financial problems, (e.g. poor pricing and a loss of sales, money and profits), cost/expense problems (e.g. high cost and poor cost visibility) and recovery problems (e.g. no/limited recovery and loss product value), impacting the economic sustainability of online retailers.

The subtheme "***cost propositions***" involves various practices and parameters that online retailers can implement to address cost pitfalls/problems and realise cost profits (benefits), contributing to the efficient and effective RLM of consumer returns. Specifically, cost propositions include cost identification, cost-effective return, cost recovery and cost control practices and cost parameters, including, volume, product, organisational and external parameters (e.g. SC, legislation and environmental). Additionally, the subtheme involves key practices/parameters and support practices that associate with the RL practices identified as important in the QCA of RL literature findings.

The final subtheme, "***cost profits***" represents the benefits or outcomes of successfully implementing cost propositions in RL. Therefore, cost profits demonstrate the importance of implementing appropriate cost practices and parameters for the effective RLM of consumer returns in

online retailing. The profits associated with the cost theme include economic profits, operational profits, organisational profits and other theme profits.

The ***cost theme*** (theme 3) ***links to other themes*** (themes 1 and 2) in terms of the common subthemes of pitfalls and problems, propositions and profits. Moreover, the cost theme relates to other themes in terms of specific (1) pitfalls, including operational inefficiencies, poor prevention, inattention to RL, poor RL planning, lack of resources and poor integration, (2) problems, including a loss of sales and a loss of products, (3) support practices, including IT, integration, RL in/outsourcing, disposition, performance measurement (PM), facility/locations, resource commitment (RC), financial management (FM), return prevention and avoidance (RPA), strategic planning and procedures (SPP) and management and staff practices, (4) parameters, including volume, products, organisational, SC, legislation and environmental parameters, and (5) profits, including cost savings, return visibility, RL process speed and efficiency, reduction of product returns and improvements in customer service, satisfaction and retention.

The ***cost theme is unique*** in terms of specific (1) pitfalls, including poor financial management, poor accounting and poor costing practices, (2) problems, including poor pricing, loss of money and profits, inaccurate view of financial performance, high and unnecessary costs and expenses, poor cost visibility, obsolete products, no/limited recovery and loss of product value, (3) practices, including cost identification, cost-effective returns, cost recovery and cost control practices, and (4) profits, including cost effectiveness, cost visibility, cost recovery, resource reduction and improved financial management.

In essence, the ***cost theme can be significant*** in answering the following research questions:

- ***"What are important RL practices for managing consumer returns in online retailing?"***

Cost propositions, including cost-effective return, cost recovery and cost control practices and cost parameters with related key practices/parameters can be important RL practices for managing consumer returns in online retailing. Additionally, the support RL practices for the effective implementation of cost propositions, including IT, integration, RL in/outsourcing, disposition, PM, facility/location, RC, FM, RPA, SPP and management and staff practices, identified in the QCA of RL findings and confirmed by the interview findings, can be important RL practices for managing consumer returns in online retailing.

- ***What are important factors for the effective RLM of consumer returns in online retailing?***

Cost is an important factor that require the identification and mitigation of cost pitfalls and problems, implementation of cost practices, consideration of cost parameters and the subsequent realisation of cost profits (benefits) for the effective RLM of consumer returns in online retailing.

Source: Compiled by the researcher

Essentially, the narratives for each theme, presented in Table 7.11, enabled the researcher to identify the essence and uniqueness of each theme, the relationships between themes and the importance of each theme in answering the research questions. Based on the narratives, phase 5 concluded with naming each theme and finalising themes in preparation for phase 6, which will be described in step 4 next.

- *Step 4: Naming candidate themes and finalising thematic framework for presentation*

Based on the narratives for each theme, the researcher concluded phase 5 with naming the candidate themes to reflect the essence of themes. While the researcher preferred to *keep the original theme names*, including *prevention and control, service and cost*, the *phrase* "*for the effective RLM of consumer returns*" *was added* to the name of each theme, *reflecting* the overall *purpose* of identifying practices and factors for the effective RLM of consumer returns.

After completing the narratives for the themes and subthemes, the *thematic framework* created during phase 4 (reviewing themes) was adjusted to reflect the refined, defined and named themes. Evidently, the result of phase 5 involved (1) simplified (singular focus) themes, (2) themes that related to each

other (without overlap), and (3) themes that addressed the research question(s) (Braun & Clarke, 2012:9), which developed into a final thematic framework (Maguire & Delahun, 2017:33511).

Figure 7.8 shows the final thematic framework that was used as a foundation for presenting the findings, discussed in phase 6.

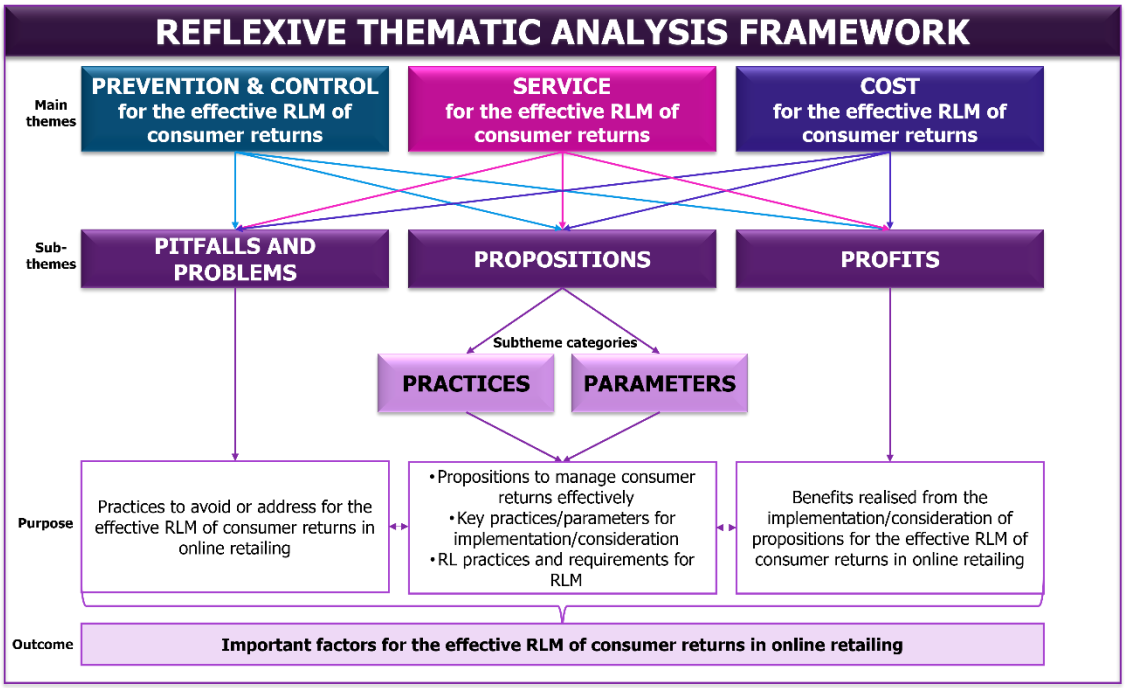


Figure 7.8 Reflexive TA framework for the interviews with industry experts
Source: Compiled by the researcher

Figure 7.8 shows the final thematic framework derived from the thematic map from phase 4 (Figure 7.5) and theme narratives (step 3, phase 5), demonstrating the links between the main themes, subthemes, the purpose of each theme and subtheme and the resulting outcomes. The thematic framework shows the (1) *renamed main (candidate) themes*, namely prevention and control for the effective RLM of consumer returns, service for the effective RLM of consumer returns and costs for the effective RLM of consumer returns, (2) *subthemes*, namely pitfalls and problems, propositions and profits, (3) *subtheme categories*, namely practices and parameters, (4) *purpose* of each subtheme, and (5) *outcome* of the themes and subthemes, linking with the research questions of "*what are important RL practices for managing consumer returns in online retailing?"* and *"what are important factors for the effective RLM of consumer returns in online retailing?"*. The final thematic framework, presented in Figure 7.8 was used to structure the presentation of the findings, which will be discussed in the next section.

7.3.8.7 Phase 6: Write-up of data from interviews with industry experts

Phase 6 involves the final analysis and write-up of the report, which starts after defining, refining and naming themes in phase 5 (Braun & Clarke 2006:93). Writing in a TA is the product of all the creative work and engagement with the data from the previous phases (Terry & Hayfield, 2020:440). In qualitative research the findings are mostly presented in text format and written using a combination of the researcher's and participants' voices, through quotations chosen by researcher (Cardano, 2020:143)

The write-up of a TA must involve a complicated discussion of the data, which must be convincing, clear, complex and embedded within the scholarly field, to convince readers of the merit and validity of the analysis (Braun & Clarke 2006:93; Braun & Clarke, 2012:10). Themes must be presented in sufficient depth and detail to convey the richness and complexity of the data (Braun & Clarke, 2006:82; Braun & Clarke, 2012:8). In other words, themes must be presented in a logical and meaningful way (themes relating to each other) to provide a compelling account about the data (Braun & Clarke, 2012:11), and the arguments must be supported by referring to the literature (Nowell *et al.* 2017:11).

Like the previous phases in the TA, researchers can use key questions for phase 6 of the TA, including (1) "what is the meaning of this theme?", (2) "what are the assumptions underpinning the theme?", (3) "what are the implications of this theme?", (4) "what conditions have given rise to the implications of the theme?", and (5) "what is the overall story that the different themes reveal about the topic or research question?" (Braun & Clarke 2006:94).

Although these questions can guide the write-up of findings, the researcher essentially answered these questions in phase 5 (see Table 7.11), providing detailed narratives to support the discussion of findings. Instead, the researcher focused on selecting quotations to produce a comprehensive report for each theme, write-up and presentation styles and methods of linking interview findings with literature findings, before producing the final write-up of findings. Accordingly, the following steps, incorporating both suggestions from theory and practical applications, were used to complete phase 6 of the analysis.

- *Step 1: Selecting quotations and creating quotation tables for write-up of interview findings for the reflexive TA*

According to Braun and Clarke (2006:93), the write-up must provide sufficient evidence for the themes, meaning sufficient quotations (data extracts) must be selected to support the discussion and analysis of findings. Using the tables created in step 1 of phase 5 (section 7.3.8.6), the researcher created *quotation tables for each theme*, which included columns for the subtheme categories, main

elements, key points, key quotations, and comments (observations). Subsequently, the quotations tables created in step 1 of phase 6 are more comprehensive in comparison to the quotation tables from phase 5 and were used for the write-up of findings.

Due to the comprehensive of the quotation tables and number of quotations, Appendix D.10 provides an extract from Theme 2 (service for the effective RLM of consumer returns), focusing on the pitfalls and related problems.

- *Step 2: Selecting the write-up and presentation styles for reflexive TA*

When writing up an analysis, Terry and Hayfield (2020:440) suggest that the findings and the *discussion of the findings are presented in one section*, which was the approach used in this study to present the findings of the interviews with industry experts. In terms of write-up styles, Merriam and Grenier (2019:16) indicated that write-ups can vary from intimate, first-person accounts to more formal, creative and artistic presentations. Due to a more formal approach of this study (as required in the economic and management science field), a *formal write-up style* was selected, which excluded writing in the first person. However, the researcher *developed* various *frameworks* to *illustrate overviews and summarise key findings* for each theme and subtheme.

According to Nowell *et al.* (2017:11) the presentation style may include (1) short quotes that aid in specific points of interpretation and demonstrate the prevalence of the themes, or (2) extensive passages to provide evidence of the original discussion. Furthermore, Braun and Clarke (2006:93) indicated that quotations must be embedded within an analytic narrative, going beyond a description of the data, to support the arguments in relation to the research question of the study. However, quotations must be identifiable as an example that support the argument (Braun & Clarke 2006:93).

Subsequently, in this study, the researcher selected the *presentation style* of *short to medium-sized quotations* (from the quotation tables) that were *embedded into the discussion* and analysis of interview findings. Additionally, the quotations (participants' voices) were formatted to be distinguished from the discussion and analysis of findings (researcher's voice). Specifically, after discussing key findings in one or two paragraphs, the researcher referred to the supporting quotations, before *inserting the quotations* by using and selecting the "styles" function in Ms Word. The "*quotation style*" in Ms Word automatically *indents the quotations, reduces font size* and *reduces line spacing*, which effectively distinguishes the discussion of findings from supporting quotations.

- *Step 3: Selecting the method of linking interview findings with literature*

Norwell *et al.* (2017:11) indicated that adding literature to the write-up can demonstrate if the findings support, contradict or add to the body of knowledge, which contributes to the validity of the analysis (Nowell *et al.* 2017:11). *Literature was incorporated* into the interview findings in *two ways*, which involved (1) *reviewed literature from Chapters 1 and 2* in the *discussion of findings* of all *subtheme subcategories*, and (2) *reference* to the literature findings identified in the *QCA of RL literature* from *Chapter 6* as part of the support RL practices to effectively implement the *key practices/parameters*. To avoid cluttered sections, the researcher only referred to the main findings of Chapter 6 (e.g. various integration strategies), excluding the literature quotations presented in various tables from Chapter 6.

- *Step 4: Final write-up of interview findings for the reflexive TA*

Finally, the researcher commenced with the *final write-up of findings* for the reflexive TA, based on (1) *theme narratives* (step 3 of phase 5), (2) *thematic frameworks* (step 4 of phase 5), (3) *theme quotation tables* (step 1 of phase 6), (4) selected *write-up and presentation styles* (step 2 of phase 6) and, (5) selected *methods of incorporating literature* to support/contradict interview findings (step 3 of phase 6). Table 7.12 provides an overview of the format used for the final write-up of interview findings.

Table 7.12 Presentation format of interviews with industry expert findings in the reflexive TA

SECTIONS	SECTION ELEMENTS
Main theme introduction	• Introduce the theme, add quotations to support the importance of theme and provide a broad overview through a figure. Add literature from chapters 1 and 2.
Subtheme	• Introduce the subtheme, provide an overview of the theme through a figure, and add literature from chapters 1 and 2. • Discuss the findings following the subtheme main categories and subcategories. • Incorporate quotations through the discussion of findings. • Add literature to the main categories, introductions and conclusions. • For propositions add references to chapter 6 as support practices for implementing key practices/parameters • Finalise the subtheme with a broad framework, illustrating key findings • Provide a data table to summarise key findings of the subtheme.
Main theme conclusion	• Finalise the main theme with a broad framework, illustrating the key findings from all subthemes. • Provide a data table to summarise the key findings for all subthemes and include literature from chapters 1 and 2 in the conclusion.

Source: Compiled by the researcher

The application of the format given in Table 7.12 can be viewed in sections 8.3 to 8.5. Essentially, the final analysis and write-up provided a concise, coherent, logical and interesting account of the data, within and across themes (Braun & Clarke 2006:93; Braun & Clarke, 2012:11).

In the next section, the final stage of the interviews with industry experts will be discussed.

7.3.9 Stage 9: Demonstrating the trustworthiness strategies employed in interviews with industry experts

As qualitative research becomes systematically acknowledged and valued, it is important that qualitative research is conducted in a rigorous manner to produce meaningful findings (Nowell *et al.* 2017:1). The validity of qualitative research is often referred to as trustworthiness or credibility (Suter, 2012:346). In qualitative research, it is the rich, thick descriptions through words (not numbers) that demonstrate the trustworthiness of findings (Merriam & Grenier, 2019:16). A difficult task for qualitative researchers is to take large amounts of qualitative data (such as interviews) and share what the data reveal in a credible way (Suter, 2012:364). Consequently, qualitative research must be conducted in a rigorous, methodical, and ethical manner, such that the results can be trusted, and applied to practice (Merriam & Grenier, 2019:23).

Contrasting quantitative research that involves measurable rigors of relevance, reliability, validity, objectivity and generalisability (Stasik & Gendźwiłł, 2018:236), trustworthiness in qualitative research are pragmatic choices for researchers concerned about the acceptability and usefulness of their research for various stakeholders (Nowell *et al.* 2017:3). Nevertheless, related concepts used by qualitative researchers include dependability, credibility, transferability, confirmability, transparency and traditional reliability and validity (Salkind, 2010:1163; Suter, 2012:364).

In this study the standard criteria for establishing trustworthiness in qualitative research was adopted, which included (1) credibility (findings accurately and fairly represent the data), (2) transferability (findings can be applied to other settings and contexts), (3) confirmability (researcher is unbiased in the findings) and (4) dependability (consistent and sustainable findings) (DeJonckheere & Vaughn, 2019:7). These standard criteria for the trustworthiness of the interviews with industry experts will be briefly discussed in subsequent sections.

7.3.9.1 Credibility of interviews with industry experts

According to Suter (2012:363) many researchers argue that credibility, which refer to the believability of findings, can be the most important criterion for judging a qualitative study. Credibility can be demonstrated by triangulation of data (multiple data sources), producing believable conclusions through strong evidence, clear logic, valid data, and the ruling out of alternative explanations (Suter, 2012:363). According to Stahl and King (2020:26-27) multiple forms of triangulation can be used to establish credibility in qualitative research, including data triangulation (various data sources), investigator triangulation (two or more researchers), theoretical triangulation (various theoretical orientations) and environmental triangulation (various viewpoints or perspectives).

In this study the following forms of *triangulation* was used to ensure *credibility* of the interviews with industry experts: (1) *data triangulation* using different sources of data (i.e. 289 literature articles and 13 interview transcripts), (2) *theoretical triangulation* using multiparadigm as a theoretical framework (i.e. pragmatism involves elements of positivists and interpretivists) and various approaches to theory development (i.e. deductive, inductive and abductive approaches) (see section 3.2.5.3), and (3) *environmental triangulation* recruiting different industry experts representing various positions, business types and industries (see Table 7.6).

7.3.9.2 Transferability of interviews with industry experts

Transferability can be described as evidence supporting the generalisation of findings to other contexts, like including different participants (e.g. operational staff in RL) in different situations (Suter, 2012:363). However, the term generalisability in qualitative research must be distinguished from the positivist-orientated research using statistics, large and random samples sample (Merriam & Grenier, 2019:28). Particularly, qualitative research uses non-probability sampling techniques, involving small and purposively selected samples since the aim is to understand a particular phenomenon in depth, which cannot be generalised statistically (Merriam & Grenier, 2019:29).

Subsequently, in qualitative research transferability of findings depend on the transparency of the data collection and analysis process (Saarijärvi & Bratt, 2021:395). In other words, to demonstrate transferability of findings in a qualitative research study a detailed methodological and rich description can be critical (Merriam & Grenier, 2019:29; Saarijärvi & Bratt, 2021:395). Audit trails can be a strategy used in qualitative research, involving detailed description of the sampling, data collection and data analysis, for transferability (Merriam & Grenier, 2019:22). Additionally, researchers can describe influential parties (such as gatekeepers and membership associations) that other researchers can use for data collection and detailed timeframes for data collection (Stahl & King, 2020:27).

In this study, *transferability* was achieved through *detailed methodological discussions* and related applications of the interviews with industry experts (section 7.3). Particularly, transferability can be demonstrated through the detailed description of (1) *developing the interview protocol*, (2) *sampling procedures*, including inclusion/exclusion criteria, recruitment process (including disclosing memberships and gatekeepers used), sample size considerations and presentation of the final sample, (3) *pre-interview planning procedures*, including piloting, scheduling, reconfirming and preparation for using online video software, (4) *data collection techniques*, including motivating factors and key considerations for remote interviews and the features, advantages and disadvantages of the online video software used for the remote interviews, (5) *actual interviews*, including the introduction and building

rapport, interview conversation and questioning, time management and interview recording, (6) *post-interview reflection* about the sampling procedures and using online video software for remote interviews, and (7) *data analysis*, including an overview of thematic analysis (TA), followed by detailed discussions of the phases of TA.

7.3.9.3 Confirmability of interviews with industry experts

According to Suter (2012:363) confirmability can be described as objectivity and the control of researcher bias. However, unlike quantitative research, confirmability in qualitative research means pursuing objectivity through precision and accuracy in research practices or involving more than one researcher in a single study (Stahl & King, 2020:28). Additionally, unbiased interpretations can be achieved by actively seeking potential contradictory evidence predicted by alternatives (Suter, 2012:363) and using triangulation (Abdalla *et al.* 2018:7). However, Stahl and King (2020:28) indicated that confirmability must be restricted in qualitative research since objectivity mostly suit emergent design positivism (such as mixed method research).

Nevertheless, in this study confirmability was realised using rich descriptions that contain a strong sense of the participants inputs by allowing readers to gain realistic impressions of the data (Bolderston, 2012:74). Subsequently, *confirmability* was obtained by *providing sufficient quotations* in the data analysis from various industry experts to demonstrate unbiased interpretations. Additionally, confirmability was achieved utilising *between-methods triangulation*, which means that the biases of one approach (interviews with industry experts) was mitigated by the *inclusion of other sources of data and methods*, like a literature review and QCA of RL literature (Salkind, 2010:1538) (also see section 3.2.5.2). Consequently, confirmability was obtained by using various (recent) literature sources and the findings of the QCA of RL literature to corroborate or contradict the interview data and findings.

7.3.9.4 Dependability of interviews with industry experts

Dependability in qualitative research relate to the construct of reliability in quantitative research (Suter, 2012:363) and can be described as the trust element in trustworthiness (Stahl & King, 2020:27). A qualitative researcher can demonstrate dependability by providing evidence to support the claim that similar findings can be obtained if the study were replicated (Suter, 2012:363). Like other standard elements of trustworthiness researchers described several strategies that can enhance dependability of a study, including triangulation, rich documentation, audit trails, peer examination (Merriam & Grenier, 2019:28; Suter, 2012:363) and describing the researcher's role or reflexive auditing (Merriam & Grenier, 2019:28; Stahl & King, 2020:28). However, researchers can use other traditional measures like

code-recode consistency (Suter, 2012:363) and reliability checks of transcripts (Kowal & O'Connell, 2014:70) to enhance dependability of the interview data.

This study utilised several approaches to demonstrate ***dependability*** of the interviews with industry experts, including (1) ***multiple methods of data collection***, like a multimethod qualitative study for obtaining dependable data (Merriam & Grenier, 2019:28), (2) ***rich documentation***, like a coding framework with clear definitions (Nowell et al. 2017:7) and well-defined and clear inclusion and exclusion criteria to ease replication for other researchers (Hornberger & Rangu, 2020:3,4), (3) ***peer review feedback*** on the interview protocol (Castillo-Montoya, 2016:824) through the ethical clearance process (see section 7.3.2), (4) ***reflexive*** auditing that involved describing the role of the researcher (Stahl & King, 2020:28) during the recruitment of industry experts, preparation for the interviews, data collection using online video software for remote interviewing and describing post-interview reflection, and thematic analysis of interview data, (5) ***CAQDAS (ATLAS.ti) software*** to analyse and re-analyse data quickly, efficiently and reliably (Tummons, 2014:174) and TA for several coding rounds and theme development (see section 7.3.8), and (6) ***Sonix transcription software*** that mimic reliability checks, like using several independent transcribers to verify validity and reliability of the transcripts (Kowal & O'Connell, 2014:70) (see section 7.3.8.2).

Essentially, the elements of trustworthiness (credibility, transferability, confirmability and dependability) of the interviews with industry experts were demonstrated through the (1) detailed and step-by-step description of the interviews with industry experts (in section 7.3) with supporting appendices, (2) description of the researcher's role in the interview process, (3) use of a multiparadigm and multimethod qualitative research design, (5) use of software to support the collection and analysis of the interview data, and (4) provision of sufficient data to support the findings of the interviews with industry experts (discussed in chapter 8).

In the next section the conclusion of chapter 7 will be provided.

7.4 CONCLUSION

In this chapter, the research methodology of the interviews with industry experts that applied to phase three of the study was discussed. Particularly, the chapter started with an overview of interviews as a research method, which included (1) description of in-depth interviews in qualitative research, (2) interview styles in qualitative research, (3) roles of the researcher and participants in interviews, (4) potential problems of interviews and (5) motivating factors and advantage of interviews.

Thereafter, the methodology and application of interviews with industry experts were discussed based on several stages adapted from DeJonckheere and Vaughn (2019:3). The stages for the interviews with industry experts included, (1) defining the purpose and research questions, (2) considering ethical issues and practices, (3) developing the interview protocol, (4) sampling procedures and identifying participants, (5) pre-interview planning, (6) conducting the interviews, (7) post-interview reflection, (8) data analysis of interview and (9) demonstrating trustworthiness of interviews.

In terms of the first stage of the interviews with the industry experts, the purpose of the interviews with industry experts were based on secondary objectives 5 - 7 of the study, which included (1) determine consumer return types and RL processes in online retailing, based on inputs from industry experts (SRO-5), (2) explore and identify important RL practices for managing consumer returns in online retailing, based on inputs from industry experts (SRO-6), and (3) investigate and determine important factors for the effective RLM of consumer returns in online retailing (SRO-7). Additionally, four key research questions were identified, which related to the types of consumer returns, RL process in online retailing, important RL practices for managing consumer returns and factors for the effective RLM of consumer returns in online retailing.

The ethics section (stage 2) focused on (1) pre-interview ethics, including interview design stage (i.e. formulating research questions and aim) and gaining access to participants, (2) during the interview ethics (data collection), and (3) post-interview ethics, including data analysis and presentation/publication of findings. The interview protocol (stage 3) included a discussion on the structure of the interview protocol used for the interviews with industry experts, which included the introduction, opening questions, research-specific questions, and closing questions and the conclusion of the interview protocol.

Next, the sampling procedures and identifying participants (stage 4) included a detailed discussion based on the five steps of Daniel (2012:88) that can be followed to select and recruit a non-probability sample, which included (1) define the target population and choose the sampling techniques, (2) identify the inclusion and exclusion criteria, (3) create a plan to recruit participants that satisfy inclusion and exclusion criteria, (4) determine the sample size, and (5) finalise the sample of selected participants. Thereafter, the pre-interview planning (stage 5) included a discussion about (1) familiarisation and piloting of the interview protocol, (2) setting the stage and scheduling interview times and locations, (3) reconfirming interviews and resending interview information, and (4) preparation for using online video software as remote interview technique.

In terms of stage six, conducting the interviews, the interview data collection techniques used for the interviews with industry experts were discussed, followed by a discussion on the actual interviews with industry experts, which included building rapport and introduction, main questioning, closing the conversation, time management and recording. Thereafter, post-interview reflection (stage 7) was briefly discussed, which focused on the researcher's reflection on the impact of remote interviewing on the sampling procedures, including inclusion criteria, recruitment and sample size, and the use of online video software for the remote interviews with industry experts.

Stage eight, the data analysis of the interviews with industry experts, focused on an overview of TA and the six phases of TA in terms of theory and practical application for the interviews with industry experts. The six phases of TA based on Braun and Clarke (2006) and adapted by Braun and Clarke (2021:331) included: (1) familiarisation of data and writing notes, (2) generating codes and systematic coding of data, (3) generating themes from coded data, (4) developing and reviewing themes, (5) refining, defining and naming themes, and (6) writing the report. Finally, stage nine, trustworthiness of the interviews with industry experts were discussed, which included the credibility, transferability, confirmability and dependability of interviews with industry experts.

In the next chapter (chapter 8), the findings of the interviews with industry experts will be presented and discussed.

Chapter 8 - Findings of the interviews with industry experts

8.1 INTRODUCTION

Although RL was always a part of the supply chain, the significant increase in online retail sales and consumer buying behaviour led to higher volumes of returns, complicating the effective management of consumer returns (Eliav, 2022:2). Unfortunately, many online retailers view returns as a costly and unwanted burden, failing to recognise the importance of reverse logistics management (RLM) (Schooling, 2023:1). An undermanaged RL function can lead to various challenges, like operational challenges (Franklin, 2022:1), consumer dissatisfaction and higher return costs (Foo & A-Jalil, 2021:45). Evidently, online retailers must gain a deeper understanding of the importance of RLM to increase RL process efficiencies, reduce costs and maintain consumer satisfaction and loyalty (Eliav, 2022:1)

This chapter focuses on the final phase (three) of this study, which involved interviews with industry experts. Figure 8.1 provides the secondary research objectives associated with phase 3 of this study.

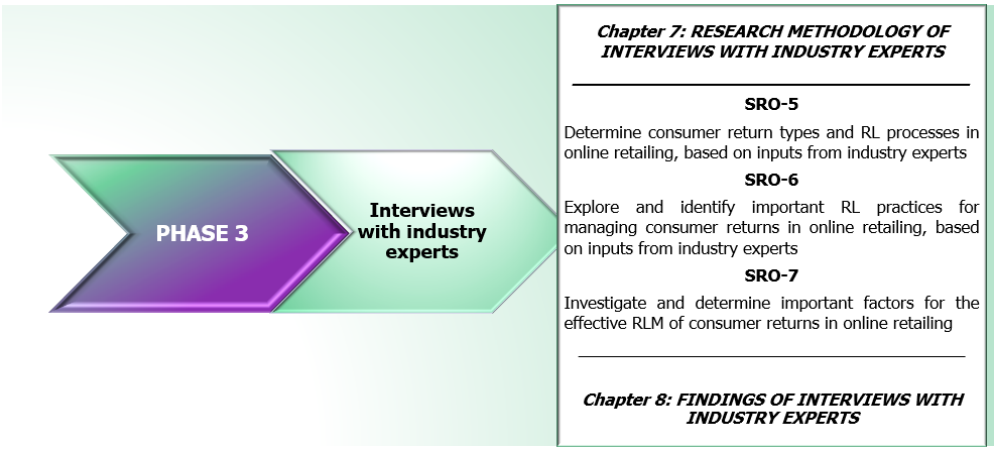


Figure 8.1 Findings of interviews with industry experts - Aims of chapter 8
Source: Compiled by the researcher

The purpose of the interviews with industry experts was to gain practical insight from industry on the main themes of the study, namely, RL processes, RL practices and RLM factors for the effective management of consumer returns in online retailing. More specifically, the aim of the interviews with industry experts was to (1) *determine consumer return types and RL processes in online retailing, based on inputs from industry experts (SRO-5),* (2) *explore and identify important RL practices for managing consumer returns in online retailing, based on inputs from industry experts (SRO-6),* and (3) *investigate and determine important factors for the effective RLM of consumer returns in online retailing (SRO-7).* Furthermore, the interview findings presented in this chapter contributes to the

primary objective of the study, which is to *develop a framework for the effective RLM of consumer returns in online retailing.* Therefore, key findings from the interviews with industry experts will (in combination with other research findings from phases one and two) be included in the framework for the effective RLM of consumer returns in online retailing, presented in chapter 9.

Figure 8.2 provides an overview of the main sections of chapter 8.

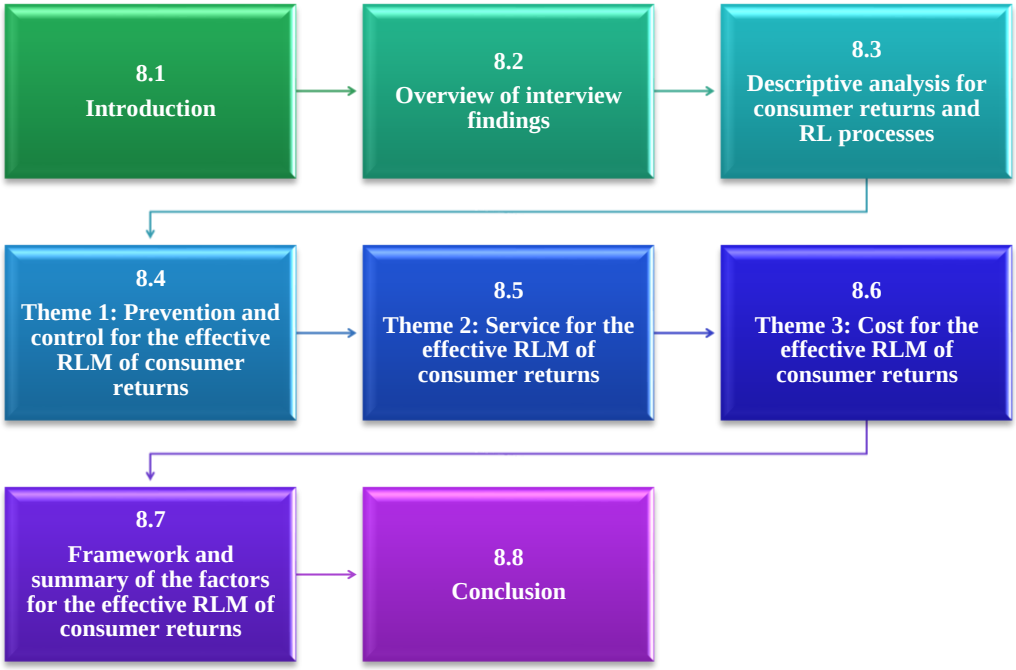


Figure 8.2 Overview of chapter 8
Source: Compiled by researcher

Figure 8.2 provides an overview of chapter 8, starting with the introduction (this section), followed by an overview of the interview findings (section 0), whereafter the descriptive analysis for consumer returns and RL processes will be presented (section 8.3). Thereafter, themes one to three from the reflexive thematic analysis (TA) will be presented, including Theme 1 – prevention and control for the effective RLM of consumer returns (section 8.4), Theme 2 – service for the effective RLM of consumer returns (section 8.5) and Theme 3 – cost for the effective RLM of consumer returns (section 8.6). The chapter concludes with a framework and summary of the factors for the effective RLM of consumer returns in online retailing (section 8.7) and a conclusion (section 8.8).

8.2 OVERVIEW OF THE INTERVIEWS WITH INDUSTRY EXPERTS

In chapter seven a detailed discussion of the interviews with industry experts was given. This section serves as a reminder of the research questions and aims of the interview findings with industry experts and an overview of presenting the descriptive analysis and reflexive TA.

The aim of chapter eight was to (1) triangulate the interview and QCA of RL literature findings related to consumer returns, RL processes and RL practices, (2) identify important factors for the effective

RLM of consumer returns in online retailing, and (3) develop frameworks from the interview findings for the effective RLM of consumer returns in online retailing. The main research questions for the interviews with industry experts included:

5. *What are the types of consumer returns in online retailing? (RQ-1)*
6. *What are the RL processes of consumer returns in online retailing? (RQ-2)*
7. *What are important RL practices for managing consumer returns in online retailing? (RQ-3)*
8. *What are important factors for the effective RLM of consumer returns in online retailing? (RQ-4)*

The focus of the first two research questions was to triangulate the findings of the interviews with the findings QCA of RL literature findings through a deductive approach and a descriptive analysis. The focus of the third research question was to triangulate the interview findings with the QCA findings through an inductive approach and a reflexive TA. The final question focused on identifying important factors for the effective RLM of consumer returns in online retailing from the interview findings through an inductive approach and a reflexive TA.

In the subsequent sections overviews of the descriptive analysis and reflexive TA will be provided.

8.2.1 Overview of the descriptive analysis of the interviews with industry experts

The presentation of findings for the descriptive analysis involves a comparative approach, which enables the triangulation of two sets of qualitative data. The participants were asked to explain the various return types and return processes that can occur in online retailing. Additionally, the participants were asked about the parties involved in consumer returns and facilities used for RL processes. These questions enabled effective triangulation between the interview findings and the QCA of RL literature findings. However, other questions asked about RL practices produced additional content that enabled a rich comparison between the interview findings and the QCA findings.

For an effective comparison, the presentation style for the descriptive analysis includes a combination of the quotation tables used for the presentation of the QCA findings (see chapters 4 and 5), containing the inductive categories and subcategories from the QCA findings, with the addition of categories identified in the interviews. Additionally, the tables for the descriptive analysis include a simplified matrix, comparing the two sets of data (QCA versus interview findings) per category/subcategory. However, the descriptive analysis tables exclude quotations from the QCA (which can be viewed in chapters 4 and 5) to avoid unnecessary cluttering and duplication of findings. Instead, the final column in the descriptive analysis tables include some quotations from the interview findings to support the comparison and discussion of findings. Following the tables, a discussion of the key findings is given, focussing on the similarities and differences between the interview findings and QCA of RL literature findings.

In chapters 4 and 5, a description was created for each main category based on the QCA of RL literature findings. Based on the descriptive analysis findings for the interviews with industry experts, the description for each main category is redefined to answer the first two research questions (i.e. RQ1 and RQ2). Based on the recreated descriptions, each main section concludes with a descriptive analysis summary in the form of a data matrix, containing overlapping categories and subcategories between the different consumer return types, different pre-receipt RL processes and different post-receipt RL processes. Following the data matrix, some key findings are discussed with important implications and RLM considerations for online retailers.

8.2.2 Overview of the reflexive thematic analysis (TA) of the interviews with industry experts

In section 7.8, the research methodology for the reflexive TA of the interviews with industry experts was provided, including a broad thematic framework, showing the themes, subthemes and aims of each theme. Based on the broad thematic framework, Figure 8.3 provides a detailed overview of the developed themes from the reflexive TA of the interviews with industry experts.

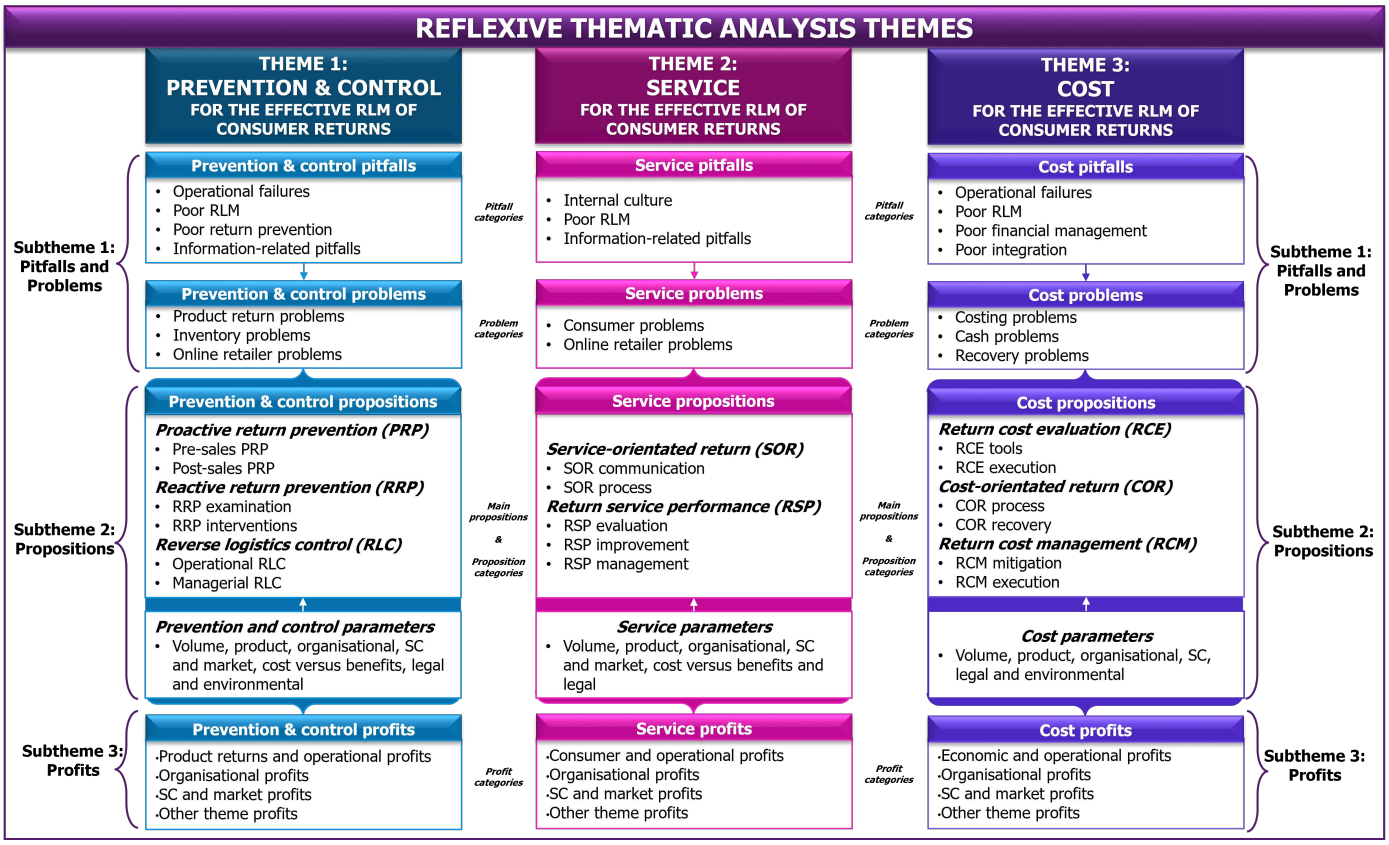


Figure 8.3 Detailed overview of the themes from the reflexive TA
Source: Compiled by the researcher

Specifically, Figure 8.3 shows the main themes, namely, Theme 1 - *Prevention and control for the effective RLM of consumer returns* (section 8.4), Theme 2 - *Service for the effective RLM of consumer returns* (section 8.5), and Theme 3 - *Cost for the effective RLM of consumer returns* (section 8.6). Additionally, the overlapping subthemes are illustrated, including *pitfalls and problems* (*subtheme 1*),

propositions (*subtheme 2*) and *profits* (*subtheme 3*). Moreover, a broad overview of each theme is provided, showing the (1) pitfall categories and problem categories, (2) main propositions and proposition categories, and (3) profit categories. To avoid repetition of explaining the pitfalls, problems, propositions and profits for each theme, the following should be noted for each subtheme:

- ***Pitfalls and problems (subtheme 1)***
  - The *pitfalls represent poor practices* that can hamper the effective RLM of consumer returns in online retailing.
  - The *problems represent* the *consequences* of the *pitfalls* (poor practices), which complicate the effective RLM of consumer returns
  - The pitfalls consist of *pitfall categories* (listed in Figure 8.3) and *related pitfalls,* which may consist of *pitfall elements* (not listed in the framework for simplification).
  - The *problems* include *problem categories* (listed in Figure 8.3) and *related problems* (not listed in the framework).
  - While a distinction can be made, the *pitfalls and related problems* (consequences) are *discussed concurrently* in the interview findings since the participants discussed the pitfalls and related problems concurrently in the interviews.
  - Corresponding *literature from chapters one and two* is identified (if applicable) in the discussions of each *pitfall category* and related *problems*.
  - The pitfalls and problems of each theme concludes with a *framework and summary of findings,* demonstrating the relationships between the pitfalls and problems.
- ***Propositions (subtheme 2)***
  - The propositions involve various proposition categories, practices and parameters that online retailers can implement to address the pitfalls/problems (subtheme 1) and realise profits (subtheme 3), contributing to the effective RLM of consumer returns in online retailing.
  - The *main propositions* of each theme consist of unique *proposition categories* related to the theme. All themes include '*parameters'* as a *proposition category*.
  - The *parameters* involve important factors that online retailers must consider for the effective implementation of the propositions.
  - The proposition categories include *key practices or key parameters* (not included in Figure 8.3 for simplification) that can be critical for the effective implementation of the proposition categories.
  - Some key practices/parameters consist of *key practice/parameter elements,* which can be important for the implementation of the respective key practice/parameter.
  - The *propositions can be linked*, meaning that certain key practices and parameters within the propositions must be implemented and/or considered for the effective implementation of the corresponding (linked) key practice/parameter.

- The propositions of all themes include *requirements* for implementation, representing *support RL practices* that can facilitate the implementation of the key practices/parameters.
- The interview findings were triangulated with the QCA of RL literature findings, which were presented as *support practices* in the discussions of the interview findings.
- As a part of the *literature integration*, the discussion of the interview findings contains *references to specific strategies* associated with the RL practices discussed *in chapter 6*, which will be added to the discussions of each key practice/parameter.
- Corresponding *literature from chapters one* and *two* is identified (if applicable) in the discussions of each key practice and key parameter.
- The propositions of each theme conclude with a framework and summary of findings. A *broad framework is illustrated*, demonstrating the links between the support practices, main propositions and proposition categories. The *summary of findings is presented in a table* (detailed framework), focusing on the proposition categories, key practices/parameters, support practices and linked proposition categories. Furthermore, numeric summaries for the key practices/parameters and proposition categories are provided to demonstrate the number of requirements (costs) per key practice/parameter and per proposition category.

- ***Profits (subtheme 3)***
  - The profits represent the *benefits or outcomes realised* through the successful implementation and consideration of the propositions.
  - The profits of each theme consist of *profit categories* (listed in Figure 8.3), *profit subcategories* and *related profits* (not listed in the framework for simplification).
  - The profits of all themes include *other theme profits* as a profit category, which can consist of profits related to prevention and control (theme 1), service (theme 2) and cost (theme 3).
  - Corresponding *literature from chapters one and two* is identified (if applicable) in the discussions of each profit.
  - The profits of each theme *exclude a framework* and *summary of findings* since no relationships between the profits are identified. However, the findings related to the profits are provided in the final framework of each theme.

Consequently, *each theme concludes* with an *overall framework, summary and analysis of findings*. Specifically, a *broad framework is illustrated*, which identifies the links between the profits/pitfalls, propositions and profits. Additionally, the most significant pitfalls, propositions and profits are highlighted. The *summary of findings* is presented in a *table* (detailed framework), focusing on the proposition categories, key practices/parameters and related pitfalls and problems addressed, and profits realised. Furthermore, the summary table provides columns giving an overview of the costs (total requirements, including the number of key practices/parameters and support practices identified

from the summary of findings from the propositions) versus the benefits (total benefits, including the number of addressed pitfalls and problems and realised profits) per key practice/parameter and proposition category. Including the cost versus benefits can be important since Anderson (2020:7) indicated that organisations find balancing the costs versus benefits challenging for effective RLM. Consequently, providing the costs versus benefits can help online retailers to effectively implement propositions for the effective RLM of consumer returns. Following the table, some practical examples are provided, demonstrating the application of the summary framework, which can help online retailers explore important factors for the effective RLM of consumer returns.

Essentially, the introduction and conclusion of each subtheme associate with the key points discussed in this section. Therefore, to eliminate repetition in the analyses and discussions of the different themes, reference to this section will be provided where applicable in the relevant sections of each theme. In the next section, the descriptive analysis for consumer return types and RL processes in online retailing is provided.

8.3 DESCRIPTIVE ANALYSIS FOR CONSUMER RETURN TYPES AND RL PROCESSES IN ONLINE RETAILING

The interviews with industry experts contained rich findings, covering most, if not all, of the consumer return types and RL processes discussed in the QCA findings of RL literature. This section provides a descriptive analysis that compares the findings from the interviews with industry experts with the findings from the QCA of RL literature (hereafter QCA findings). The aim of this section is not only to triangulate the QCA findings and interview findings but also to identify the consumer return types and RL processes that can occur in the online retailing industry of South Africa. Figure 8.4 provides an overview of the consumer return types, pre-receipt processes and post-receipt processes that will be compared between the interview findings and QCA findings.

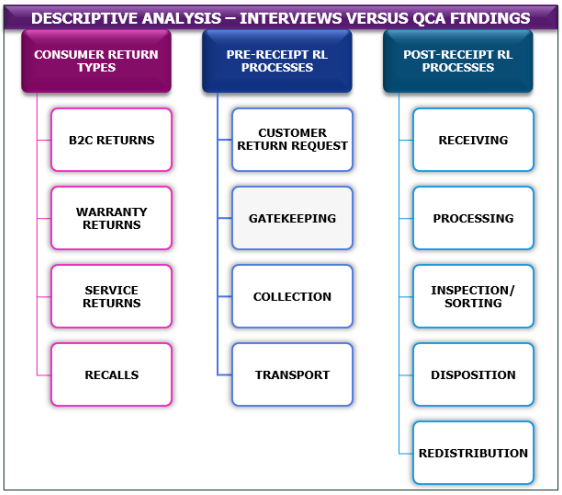


Figure 8.4 Descriptive analysis overview
Source: Compiled by the researcher

In the subsequent sections, the descriptive analysis for the consumer return types, pre-receipt RL processes and post-receipt RL processes will be presented and discussed.

8.3.1 Descriptive analysis for the consumer return types in online retailing

Consumer returns involve the return of products by consumers to the online retailer (or seller) for various reasons. The consumer return types identified in the QCA findings were discussed in section 4.3 and consisted of business-to-consumer (B2C) returns, end-of-use (EoU) returns, warranty returns, service returns and product recalls. The participants indicated that B2C returns are the most common return types in online retailing, with only a few mentioning warranties, service returns and product recalls. Due to the absence of legislation in South Africa that drives organisations to accept used product returns, the acceptance of EoU returns is uncommon in the online retailing industry of South Africa. Subsequently, the comparison excludes EoU returns and only focuses on the return types that correspond between the interview findings and QCA findings.

Table 8.1 provides an overview of the findings related to consumer returns in online retailing, including detail on the combined categories and subcategories from the QCA and interview findings, a basic data matrix to compare the QCA and interview findings with supporting quotations from the interviews.

Table 8.1 Comparison between the QCA and interview findings of consumer returns

TYPES	CATEGORIES	SUBCATEGORIES	QCA	INT	SUPPORTING INTERVIEW QUOTATIONS
B2C	***Product condition***	New and unused	X	X	• "But those are essentially unwanted returns that are in perfect condition […]." (P1, operations manager, 3PRL provider firm) • "An example might be I might use reasons for returns such as […] dead-on-arrival […]." (P12, Head of logistics, online retailer) • "Look, the types of returns are diverse […] from incorrectly chosen products […]." (P7, owner, 3PRL provider firm) • "So, if, if the item is found to be in working condition and then […] it was actually just the consumer who purchased the incorrect product and didn't read that it's not compatible with the device, etc." (P5, general manager, online retailer) • "[…] with online more so than others, is that people buying it and they haven't tried it on in the store and they either find that the colour is wrong, or the sizing doesn't fit and." (P8, logistics manager, multichannel retailer) • "[…] the majority of our returns that we've had now are all buyer's remorse, I don't really need this product […]." (P10, Head of Sales and Logistics, OEM/multichannel retailer) • "We've got different reasons that the customers can select for returns […] So most common is, I've changed my mind, obviously, at being an online store, […]." (P3, returns manager, online retailer) • "The type of returns that we've identified […] in terms of the customer is not really happy with the colour […] the actual specifications of the products hasn't [sic] met his standard." (P10, Head of Sales and Logistics, OEM/multichannel retailer) • "So, you might well say this customer has returned […] Jimmy Choo stilettos, saying that as an unwanted item. In other words, they've decided that they know they don't want them […]." (P1, operations manager, 3PRL provider firm) • "However, also what happens is from a return perspective is that we deliver a product, and the customer hasn't actually ordered the product or there was a duplicate purchase order." (P10, Head of Sales and Logistics, OEM/multichannel retailer) • "We've got different reasons that the customers can select for returns. So one of them might be product defective or damaged." (P3, returns manager, online retailer) • "So, as we are actually not really in charge of quality of products […] So then obviously the quality side gets pushed into the supplier." (P3, returns manager, online retailer) • "Yes, and the reason for return […] you know it there is almost like a no questions asked return policy […]." (P8, logistics manager, multichannel retailer) • "[…] the consumer who purchased the incorrect product and didn't read that it's not compatible with the device, etc. […] The product is still in perfect condition. We can
		Defective upon arrival	X	X	
	Consumer errors - push returns	Order errors	X	X	
		False failures	X	X	
		Problems experienced with products	X	X	
		Buyer's remorse/ change of mind	X	X	
		Dissatisfaction	X	X	
		Unwanted	X	X	
	Organisational errors - pull returns	Wrong delivery	X	X	
		Quantity issues	X	X	
		Damaged or defective	X	X	
		Quality issues	X	X	
	Other reason	Liberal return policies	X	X	
		Seasonal	X		
	Disposition options	Direct reuse	X	X	
		Repair	X	X	
		Refurbishment	X		
		Ship to the supplier		X	

					resell it." (P5, general manager, online retailer) • "If a product comes back in, customer maybe be sent it back because there might have been a default or a fault or something […] we'll fix it ourselves […] you know, repairing […]." (P13, supply chain manager, multichannel retailer)
Warranty	***Product condition***	Used	X	X	• "We have a six-month […] implied warranty. So, when we get the item and we see that it is faulty and it's not working […]." (P3, returns manager, online retailer) • "So, if a customer said that the item doesn't the item is not working, is defective. […] they can then class that […] as a supplier warranty claim […]." (P5, general manager, online retailer) • "[…] from a warranty perspective. Train them on consumer behaviour, saying before you tell me that the product is broken, you know, just try one, two and three and they'll say, oh, OK, now that works perfectly." (P5, general manager, online retailer) • "[…] this person bought the item two years ago and it's out of warranty and it is not returnable. […] what are you going to do with this two-year old computer […]." (P1, operations manager, 3PRL provider firm) • "[…] the TV set breaks […] you can give accurate information to your customer saying, you know what, we've established that this product is still under warranty. […] The supplier has spoken to us, and […] is going to fix your item." (P5, general manager, online retailer) • "As a as an online retailer, you always try and get your money back. That's your number one priority. So, sending it back to the supplier to a warranty claim is the easiest thing in the world, done deal." (P5, general manager, online retailer)
		Defective condition	X	X	
	Reasons/ causes	Product failure	X	X	
		Quality failures	X	X	
		Warranty claims	X	X	
		False failures	X	X	
		Product defects	X	X	
	Types of products	Vehicles	X		
		Computers	X	X	
		TVs		X	
	Disposition options	Repairs	X	X	
		Refurbishment	X		
		Ship to the supplier		X	
		Return to consumer		X	
Service /	***Product condition***	Relatively good condition	X		• "[…] repairs are done by […] the authorised service centres. So, what happened there is that, for example, Amanda would like to return a product or send it in for repairs if it happens that her unit is damaged […]." (P10, Head of Sales and Logistics, OEM/multichannel retailer) • "But if you do big electronics, […] there is a little repair centre right next door […]." (P1, operations manager, 3PRL provider firm)
		Used	X		
		Damaged		X	
	Reasons/ causes	Product failures	X		
		False failures	X		
		Product damages		X	
		Repair service requests	X	X	
	Types of products	Computers	X		
		Mobile phones	X		
		Cameras	X		
		Vehicles			
		Electronics		X	
	Disposition option	Repair	X	X	
Recalls	***Product condition***	Defective	X	X	• "Well, obviously, the product comes back defective. We are actually not the manufacturer of that product. So then obviously the quality side gets pushed to the supplier. So obviously, if you have a certain let's say, for instance, Samsung, we get 95 percent product returns on a product of theirs. And obviously that question gets raised to Samsung about, you know, maybe recalling the product for a total quality overhaul of it." (P3, returns manager, online retailer) • "[…] this red grape that was pulled back out of the market now a month ago. Where they suspected there was some hazardous optical in the batch. So, all the total batch that was made in that period was pull back from consumers." (P11, Demand and sales manager, FMCG distributor)
	Reasons/ causes	Defects	X	X	
		Quality failures	X	X	
		Safety issues	X	X	
		Notifications/ announcements	X		
	Types of products	Automobile	X		
		Pharmaceutical	X		
		Food	X	X	
		Toys	X		
		Infant/baby products	X		
		Household products	X		
		Outdoors	X		
		Sports	X		
		Electronics		X	
	Disposition option	Repairs	X		
		Ship to the supplier		X	

Source: Compiled by the researcher

Table 8.1 shows that all consumer return types, except EoU returns, identified in the QCA findings can occur in online retailing. The findings for each consumer return type will be discussed in the subsequent sections.

8.3.1.1 Descriptive analysis for B2C returns

Most findings related to B2C returns *corresponded* between the interview findings and QCA findings. The participants confirmed that B2C returns in online retailing include products in new/unused or defective on arrival *conditions*. Furthermore, most *return reasons/causes* identified in the QCA

findings correspond with the interview findings, including the (1) consumer error reasons of order errors, false failures, problems experienced with products, buyer's remorse, change of mind, dissatisfaction and unwanted, (2) organisational error return reasons of wrong delivery, quantity issues, damaged or defective and quality issues and (3) other reason of lenient return policies. Specifically, the participants indicated that the most common consumer error return reasons include a change of mind and unmet expectations because of the inability to touch, feel and see the product in person. The participants added that product categories can play a role in the return reasons, for example, clothing can involve incorrect size and electronics incorrect specifications.

In terms of organisational error returns, damages and wrong deliveries are mostly prevalent in online retailing because of in-transit damages and the possibility of delivering incorrect orders or missing items in the order. However, the participants indicated that defects or dead-on-arrival products (i.e. products delivered in defective conditions) are often part of the return reasons provided by consumers. Finally, the participants confirmed that online retailers use the *disposition options* of reuse and repair for B2C returns. Corroborating the QCA of findings, the participants indicated that new/unused B2C returns can be resold as new on the website and defective or damaged products can be repaired.

In terms of the *differences* between the interview and QCA findings, the participants omitted supply and demand as a cause for B2C returns, indicating that South African online retailers may not accept season related returns. Additionally, the disposition option of refurbishment was not mentioned by the participants. In fact, refurbishment as a disposition option was omitted from the interview findings, indicating that South African online retailers and 3PRL providers are not directly involved in refurbishment activities. Instead, the participants indicated that organisational error return reasons, like defective or quality issues, are mostly pushed to the supplier, which associates with the exit (disposition) option of the ship to the vendor.

In section 4.3.1, a description, based on the QCA of RL literature findings, for B2C returns was proposed. Based on the findings of the descriptive analysis, B2C returns in online retailing will be redescribed as follows:

> B2C returns in online retailing involve consumers returning new/unused products in good or defective/damaged condition for various reasons, including (1) consumer errors (push returns), involving, order errors, false failure returns, problems with the product, buyer's remorse or a change of minds, dissatisfaction and unwanted products, (2) organisational errors (push and pull returns), involving wrong deliveries, inaccurate quantities, defective/damaged products and quality issues, and (3) other reasons, involving lenient return policies. Depending on the condition and return reasons, B2C returns can be directly reused, repaired or shipped to the supplier.

8.3.1.2 Descriptive analysis for warranty returns

Although a few participants mentioned warranty returns, Table 8.1 shows that most findings from the interviews *corresponded* with the QCA findings. The participants confirmed that warranty returns

include products in used and/or defective conditions that are returned because of product/quality failures, warranty claims, false failures and defects. For example, the participants confirmed that computers can be returned under warranty and repair can be an appropriate disposition option for warranty returns.

Regarding the *differences* between the interview and QCA findings, the participants excluded vehicles as a product type and refurbishment as a disposition option in warranty returns (see section 8.3.1.1). The participants (representing retailers and 3PRL providers) interviewed in this study were not involved in car sales (except car parts), which explains the omission of warranty claims for vehicles. Nevertheless, the participants expanded on the QCA findings by adding televisions as a product type, indicating that any electronic type of product can associate with warranty returns. Additionally, the participants identified ship to the supplier (vendor) and return to the consumer as exit options for warranty returns. Like B2C returns, defective warranty returns are pushed to the suppliers, indicating that South African online retailers prefer to send warranty claims to suppliers. In fact, apart from new/unused B2C returns, participants indicated that warranty returns are preferred by online retailers due to the ability to transfer RL costs and disposition to the suppliers.

Regarding the false-failure warranty claims, online retailers may inspect a product or assist a consumer telephonically to determine if the product is faulty as claimed by the consumer. If the warranty claim is invalid, the online retailer can return the product to the original consumer or avoid warranty return pickup if the consumer was assisted telephonically.

In section 4.3.3, a description for warranty returns was proposed based on the QCA of RL literature findings. Based on the interview findings for the descriptive analysis, warranty returns in online retailing can be redescribed as follows:

> Warranty returns in online retailing refer to consumers returning used or defective products (e.g. electronics, computers and televisions) under manufacturer warranty. Warranty returns can include various reasons, including product failures, quality failures, warranty claims, defects or false failures. Based on the reasons for warranty returns and the condition of the product, warranty returns can involve repair, ship to the supplier or return to the consumer as disposition/exit options.

8.3.1.3 Descriptive analysis for service returns

Only two participants mentioned *service returns* (product returns for service), which means that limited findings from the interviews *corresponded* with the QCA findings. In fact, Table 8.1 shows that the only corresponding findings between the interviews and QCA included the return reason/cause of service return request and the disposition option of repair. While the product types of computers, phones and cameras were not explicitly mentioned in the interviews, participants mentioned consumer electronics and devices, implying that any type of electronics and devices (e.g. computers, cameras, televisions, and tablets/mobile phones) can form part of service returns in online retailing.

Regarding the *differences*, the QCA findings identified "relatively good" and "used" as the product conditions of service returns, while the interviews identified "damaged" as the product condition of service returns. However, it can be argued that a repair request from a consumer means that the product was used and must still be in a relatively good reparable condition. For example, a consumer might request a service repair for a cracked screen of a cell phone, which can be still in a relatively good and used condition. In terms of the reasons for service returns, the QCA findings identified product failure and false failure, while the participants suggested damages as reasons/causes for service returns. This interview finding implies that service returns in online retailing exclude repairs for products in defective condition, which might be more appropriate for warranty returns. Nevertheless, the interview findings related to service returns are too limited for a definite conclusion about the product condition and return reasons/causes for service returns in online retailing. Finally, the interviews excluded vehicles as a product type in service returns because manufacturers or independent service centres for the manufacturers are mostly responsible for vehicle services.

In section 4.3.4, a description, based on the QCA of RL literature findings, for service returns was proposed. Based on the interview findings of the descriptive analysis, service returns in online retailing will be redescribed as follows:

> Service returns in online retailing involve consumers returning relatively good, used and damaged products (e.g. computers, cameras, cell phones or any electronic and device products) due to a repair service request and product damages, involving repair as a disposition option.

8.3.1.4 Descriptive analysis for recalls

Like service returns, Table 8.1 shows that a few participants discussed product *recalls* as a consumer return type in online retailing. However, the participants *confirmed* that recalls involve products in defective condition that are returned because of quality failures, defects and safety issues. Additionally, food was confirmed as a product type associated with product recalls in online retailing. For the *differences* between the QCA and interview findings, notifications and announcements were not mentioned by the participants during the interviews. However, plenty of examples of product recalls in South Africa, demonstrate that notifications and announcements can occur in online retailing. For example, South African grocery retailers, such as SPAR announced on their website that customers can return cold meat products for a full refund (SPAR, 2019).

Furthermore, the QCA findings contained various products that were not mentioned by the participants, including vehicles, pharmaceuticals, toys, baby products, household items, sport equipment and outdoor products. However, one participant added that online retailers selling electronic products might engage with the manufacturers about recalling specific electronic products associated with high volumes of defective returns. Although limited product types were mentioned in the interviews, recalls in South Africa can involve any product type that poses a risk of harm to the public. Therefore, online

retailers that stock pharmaceuticals, toys, baby products, home, sports and outdoor equipment might be involved in the recall of these products. Finally, the QCA findings included repair as a disposition option, while the interview findings included return to the supplier as an exit option. Therefore, like warranty returns, online retailers push the disposition of recalled products to the suppliers/manufacturers.

In section 4.3.5, a description for product recalls was provided based on the QCA of RL literature findings. Based on the findings of the descriptive analysis, product recalls in online retailing will be redescribed as follows:

> Product recalls in online retailing are consumer returns, initiated by online retailers or their suppliers (pull returns), which involve announcements/notifications to consumers about potential defects, quality failures and safety issues related to the consumption of certain products (e.g. electronics, toys, medicine, food, household goods or sports equipment). Online retailers issue refunds to the consumers and ship the recalled products to the manufacturer or supplier for disposition.

In the next section, the descriptive analysis for consumer returns in online retailing concludes with a descriptive analysis summary.

8.3.1.5 Descriptive analysis summary for consumer returns in online retailing

Clearly, several of the findings related to consumer returns corresponded between the QCA of RL literature and the interviews with industry experts. However, the biggest difference between the interview and QCA findings associated with EoU returns. As explained in section 4.3.2, EoU returns involve product upgrades, product exchange programmes and incentives for consumers to return used products (e.g. cell phones and computers) for an upgrade or refund. Some organisations operating in South Africa are implementing these programmes to reduce damages to the environment and raw material consumption. For example, Apple iStore in South Africa sells products online to consumers and offer trade-ins for used devices. Therefore, consumers are incentivised to request a trade-in return for a sales discount of a new product or store credit (Fox, 2023:22).

Ultimately, online retailers must be mindful of these environmentally and socially responsible practices from online sellers, paying attention to the possibility of EoU returns becoming the norm in the online retailing industry of South Africa. Accordingly, the description of EoU returns provided in section 4.3.2, must be considered by online retailers for socially and environmentally responsible RLM practices.

Based on the reformulated descriptions provided in section 8.3.1, Table 8.2 provides a data matrix, comparing the overlapping subcategories of the consumer return types in online retailing.

Table 8.2 Descriptive analysis matrix for common elements of consumer return types

Category	Subcategory	B2C	Warranty	Service	Recalls
Product condition	**Used**		**X**	**X**	
	Damaged	**X**		**X**	
	Defective	**X**	**X**		**X**
Reasons/causes	**False failures**	**X**	**X**		
	Product damage	**X**		**X**	
	Product defects	**X**	**X**		**X**
	Quality failures		**X**		**X**
Product type	**Electronics**		**X**	**X**	**X**
	Computers		**X**	**X**	
	Assorted	**X**			**X**
Disposition	**Repair**	**X**	**X**	**X**	**X**
	Ship to the supplier	**X**	**X**		**X**

Source: Compiled by the researcher

From Table 8.2, several observations can be made for each category. In terms of *product condition*, warranty and service returns can involve products in *used condition*, meaning that online retailers must focus on product protection for warranty and service returns. Additionally, B2C and service returns can involve products in *damaged condition*, indicating that online retailers must distinguish between the return of new/unused products in damaged condition and used products in damaged condition to identify the appropriate consumer return type. All product return types, except service returns, can include products in *defective condition*, indicating that online retailers must develop strategies to effectively handle products in defective condition.

For common *return reasons/causes*, both B2C and warranty returns can include *false failures*. Evidently, online retailers can consider improving product descriptions and collaborating with suppliers to improve product instructions to avoid false failure returns. Linking with the product condition, B2C and service returns entail *product damages* as return reasons, indicating that online retailers can reduce B2C and service returns through improved packaging and product care instructions. Similarly, *defects* can be a common return reason for B2C, warranty and product recalls, which means that online retailers must focus on effective procurement practices to reduce consumer returns. Likewise, improved quality control can help reduce warranty returns and recalls related to *quality failures.*

Regarding *product type*, all consumer returns, except B2C returns (if only warranty electronics are sold), can include *electronic products*. Therefore, online retailers that sell electronics must prepare for all types of consumer returns. Additionally, online retailers that sell *computers* must prepare for warranty and service returns and online retailers that sell *assorted products* must prepare for B2C returns and recalls for effective RLM. Finally, for the *disposition/exit options*, all consumer return types, except recalls, associate with *repair*, which demonstrates that online retailers must develop a product repair strategy for the effective disposition of consumer returns. Likewise, all consumer return types, except service returns, associate with the exit option of *ship to the supplier*, emphasising that online retailers must focus on supplier agreements, integration and relationships to effectively manage consumer returns.

In the next section, the descriptive analysis for the pre-receipt RL processes in online retailing will be provided.

8.3.2 Descriptive analysis for pre-receipt RL processes in online retailing

Pre-receipt RL processes in online retailing start when a consumer notifies the online retailer of a return and ends before the online retailer receives the product at a facility. The pre-receipt RL processes identified in the QCA findings were discussed in section 4.4, including customer return request (CRR), gatekeeping, collection and transportation. All the pre-receipt processes identified in the QCA findings aligned with the interview findings, indicating that pre-receipt RL processes in online retailing involve CRR, gatekeeping, collection and transportation. The descriptive analysis for each pre-receipt RL process will be provided in the subsequent sections.

8.3.2.1 Descriptive analysis for the customer return request (CRR) process in online retailing

In section 4.4.1, the QCA findings for the CRR process (i.e. consumer requesting a return from the online retailer) was presented and discussed. The findings between the QCA and interviews mostly corresponded for the CRR process. However, the participants provided more detailed information on the CRR process, which supplemented the QCA findings. Table 8.3 provides an overview of the findings related to the CRR process in online retailing, including detail on the combined categories and subcategories from the QCA and interview findings, a basic data matrix to compare the QCA and interview findings and supporting quotations from the interviews.

Table 8.3 Comparison between the QCA and interview findings for the CRR process

CATEGORIES	SUBCATEGORIES	QCA	INT	SUPPORTING INTERVIEW QUOTATIONS
Characteristics	**Starts with the consumer**	X	X	•"Well, the processes that take place, look, it starts right at the beginning, obviously, from the from the interaction point of view […]." (P7, owner, 3PRL provider firm) •"Ok, so obviously, the customer gets it, they don't like it […] our customer service will log that return." (P13, supply chain manager, multichannel retailer) •"We've got different reasons that the customers can select for returns. So one of them might be product defective or damaged." (P3, returns manager, online retailer) •"And it's the administrative cost of supporting the logging of the return on some system or the call taking off that system." (P2, owner, supply chain consultancy firm) •"[…] the customer gets it, they don't like it. They will kind of log a return and that kind of goes through our CRM system." (P13, supply chain manager, multichannel retailer) •"So, when a customer logs a return, they obviously need to take a photo of an item, a picture of something as like that person can see that item has been used. It obviously it gets declined right away […] But I also think that's a great, just generally speaking, you must have a very clear returns policy on it." (P3, returns manager, online retailer) •"If a customer wanted to return and they would click onto a link […] It would trigger the collection […]." (P1, operations manager, 3PRL provider firm) •"So mostly with this type of situation, the credit or the refund is processed at the time the consumer logs the return and the online sales system." (P2, owner, supply chain consultancy firm) •"This is what the customer said it was, but on inspection, this is actually what it looked like." (P1, operations manager, 3PRL provider firm)
	Initial RL process	X	X	
	Recognition of a product return	X	X	
	Important	X		
	Involves costs		X	
	Involves technology		X	
	Relates to return reasons	X	X	
	Relates to return policy		X	
	Linked to gatekeeping		X	
	Linked to collection		X	
	Linked to processing	X	X	
	Linked to inspection	X	X	
Activities	**Communication**	X	X	•"You must acknowledge that you have heard the customer, acknowledge the customer's request […]." (P10, Head of Sales and Logistics, OEM/multichannel retailer) •"And the person will log a return and say, look, it's defective or damaged. So, then you have that gatekeeping function at the point where the person logs their return to say, look, we're not accepting it." (P3, returns manager, online retailer) •"So, when a customer logs a return, they obviously need to take a photo of an item, a picture of something as like that person can see that item has been used. It obviously it gets declined right away." (P3, returns manager, online retailer)
	Acknowledge the request		X	
	Record return reasons	X	X	
	Request and provide evidence		X	
	Review request	X	X	

	Initial assessment of product condition	**X**	**X**	•"And then when it proceeds through the authorisation, you then into now have to arrange for collection." (P1, operations manager, 3PRL provider firm)
	Pre-return authorisation or rejection	**X**	**X**	•"So once that's been confirmed and you can validate whether or not that's a legitimate collection for return, you then basically, if it's your own in-house reverse logistics, it will notify the customer either by email or by SMS that it's been confirmed." (P12, Head of logistics, online retailer)
Methods	**Online CRR**		**X**	•"[…] you've got to have a reverse online portal and where the customers got a choice to first log their query of return […]." (P12, Head of logistics, online retailer) •"Well, the processes that take place, look, it starts right at the beginning, obviously, from the from the interaction point of view, whether it's done via a call centre […]." (P7, owner, 3PRL provider firm) •"[…] customer of your goods can […] send an email to initiate the return." (P3, returns manager, online retailer)
	Call centre CRR		**X**	
	Email CRR		**X**	
Parties	**Consumers**	**X**	**X**	•"[…] at the time of the return being logged by the consumer, […]." (P2, owner, supply chain consultancy firm) •"[…] the call centre will obviously be the person responsible for listening to the voice of customer and loading […] a call or ticket […]." (P10, Head of Sales and Logistics, OEM/multichannel retailer)
	Retailers	**X**	**X**	

Source: Compiled by the researcher

Table 8.3 shows that almost all subcategories of the CRR process identified from the QCA corresponded to the interview findings. In the subsequent paragraphs the similarities and differences between the QCA and interview findings for the characteristics, activities, methods and parties of the CRR process will be provided.

- *Characteristics of the CRR process in online retailing*

Most of the characteristics identified in the QCA findings were *confirmed* by the interview findings. Specifically, the participants confirmed that the CRR process is the *first RL process* in online retailing, *starting with the consumer* and *recognition of a product returns*. Furthermore, participants confirmed that the CRR process relates to *return reasons*. Consumers provide the reason for the return at the time of the request, which means that online retailers can provisionally determine the product condition and return type. Like the QCA findings, the CRR process in online retailing can link with other RL processes, including processing and inspection. Particularly, the participants indicated that online retailers could *process a refund or credit* at the time of the CRR, implying that some online retailers trust consumers and perform early processing before return receipt. Additionally, like the QCA findings, participants indicated that the return reasons provided by consumers at the time of the request is verified during *inspection*, linking the CRR and inspection process.

While the interview findings confirmed most of the QCA findings, the *characteristics* included several *differences.* Specifically, the QCA findings indicated that CRR can be characterised as an *important process*, which was not mentioned in the interview findings. Nevertheless, it can be argued that the CRR process can be a significant RL process because the consumers provide online retailers with important information about the product condition and return reasons, which may enhance product return visibility. The participants added several new characteristics to the CRR process, extending the QCA findings. Particularly, the CRR process can *involve costs*, including communication costs (e.g. telephonic costs) and administration costs for supporting the CRR process. Furthermore, participants added that the CRR process can *involve technology*, like a CRM (customer relationship management)

system. Therefore, online retailers can integrate their web-based system with other IT systems to support the CRR process. Additionally, participants mentioned that the CRR process relates to the *return policy*. For example, the return policy might state that defective/damaged return reasons must be accompanied by photos as proof, which means that the CRR process must be adapted for uploading pictures.

Finally, the participants extended the links between CRR and other RL processes by including gatekeeping and collection. The link between CRR and *gatekeeping* relates to the provision of proof of the condition of a product during return logging. Subsequently, the online retailer can gatekeep the return based on the evidence or lack thereof provided by the consumer during the CRR. The involvement of technology demonstrates the linkage between CRR and *collection* since the system use by the online retailer can automatically trigger the collection process. For example, automatically sending the collection instruction to the driver or courier partner as soon as the return request is accepted.

- *Activities, methods and parties of the CRR process in online retailing*

All the activities identified in the QCA findings *correspond* to the interview findings. Therefore, the CRR process in online retailing involves communication, capturing of return reasons, reviewing the return request, early assessment of product condition and pre-return authorisation or rejection. Additionally, the participants *added activities* that can occur in the CRR process, including acknowledging the request and requesting evidence. While *acknowledging the request* can be part of the communication activity, the QCA findings mostly indicated that the communication comes from the consumer. Contrastingly, participants indicated that acknowledging the request can be an important activity from the online retailer since it can reduce consumer uncertainty. Relating to the return policy and gatekeeping characteristics of CRR, the participants added the *request and provision of evidence* activity to the CRR process.

The interviews findings produced a *new category* for the CRR process, which was not identified in the QCA findings. Several participants discussed *methods* of CRR, including online CRR, call centre CRR and email CRR. Therefore, online retailers can offer consumers with several options of CRR logging, either through an online return portal on the website, telephonically with a call centre agent or electronically via an email. Finally, both the QCA and interview findings *corresponded* with the *parties* involved in the CRR process, including consumers and online retailers. While the roles of consumers and online retailers corresponded with the QCA findings, the additional activities identified by participants extended the roles of consumers and online retailers. Apart from logging the return, communicating with the online retailer and providing return reasons, consumers can also be responsible

for providing evidence. Additionally, the online retailer can be responsible for acknowledging the request and requesting for supporting evidence in conjunction with assessing the request, communicating the outcome of the assessment and accepting or rejecting the return request.

Essentially, the interviews produced valuable new findings to a RL process that was understudied in the QCA of RL literature (see section 4.4). Based on the interview findings from the descriptive analysis, the description provided for the CRR process from the QCA findings (in section 4.4.1.3), can be reformulated as follows:

> The CRR process of consumer returns in online retailing can be described as the first pre-receipt RL process, starting with a consumer and the recognition of a product return. The CRR process involves costs and technology, relates to the return reasons and the return policy, and links with the gatekeeping, collection, processing and inspection processes. The CRR process involves methods and activities related to information flows, including online, telephonic or electronic communication, acknowledging of the return request, recording of return reasons, requesting and providing evidence, reviewing the request, initial assessment of product condition and pre-return authorisation or rejection, which can be performed by the consumer and online retailer.

In the next section, the descriptive analysis for the gatekeeping process in online retailing will be provided.

8.3.2.2 Descriptive analysis for the gatekeeping process in online retailing

In section 4.4.2, the gatekeeping process (i.e. determining if the product return is valid) was discussed based on the QCA findings. Several findings between the QCA and interviews corresponded for the gatekeeping process. Table 8.4 provides an overview of the findings related to the gatekeeping process in online retailing, including detail on the combined categories and subcategories from the QCA and interview findings, a basic data matrix to compare the QCA and interview findings and supporting quotations from the interviews.

Table 8.4 Comparison between QCA and interview findings of the gatekeeping process

CATEGORIES	SUBCATEGORIES	QCA	INT	SUPPORTING INTERVIEW QUOTATIONS
Characteristics	**Entry point of RL**	X	X	•"[…] so, it's better obviously to have the gatekeeping function at the start of it. […] And the person will log a return and say, look, it's defective or damaged. So then you have that gatekeeping function at the point where the person logs their return to say, look, we're not accepting it. It's out of our policy." (P3, returns manager, online retailer) •"So, you could implement a verification process, which is the gatekeeper. […] So there you would need verification at collection point […]." (P4, owner/CEO, 3PRL provider firm) •"And then when it proceeds through the authorization, you then into now have to arrange for collection." (P1, operations manager, 3PRL provider firm) •"So, your returns policy is translated into online functionality. So if I wanted to add something your system knows when I bought it, it knows what the rules are for the particular reason I'm returning it as. And that you said that that authorisation piece doesn't need human interaction." (P1, operations manager, 3PRL provider firm) •"They will then take the reason for the return and match it up with the actual product to see whether or not it is right or wrong or whether it meets the criteria. It will log it then and then that information will be fed back to the customer care department to validate that, that is the original reason for return. The customer care department will then make contact with the client to see whether or not there is a credit eligible […]." (P12, Head of logistics, online retailer) •"So that's why the evaluators they can look at an item, and for instance, if you return the cell phone with a cracked screen and you say, I've changed my mind, like the evaluators should know that you're not allowed to do that. Or if you return a gaming disk that has already been opened according to our policy, you're not allowed to do it. So, it's important because that obviously keeps the fact that people will return anything down to saying like okay cool, they are actually checking what the people are returning and making sure that they are returning it for valid reasons." (P3, returns manager, online retailer)
	Identify if a product is allowed	X	X	
	Involves technology		X	
	Based on a return policy	X	X	
	Linked to the CRR process		X	
	Linked to the collection process	X	X	
	Linked to processing	X	X	
	Linked to inspection	X	X	
	Linked to sorting	X	X	
	Linked to the disposition process	X		

				•"We'll verify that what the consumer says they are returning has indeed been returned […] And then we would also sort that into the various buckets […]." (P4, owner/CEO, 3PRL provider firm
Activities	**Screening of a product return**	X	X	•"[…] the customer care department who must make a call to see whether or not it's legitimate or if they can return it." (P12, Head of logistics, online retailer) •"[…] on our website, if you want to log a return for something that you've changed your mind, but you've ordered it outside the period that you allowed to return it, it automatically rejects it." (P3, returns manager, online retailer) •"So that's why the evaluators they can look at an item, and for instance, if you return the cell phone with a cracked screen and you say, I've changed my mind, like the evaluators should know that you're not allowed to do that. […] making sure that they are returning it for valid reasons." (P3, returns manager, online retailer) •"And then when it proceeds through the authorisation, you then into now have to arrange for collection." (P1, operations manager, 3PRL provider firm) •"[…] you've got to have a reverse online portal and where the customers got a choice to first log their query of return, the company then will validate the query […] So once that's been confirmed and you can validate whether or not that's a legitimate collection for return, you then basically, if it's your own in-house reverse logistics, it will notify the customer either by email or by SMS that it's been confirmed." (P12, Head of logistics, online retailer)
	Make decisions	X	X	
	Returns authorisation	X	X	
	Communication	X	X	
	Verification		X	
	Return rejection		X	
Facilities/ location	**Collection point**		X	•"So, you could implement a verification process, which is the gatekeeper. […] So, there you would need verification at collection point […]." (P4, owner/CEO, 3PRL provider firm) •"[…] whether or not you're going to accept that reverse […] you want all those items to a centralised place that can be managed in one facility, but you're going to double up on reverse costs. […] if you had a decentralised little satellite hub. In one of those places that could easily, for a small fee, let's return to that party where they can make the call, there and then to say this is not worth it." (P12, Head of logistics, online retailer)
	Retail stores	X		
	Centralised returns centre (CRC)	X	X	
	Decentralised facility		X	
	Processing facilities	X		
Parties	**Consumers**	X	X	•"[…] you've got to have a reverse online portal and where the customers got a choice to first log their query of return, the company then will validate the query […] So once that's been confirmed and you can validate whether or not that's a legitimate collection for return, you then basically, if it's your own in-house reverse logistics, it will notify the customer either by email or by SMS that it's been confirmed." (P12, Head of logistics, online retailer) •"[…] at the time that the return is logged into the system rather than when the return is processed back into your facility. The online retailer would have an opportunity to proactively do something about it, which is now I think they just leave it until the product is physically back." (P2, owner, supply chain consultancy firm) •"[…] I developed an app that actually does all those processes […] Too many people and too many parties, you could have an authorisation party whether to give immediate authorisation to pick it up to the inventory, to the repurposing, to the scheduling, […] and that's what we do." (P7, owner, 3PRL provider firm)
	Retailers	X	X	
	Third parties	X	X	
	Supplier	X		

Source: Compiled by the researcher

Table 8.4 shows that most subcategories of the gatekeeping process identified from the QCA corresponded to the interview findings. In the subsequent paragraphs the similarities and differences between the QCA and interview findings for the characteristics, activities, facilities/locations and parties of the gatekeeping process will be provided.

- *Characteristics of the gatekeeping process in online retailing*

Several characteristics identified in the QCA findings were *confirmed* by the participants. The participants agreed that gatekeeping can be the *entry point for RL*, which relates to the acceptance or rejection of a product return. While gatekeeping can be conducted in conjunction with the CRR process, the gatekeeping process ultimately decides if the *return can be allowed* in terms of authorising the return for collection and authorising the refund. Furthermore, the participants confirmed that the gatekeeping process is *based on the return policy*, meaning that the legitimacy of the return can be determined from the product return conditions stipulated in the return policy. In terms of the *links between gatekeeping* and other *RL processes*, the participants verified that the gatekeeping process can link with the collection, processing, inspection and sorting processes. The link between gatekeeping and *collection* relates to the verification process at the point of collection, the link between gatekeeping

and *inspection* refers to the inspectors validating the return, and the link between gatekeeping and *processing* relates to the acceptance/rejection of a refund or credit. As suggested in the QCA findings, gatekeeping can take place before or after a return arrives at the facility. Accordingly, early gatekeeping before the return arrives establishes a link with collection, while post-return gatekeeping establishes links between the gatekeeping and processing and inspection processes. Similarly, the link between gatekeeping and *sorting* associates with the sequence of RL processes in the facility, for example, once the legitimacy of the return is verified and gatekeeping is completed, the sorting process commences.

Regarding the *dissimilarities*, the participants added to the QCA findings by including *technology* as a part of the gatekeeping process. Specifically, the online retailer's web-based system can perform early gatekeeping by determining the basic legitimacy of the return (e.g. the return is within the return time window based on the order date). Additionally, online retailers or third parties might use other IT systems to facilitate the gatekeeping process. Regarding the *links between the gatekeeping* and other processes, the participants *added* the *CRR process* since gatekeeping can take place during the CRR processes. In contrast, the participants *excluded* the link between gatekeeping and *disposition process*. The disposition process takes place after sorting, which separates gatekeeping and the disposition process.

- *Activities of the gatekeeping process*

All the activities identified in the QCA findings were *corroborated* by participants. Evidently, participants agreed that gatekeeping entails the screening of product returns, decision making, return authorisation and communication. As discussed in section 4.4.2, *screening of product returns* involves the identification of the legitimacy of a product return. The participants indicated that screening can be conducted either manually by call centre staff or through a system, linking with the CRR methods of telephonic return logging and online (self-service) return logging. Based on the screening activity, the staff member or system *makes the decision* to *authorise* (or reject) the product return, which can be telephonically or digitally *communicated* to the consumer. However, the participants *extended* the activities of the gatekeeping process by including *verification* and *return rejection*. The gatekeeper can verify the product return against the purchase order to determine the validity of the product return. Consequently, if the product return is illegitimate, *return rejection* will take place instead of return authorisation.

- *Facilities and parties in the gatekeeping process*

The most significant differences between the QCA findings and the interview findings relate to the *facilities/locations* used for gatekeeping. While the QCA findings included centralised return centres (CRCs) as facilities to perform gatekeeping, the participants indicated that gatekeeping can be performed at a centralised facility. Subsequently, the specific type of facility (either a combined central warehouse or CRC) used for gatekeeping was unclear in the interview findings. Regardless, both the QCA and interview findings suggested that gatekeeping could be performed at a central location. Regarding *differences*, the QCA findings included *retail stores* for gatekeeping, while the participants mentioned *collection points* for gatekeeping. Although this study focusses on the online channel, multi/omnichannel retailers that sell products online might use stores as collection points and subsequent gatekeeping activities. However, online-only retailers can establish gatekeeping virtually, perform it at the collection point (i.e. consumer residence) or in a centralised or decentralised facility. Consequently, the participants added that gatekeeping can take place at *decentralised locations* in smaller facilities/hubs. Lastly, the interviews excluded processing facilities as a facility type used by online retailers for RL processes. Resultingly, processing facilities as a subcategory is excluded from the gatekeeping process in online retailing.

Finally, the participants *reinforced* that the parties in the gatekeeping process can include *consumers*, *retailers* and *third parties*. Like the QCA findings, the interview findings indicated that the consumer plays a secondary role in the gatekeeping process by waiting for the outcome of return acceptance or rejection. Oppositely, online retailers can perform all gatekeeping activities, including screening, decision making, authorisation or rejection and communication. Alternatively, a third party, like a 3PRL provider, can play a primary role in gatekeeping if the online retailer outsourced the RL process. The QCA findings included *suppliers* as a potential party involved in the gatekeeping process, which was *excluded* from the interview findings. Consequently, online retailers perform gatekeeping regardless of the potential involvement of the supplier in the disposition process.

Essentially, most characteristics, activities and parties of the gatekeeping process aligned between the QCA findings and interview findings. Based on the interview findings from the descriptive analysis, the description provided for the gatekeeping process from the QCA findings (in section 4.4.2.4), can be reformulated as follows:

> The gatekeeping process of consumer returns in online retailing can be described as the entry point of the RL process to determine if a product return is allowed based on the return policy. The gatekeeping process involves technology and links with other RL processes, including CRR, collection, processing, inspection and sorting processes. Gatekeeping can be performed virtually before returns are received and/or physically at the collection point, centralised facility or decentralised facility. The online retailer (or its outsourced 3PRL provider) performs the gatekeeping activities of screening, verification, decision making, return authorisation or rejection and communicating the outcomes to the consumers.

In the next section, the descriptive analysis for the collection process in online retailing will be provided.

8.3.2.3 Descriptive analysis for the collection process in online retailing

In section 4.4.3, the collection process was presented and discussed based on the QCA findings. While the interviews mostly confirmed various subcategories from the QCA findings, the interview findings produced several additional subcategories. Table 8.5 provides an overview of the findings related to the collection process in online retailing, including detail on the combined categories and subcategories from the QCA and interview findings, a basic data matrix to compare the QCA and interview findings and supporting quotations from the interviews.

Table 8.5 Comparison between QCA and interview findings of the collection process

CATEGORIES	SUBCATEGORIES	QCA	INT	SUPPORTING INTERVIEW QUOTATIONS
Characteristics	**Start of RL flow**	X		•"The driver will then take ownership of that product. They will they also sign a return waybill […]and I'll take two copies with them. It can also be done electronic these days. You can sign those electronic tablets." (P12, Head of logistics, online retailer) •"[…] the cost of the return collection delivery […]." (P2, owner, supply chain consultancy firm) •"Yes, you can collect it today at a certain time. No problem, we will be there to collect your units." (P10, Head of Sales and Logistics, OEM/multichannel retailer) •"The service provider that we use in the logistics district that would then obviously go pick up the item from the customer and hopefully the customer is then at the place that they had put down as a pickup address." (P13, supply chain manager, multichannel retailer) •"[…] taking into account the cost to retrieve it from the consumer […]." (P4, owner/CEO, 3PRL provider firm) •"[…] if you send it back because you just don't like it, we charge you for the delivery if you send it back and if it's our fault or product fault, well then, your return pick up is free." (P6, logistics manager, multichannel retailer) •"And then when it proceeds through the authorisation, you then into now have to arrange for collection." (P1, operations manager, 3PRL provider firm) •"[…] the collecting courier that you will be refunded at that point in time because the consumer can't take responsibility for what happens to the product in transit." (P2, owner, supply chain consultancy firm) •"[…] collecting the product and will actually do the inspection at the time of the collection […]." (P2, owner, supply chain consultancy firm) •"If a customer wanted to return and they would click onto a link on the […] site, there was a branded returns portal that was developed for them. It would trigger the collection." (P1, operations manager, 3PRL provider firm)
	Involves costs	X	X	
	Involves time		X	
	Involves technology		X	
	Availability	X	X	
	Possession	X	X	
	Retrieval	X	X	
	Accumulation	X		
	Depends on product condition and return reason	X	X	
	Depends on product type	X		
	Linked to CRR		X	
	Linked to gatekeeping	X	X	
	Linked to transportation	X	X	
	Linked to processing	X	X	
	Linked to inspection	X	X	
	Linked to sorting	X		
	Linked to disposition	X		
Activities	**Loading vehicles**	X	X	•"[…] collect the goods, checking of the goods at the at the point of uplift […]." (P7, owner, 3PRL provider firm) •"[…] movement of that driver to go and collect that item." (P12, Head of logistics, online retailer) •"[…] a consumer […] hand it over […] to the collecting courier […]." (P2, owner, supply chain consultancy firm) •"And of course it was a drop shipment process […]." (P2, owner, supply chain consultancy firm) •"[…] collect their returns and then it will be delivered back to us by the couriers that we have." (P3, returns manager, online retailer) •"So, the fulfilment centre, obviously book with a customer a time that is convenient for them to come and collect their returns" (P3, returns manager, online retailer) •"[…] your when you arrange a collection with a courier. It's an instruction to a courier to go and picked it up." (P1, operations manager, 3PRL provider firm) •"[…] the courier will notify the customer and what sort of date and timeline they will be in the client's area." (P12, Head of logistics, online retailer) •"So, there you would need verification at collection point where they sign a waybill […]." (P4, owner/CEO, 3PRL provider firm)
	Handling	X	X	
	Shipping	X	X	
	Moving products	X	X	
	Delivery	X	X	
	Storage	X		
	Booking		X	
	Arranging		X	
	Notification		X	
	Verification		X	
	Signing and documentation		X	
Methods	**Pickup collection methods**	X	X	•"[…] driver to going to pick up a certain item at a certain time of the day […]." (P3, returns manager, online retailer) •"You know, if you can have a lot of drop off points for your consumers to return products, all the better." (P4, owner/CEO, 3PRL provider firm) •"[…] customers will return something, we'll collect it via courier, or they'll drop it off at stores." (P8, logistics manager, multichannel retailer)
	Drop-off collection methods	X	X	
	Postal-drop collection methods	X		
Facilities/ location	**Physical retail outlets**	X	X	•"So, in our store environment, customers would bring stock back to the store […]." (P8, logistics manager, multichannel retailer) •"You know, if you can have a lot of drop off points for your consumers to return products, all the better." (P4, owner/CEO, 3PRL provider firm) •"Logistics is responsible for executing the collection and bringing the collecting of the product from
	Collection points	X	X	
	Warehouses	X	X	
	Distribution centres	X	X	

	(DCs)			the customer and delivering it all the way to the warehouse." (P10, Head of Sales and Logistics, OEM/multichannel retailer) •"[…] collect the specific parcel from the consumers place of work or home, where they take it back to the central distribution centre or to specific and reverse logistics points." (P2, owner, supply chain consultancy firm) •"[…] collect the goods, checking of the goods […], bringing them back to a dedicated reworks and reverse logistics centre." (P7, owner, 3PRL provider firm) •"So, the fulfilment centre, obviously book with a customer a time that is convenient for them to come and collect their returns" (P3, returns manager, online retailer)
	RL facility		**X**	
	Fulfilment centre		**X**	
	Collection facilities	**X**		
	Inspection facilities	**X**		
	Disassembly facilities	**X**		
Parties	**Consumers**	**X**	**X**	•"So, in our store environment, customers would bring stock back to the store […]." (P8, logistics manager, multichannel retailer) •"So, external parties are mostly your fulfilment centre. So, the fulfilment centre, obviously book with a customer a time that is convenient for them to come and collect their returns and then it will be delivered back to us by the couriers that we have." (P3, returns manager, online retailer) •"Logistics is responsible for executing the collection and bringing the collecting of the product from the customer […]." (P10, Head of Sales and Logistics, OEM/multichannel retailer)
	Retailers	**X**	**X**	
	Third parties	**X**	**X**	

Source: Compiled by the researcher

Table 8.5 shows that several subcategories identified for the collection process corresponded between the QCA and interview findings. In the subsequent paragraphs the similarities and differences between the QCA and interview findings of the characteristics, activities, methods, facilities/locations and parties of the collection process will be provided.

- *Characteristics of the collection process*

Various characteristics of the collection process identified from the QCA findings were corroborated by the interview participants. Specifically, the participants agreed that the collection process in online retailing entails the *availability*, *possession* and *retrieval* of product returns. Since products must be collected from consumers in online retailing, availability can be important for the collection process. The driver can only take possession and retrieve the product if the consumer is available during collection. Furthermore, the participants confirmed that the collection process *involves costs*, which can associate with the *product condition* and *return reason.* For example, if the product was delivered damaged and the return reason is damaged on arrival, the online retailer can be responsible for the collection costs.

Participants supported the QCA findings in terms of the *links between the collection process* and gatekeeping, transportation, processing and inspection processes. Particularly, collection links with gatekeeping if the collection party performs gatekeeping. Additionally, the participants reaffirmed the strong link, identified in the QCA findings, between the collection and transportation process with both processes sharing several characteristics, activities, parties and facilities (see section 8.3.2.5). Some participants indicated that a refund or credit can be issued at the time of collection, which links the collection and processing process. Similarly, inspection can be performed by the collection party, which establishes a link between collection and the inspection process.

Despite the similarities, a few *differences* existed between the QCA and interview findings related to the collection process. The participants *added* that the collection process involves *time* and *technology*.

Collection time can be important in online retailing since the collection party must collect the product from the consumer at a scheduled time. Additionally, the collection process can involve the use of technology, for example, using devices and systems for electronic signing of the waybill. Moreover, the participants added the link between collection and the CRR process, relating to the return logging system triggering the collection process (section 8.3.2.1). Nevertheless, the participants omitted a few characteristics, including the characteristics labelled as the start of RL, depends on product type, linked with sorting and linked with the disposition process. In general, scholars adopt a narrow view of the RL process by regarding collection as the *first RL process* (see section 4.4.1), which was contradicted by all participants in the study, describing CRR as the initial process in online retailing. However, collection can accurately be considered as the first RL process that involves product flows since the CRR and gatekeeping processing mostly involve information flows.

The participants excluded the *product type* from the collection process since the type of product might play a bigger role in the transportation process in terms of vehicle size and transportation costs. The *sorting* process was mentioned less often during the interviews and like the disposition process was mentioned as part of later RL processes, taking place in the facility. From the QCA findings the link between the collection and *disposition process* relates to an early disposition decision making at the collection point. However, in the collection process for online retailers, the participants excluded any reference to disposition decisions and subsequently the disposition process.

- *Activities and methods in the collection process*

Almost all the *activities* identified in the QCA findings *corresponded* with the interview findings. The participants confirmed that the collection process in online retailing involves *loading of vehicles*, *handling*, *shipment* and *movement*. Therefore, the consumer hands the parcel to the driver, who moves the product, loads it onto the vehicle, ships it and delivers it to the next destination. However, the participants *excluded* the *storage* activity from the collection process because collection takes place at the consumer location without the need for storage.

Instead, the participants *added* several *activities* to the collection process in online retailing, including arranging, booking, notification, verification, signing and documentation. Arranging and booking activities take place before collection, which were excluded from the QCA findings since RL literature mostly focused on activities during or after collection. In terms of *arranging collection*, participants described the activity as giving an instruction to a courier and/or assigning a driver. *Booking a collection* can involve contacting the consumer to book a date for the collection. Additionally, on the day of the collection the driver can *notify* (or remind) the consumer about the scheduled collection time planned for that day. Once the driver arrives at the consumer's residence, *verification* can take place,

which involves matching the waybill against the request. If the waybill matches, *signing* and *documentation* can take place. However, signing can be done electronically through tablets or cell phones, which reduces paperwork and documentation. Consequently, the participants added new insights into the activities that can take place in the collection process.

Regarding the collection *methods,* the participants *confirmed pick-up* and *drop-off collection* as options in online retailing. Online retailers can provide consumers with two options, including home pick-up collection or drop-off collection at a collection/drop-off point (e.g. convenience store). Multichannel retailers can offer online shoppers an in-store drop-off collection option. In contrast to the QCA findings, the use of *post collection* was *omitted* from the interview findings. Unlike more developed countries, South Africa's postal system is unreliable and slow, which makes it an unviable collection method for online returns. Additionally, the high availability of good couriers in South Africa makes postal collection for online returns almost obsolete. Therefore, from a South African perspective, online retailing involves two collection methods.

- *Facilities/locations and parties in the collection process*

Several *facilities/locations* identified in the QCA findings *corresponded* to the interview findings. For instance, the participants confirmed that *retail stores, collection points, warehouses* and *distribution centres (DCs)* can be associated with the collection process. For multi/omnichannel retailers drop-off collection can occur in retailer stores, while online-only retailers can use collection/drop-off points for the drop-off collection. However, consumer locations can also be classified as collection points for pick-up collection. Warehouses and DCs are first-tier facilities that receive the collected products from the collection points to conduct post-receipt RL processes.

Regarding the *differences* in the findings, participants *added RL facilities* and *fulfilment centres* to the collection process. RL facilities might represent a specific return centre established by the online retailer for the purpose of handling returns separately from forward operations. Fulfilment centres can be the facilities of 3PL providers or couriers, tasked at collecting product returns before shipment to the online retailer's location. However, several facilities identified in the QCA were *excluded* from the interview findings, namely *collection, inspection* and *disassembly facilities*. While the QCA findings included various facilities for RL processes, dedicated facilities like collection, inspection and disassembly facilities are not used by online retailers (in South Africa), explaining the omission of these facilities from the interviews. Accordingly, these facilities will be excluded from the description of the collection process.

Finally, *all the parties* identified in the QCA findings *corresponded* with the interview findings. Evidently, the participants agreed that *consumers*, *retailers* and *third parties* are involved in the collection process. Based on the activities, the consumers can be responsible for drop-off collection, product handling and signing of the waybill (for pick-up collection). Retailers (both online-only and multi/omnichannel retailers) can be responsible for arranging and booking collection if third parties are used for product return collection. If online retailers use in-house transportation, their responsibilities will be extended to notifying, loading, handling, shipping, moving, delivering, verifying and documenting. Alternatively, third parties will perform these collection activities on behalf of online retailers.

Essentially, the interviews produced several new findings, especially for the activities in the collection process. Based on the interview findings from the descriptive analysis, the description provided for the collection process from the QCA findings (in section 4.4.3.5), can be reformulated as follows:

> The collection process of consumer returns in online retailing can be described as the start of product flows in the RL process, involving costs, time, technology, availability, retrieval and possession of products. Collection can be based on the product condition and return reasons and linked with various pre- and post-receipt RL processes. The collection process can include pick-up and drop-off collection methods and involve various activities, including the information flow activities of arranging, booking, notifying, verifying, signing and documenting, and product flow activities of handling, moving, loading, shipping and delivery. The collection activities can be performed by consumers, retailers and/or outsourced third parties at retail stores, collection points, warehouses, DCs, fulfilment centres or RL facilities.

In the next section, the descriptive analysis for the final pre-receipt RL process of return transportation in online retailing will be provided.

8.3.2.4 Descriptive analysis for the return transportation process in online retailing

In section 4.4.4, the return transportation process was presented and discussed based on the QCA findings. In the QCA findings the return transportation process represented pre-receipt (i.e. transportation from the consumer to the facility) and post-receipt transportation (i.e. transportation from one facility to another). The focus of the interview findings was mostly on pre-receipt transportation or at least initial transportation in the return process. Post-receipt transportation that relates to the exit of returned products (e.g. shipment of returned products to third-party buyers) was included in the redistribution process due to a lack of findings (section 8.3.3.6). Despite the focus shift, several subcategories identified in the QCA findings corresponded with the interview findings.

Table 8.6 provides an overview of the findings related to the return transportation process in online retailing, including detail on the combined categories and subcategories from the QCA and interview findings, a basic data matrix to compare the QCA and interview findings and supporting quotations from the interviews.

Table 8.6 Comparison between QCA and interview findings of the return transportation process

CATEGORIES	SUBCATEGORIES	QCA	INT	SUPPORTING INTERVIEW QUOTATIONS
Characteristics	**Important**	X	X	•"Well, the typical reverse logistics obviously transports number one […]." (P11, Demand and sales manager, FMCG distributor) •"I think when it comes to like transporting your goods to and from the warehouse and you know getting a courier to go and collect your parcels from the customers and making sure it gets delivered and all of that." (P3, returns manager, online retailer) •"[…] some of the bigger retailers might use their own fleet for picking up returns […]. But I think a lot of the other retailers obviously use third parties." (P13, supply chain manager, multichannel retailer) •"[…] transport costs per parcel, per cube, per route. What is our expensive routes versus the non-expensive routes?" (P6, logistics manager, multichannel retailer) •"[…] then it's the cost of the actual transportation, then it's the cost of offloading that vehicle at the site, it's being returned to." (P2, owner, supply chain consultancy firm) •"[…] a return would work the same as a delivery, really, because if you've got a job to take something from Cape Town to Port Elizabeth and drop it there, it really is the same as picking it up there in Port Elizabeth and sending it back to Cape Town you would use the same network." (P13, supply chain manager, multichannel retailer) •"[…] the first one is the turnaround time from collection. The second one is the time it takes from when the driver delivered it to the DC […]." (P5, general manager, online retailer) •"We have outsourced because to own our own fleet of transport will result in us underutilising some transport." (P8, logistics manager, multichannel retailer) •"I don't have scale in returns […] Therefore, [return transportation] it's outsourced […] it becomes part of the courier's greater scale." (P6, logistics manager, multichannel retailer) •"And often when the product is returned, there could be a quality defect that arises in the returns process, not necessarily in the delivery process." (P2, owner, supply chain consultancy firm) •"[…] your Jimmy Choo stilettos, saying that as an unwanted item. […]. But when they arrive, they've come through the courier network and head over heels, snapped off." (P1, operations manager, 3PRL provider firm) •"[…] the driver that currently collects your parcel, […] drop it in the van, and they go back to the DC. They give it to the returns clerk." (P5, general manager, online retailer) •"[…] collecting and transferring and processing." (P5, general manager, online retailer) •"[…] is defective. We need to send it back for credit. And then […] they send the courier to come and collect it or we send a courier to go and deliver the parcel with the defective items in it." (P3, returns manager, online retailer) •"[…] once they've delivered it to the to the distribution centre for evaluation." (P5, general manager, online retailer) •"E retailer […] send a courier, a reverse logistics company to fetch it, to deliver and bring it back? Redeliver it." (P7, owner, 3PRL provider firm)
	Complex	X		
	Involves product return flows between locations	X	X	
	Involves options and decisions	X	X	
	Involves costs	X	X	
	Involves time		X	
	Involves routes and networks		X	
	Lack economies of scale	X	X	
	Lack economies of distance	X		
	Require equipment	X		
	Require efficient handling	X	X	
	Influenced by organisation size		X	
	Influenced by return volume		X	
	Influenced by the product condition		X	
	Linked to the collection process	X	X	
	Linked to receiving	X	X	
	Linked to processing	X	X	
	Linked to the inspection process	X	X	
	Linked to the sorting process	X		
	Linked to disposition	X	X	
	Linked to redistribution	X	X	
Activities	**Movement**	X	X	•"They will then move back to either the in-house or the third-party courier company." (P12, Head of logistics, online retailer) •"[…] a business that all it does is coordinate that collect […] consolidate and ship back to supplier […]." (P1, operations manager, 3PRL provider firm) •"[…] method of collecting and transferring and processing." (P5, general manager, online retailer) •"[…] transfer […] product from the store environment into our distribution centre where it's acknowledged and then taken out of in-transit […]." (P8, logistics manager, multichannel retailer) •"[…] the actual transportation, then […] offloading that vehicle at the site, it's being returned to." (P2, owner, supply chain consultancy firm) •"[…] on the return side as well. The staff that's physically going to handle the product […] the guy with the motorbike […]." (P2, owner, supply chain consultancy firm) •"[…] collecting of the product from the customer and delivering it all the way to the warehouse." (P10, Head of Sales and Logistics, OEM/multichannel retailer)
	Shipping	X	X	
	Transfer products	X	X	
	Delivery	X	X	
	Handling	X	X	
	Unloading	X	X	
	Consolidation	X	X	
	Loading	X		
	Storage	X		
Facilities/ location	**Retail stores**	X	X	•"[…] collect from store, consolidate and ship back […]." (P1, operations manager, 3PRL provider firm) •"I've got a single distribution facility from where I dispatch, then I would bring it back to the centralised facility to process it in one place." (P1, operations manager, 3PRL provider firm) •"[…] collecting of the product from the customer and delivering it all the way to the warehouse." (P10, Head of Sales and Logistics, OEM/multichannel retailer) •"There's a transport cost to the distribution centre." (P8, logistics manager, multichannel retailer) •"[…] bringing them back […] to a dedicated reworks and reverse logistics centre […]." (P7, owner, 3PRL provider firm) •"[…] our main courier […] will deliver it back to our fulfilment centre." (P9, regional & online DC manager, online retailer)
	Collection facilities	X		
	CRCs	X	X	
	Warehouses	X	X	
	DCs	X	X	
	Recovery facilities	X	X	
	Processing facilities	X		
	Inspection facilities	X		
	Disassembly facilities	X		
	Repair facilities	X		
	Service centres	X		
	Refurbishment facilities	X		
	RL facility		X	
	Fulfilment centre		X	
Parties	**Consumers**	X	X	•"[…] collecting of the product from the customer and delivering it all the way to the warehouse." (P10, Head of Sales and Logistics, OEM/multichannel retailer) •"I think a lot of people probably do definitely outsource the actual logistic transport part to third parties […] some of the bigger retailers […] might use their own fleet for picking up returns […]." (P13, supply chain manager, multichannel retailer)
	Retailers	X	X	
	Third parties	X	X	

Source: Compiled by the researcher

Table 8.6 shows that several subcategories assigned to the return transportation process corresponded between the QCA cand interview findings. In the subsequent paragraphs the similarities and differences between the QCA and interview findings for the characteristics, activities, facilities/locations and parties of the return transportation process will be provided.

- *Characteristics of the return transportation process*

The participants *supported* several characteristics of the return transportation process identified in the QCA findings, including that transportation (1) is important, (2) involves product return flows between locations options, decisions and costs, (3) lacks economies of scale, (4) requires efficient handling, and (5) links with other RL processes. Subsequently, the participants indicated that return transportation is an *important process* that involves *product return flows between locations*. Furthermore, transportation can involve *options* and *decisions,* which relates to private-fleet or contract-fleet transportation. Therefore, online retailers must choose between in-house and outsourced transportation for the movement of product returns. Additionally, transportation *involves costs* that associate with the physical movement of the products between locations, for example, vehicle costs, fuel costs, labour costs. service costs and courier fees. The costs of transportation can be attributed to the *lack of economies of scale* due to lower product return volumes. The participants suggested that the transportation options/decisions can be influenced by economies of scale. For instance, a multichannel retailer with lower online sales and subsequent lower return volume can choose to outsource the transportation process for greater scale.

Like the QCA findings, the participants indicated that return transportation *requires efficient handling* since returned products can be damaged or become defective while being transported to the facility. In terms of the RL processes, both the QCA findings and interview findings included the *links between transportation* and the *collection*, *receiving*, *processing*, *inspection*, *disposition* and *redistribution* processes. Since collection takes place at the consumer's location or at a drop-off location, transportation to the facility is required. The receiving process involves the arrival and acceptance of the returned product from the driver, which links the transportation process with the receiving process. Additionally, the transportation process can sequentially link with the processing of credits/refunds, inspection and disposition processes. The link between the return transportation and the redistribution process relates to the collection and transportation of a returned product to the online retailer's facility and the redelivery of a new or recovered product to the original consumer.

Despite the similarities between the QCA and interview findings, the characteristics of the return transportation process involved several *differences.* For instance, the QCA findings describe the transportation as c*omplex, lacking economies of distance, requiring equipment* and *linking with the*

sorting process, which were excluded from the interview findings. The exclusion from complexity and requirement of equipment can associate with the use of couriers or 3PLs for return transportation. Therefore, online retailers might be less concerned about the complexity and equipment requirements in return transportation. Likewise, economies of distance might be less important if third parties are tasked with return transportation. As indicated in the gatekeeping and collection processes (sections 8.3.2.2 and 8.3.2.3), few participants discussed sorting as a RL process, which impacted the links between sorting and other RL processes.

Nevertheless, *several new characteristics* of the return transportation process were identified in the interview findings, including involvement of time, routes and networks, and influenced by organisation size, return volume and product condition. Participants indicated that the transportation process forms part of the return lead time, which can be used to measure RL process efficiency. The transportation process can also *involve time* if longer distances must be travelled between locations. Additionally, the transportation process *involves routes* and *network*s, which can associate with calculating the best route to reduce transport costs and using the forward distribution network (i.e. facilities/locations and infrastructure) for the transportation of returned products.

Several participants mentioned *factors that can influence the transportation process*, including the size of the retailers, product return volume and product condition. For instance, *larger online retailers* might perform transportation using a private fleet, while *smaller online retailers* might outsource return transportation. Likewise, *product return volume* can influence the decision to outsource transportation to third parties. Particularly, retailers with lower return volumes might find it more cost effective to outsource transportation for scale advantages. The *product condition* can influence the destination of return transportation, for example, defective products might be transported to recovery facilities instead of the warehouse for restocking. Subsequently, the participants added several new findings, which can extend the description of the transportation process in online retailing.

- *Activities, facilities and parties in the transportation process*

Most transportation *activities corresponded* between the QCA and interview findings, including *movement, shipping, transfer, delivery, handling, unloading* and *consolidation*. Therefore, the participants reemphasised that transportation involves the physical flows of returned products to a from locations. However, the participants *excluded loading* and *storage activities* from the transportation process. The participants added loading to the collection process and mentioned the storage activity as part of the post-receipt RL processes, taking place in the facilities. Therefore, in-transit storage was excluded as an activity in the transport process for consumer returns in online retailing.

Limited facilities corresponded between the QCA and interview findings, mainly because fewer types of facilities were mentioned in the interview findings. However, participants agreed that *retail stores, CRCs, warehouses, DCs* and *recovery centres* can be included as facilities/locations in the transportation process. Retail stores can be used for drop-off collection (section 8.3.2.3), which might involve the transportation of returned products from the store to a central facility (i.e. CRCs). Additionally, online retailers can use basic facilities, like warehouses and DCs as destination facilities for pre-receipt transportation. Alternatively, the destination facility can be a recovery facility for the treatment of defective/damaged products, emphasising the influence of product condition and link between the transportation and disposition process.

The QCA findings included various origin and destination facilities in the description of the transportation process, including *collection facilities, processing, inspection, disassembly, repair facilities* and *service centres,* which were *excluded* from the interview findings. While these facilities might be associated with the transportation process of consumer returns in online retailing, the participants mentioned these facilities to a limited extent. However, the participants *added RL facilities* and *fulfilment centres* as facilities in the transportation process. Despite the differences between the facility types, both QCA findings and interview findings included first- and second-tier facilities and centralised and decentralised locations as part of the transportation process for consumer returns.

Finally, the interview findings confirmed the QCA findings in terms of the parties involved in the transportation process. Participants agreed that *consumers* play secondary roles by representing the point-of-origin in the RL process or possibly perform initial transportation to the collection points/retailer stores. Additionally, the participants confirmed that *retailers* or *third parties* can perform return transportation activities, depending on the use of private or contract fleets. While the use of a private fleet might exclude third parties from the RL process, online retailers that outsource RL can still be involved in the transportation process in terms of paying transportation costs, contracting third parties, measuring third-party performance and receiving the returned products from the 3PL/courier at the facility.

Essentially, the descriptive analysis for the transportation process highlighted several similarities and differences between the QCA findings and interview findings. Consequently, the description created for the transportation process from the QCA findings in section 4.4.4.5 can be reformulated as follows:

> The transportation process of consumer returns in online retailing can be described as important, involving product flows between locations, options, decisions, cost, time, routes and networks, lacking economies of scale and requiring efficient handling. The transportation process can be influenced by organisation size, return volume and product condition and can link with various pre-and post-receipt RL processes. Transportation includes several product flow activities, including the movement, shipment, transfer, unloading, handling, delivery and consolidation of returned products from the point-of-origin (consumer) to the point-of-recovery (online retailer/third parties, first-tier and second-tier facilities).

In the next section, the descriptive analysis summary for the pre-receipt RL processes will be provided.

8.3.2.5 Descriptive analysis summary of the pre-receipt RL processes in online retailing

Based on the reformulated descriptions provided in section 8.3.2, Table 8.7 provides a data matrix, comparing the overlapping characteristics, activities, facilities/locations and parties of the pre-receipt RL processes in online retailing.

Table 8.7 Descriptive analysis matrix for common elements of pre-receipt RL processes

	Subcategory	CRR	Gatekeeping	Collection	Transport
Characteristics	Involves costs	X		X	X
	Involves technology	X	X	X	
	Relates to return policy	X	X		
	Relates to return reasons	X		X	
	Relates to product condition			X	X
	Involves time			X	X
	Linked to CRR		X	X	
	Linked to gatekeeping	X		X	
	Linked to collection	X	X		X
	Linked to inspection	X	X	X	X
	Linked to processing	X	X	X	X
Activities	Communication / notification	X	X	X	
	Return authorisation or rejection	X	X		
	Verification		X	X	
	Handling			X	X
	Movement			X	X
	Shipping			X	X
	Delivery			X	X
	Include methods	X		X	
Facilities and parties	Collection point		X	X	
	Retail stores			X	X
	Centralised returns centre (CRC)		X		X
	Decentralised facility		X	X	
	Warehouses			X	X
	Distribution centres (DCs)			X	X
	RL facilities			X	X
	Fulfilment centres			X	X
	Consumers	X	X	X	X
	Retailers	X	X	X	X
	Third parties	X	X	X	X

Source: Compiled by the researcher

From Table 8.7, several observations can be made for each category. For the *characteristics*, *costs* are associated with all pre-receipt processes, except gatekeeping. Therefore, online retailers must identify strategies to control and reduce RL costs in the pre-receipt RL processes. Likewise, all pre-receipt RL processes, except gatekeeping, involve *technology*. Therefore, online retailers can benefit from using technology and systems in the pre-receipt RL processes of consumer returns. CRR and gatekeeping processes relate to the *return policy*, which means that return conditions from the return policy must guide CRR and gatekeeping activities. Furthermore, the CRR and collection processes associate with *product return reasons*. Evidently, online retailers must focus on the consumer return types and reasons for effective execution of the CRR and collection processes. Similarly, the collection and transportation processes relate to *product condition*, meaning that online retailers can consider the condition of the returned product for appropriate return collection and transportation processes. Moreover, both

collection and transportation involve *time*, which means that online retailers need to focus on speed and efficiency for the effective execution of return collection and transportation processes.

Regarding the *links between the RL processes*, the *CRR, gatekeeping* and *collection* processes are all *linked,* which implies that online retailers must integrate the CRR, gatekeeping and collection processes to effectively manage consumer returns. Likewise, the *link* between the *collection* and *transportation* process indicates that these processes require effective coordination and integration for an effective RL process. *All pre-receipt RL processes links* with the *inspection process,* which means that online retailers can perform inspection activities before or just after product returns arrive at the warehouse. Moreover, online retailers can consider integrating the inspection process with pre-receipt RL processes for the management of consumer returns. Similarly, *all pre-receipt RL processes link* with the *processing process*, which means that online retailers must consider the best stage in the RL process for issuing credits/refunds or shipping exchanges. Additionally, online retailers might benefit from integrating processing activities with pre-receipt RL processes for processing speed and efficiency.

The pre-receipt RL processes in online retailing share several common *activities*. Specifically, the CRR, gatekeeping and collection processes involve some form of *communication*, which means online retailers must focus on information flow efficiency for effective communication in these processes. Furthermore, *return authorisation* and *rejection* can take place during the CRR and gatekeeping process, indicating that online retailers must use appropriate systems and skilled staff in the CRR and gatekeeping processes for accurate return authorisation and rejection. Additionally, gatekeeping and collection involve *verification,* which means that online retailers must implement verification mechanisms for effective gatekeeping and collection. Both collection and transportation processes involve the product flow activities of *handling, moving, shipping* and *delivery*, demonstrating that proper packaging and effective handling practices can be important for return collection and transportation. While different, both the CRR and collection process involve *methods,* indicating that online retailers can benefit from using various CRR and collection methods for a consumer-centric pre-receipt RL process.

Regarding the *facilities/locations*, both gatekeeping and collection involve *collection points,* indicating that using collection points for both gatekeeping and collection can increase the efficiency of RL processes. Furthermore, collection and transportation can include *retail stores,* indicating that multi/omnichannel retailers can use stores as a collection point to reduce return collection and transportation costs. *Centralised return centres (CRCs)* can associate with gatekeeping and transportation processes, implying that CRCs can be used for gatekeeping activities and used as destination facilities in the pre-receipt RL process. Additionally, gatekeeping and collection processes can associate with *decentralised facilities*, demonstrating that online retailers can consider

decentralisation and centralisation location strategies for gatekeeping and a decentralisation location strategy for collection. Both collection and transportation processes associate with *warehouses*, *DCs*, *RL facilities* and *fulfilment centres*, emphasising that online retailers can focus on facility/location strategies for the effective collection and transportation of consumer returns. Finally, for the *parties*, *all pre-receipt RL processes* involve *consumers*, *retailers* and *third parties*, which emphasises that online retailers must focus on internal and external integration for the establishment of effective pre-receipt RL processes.

In the next section, the descriptive analysis concludes with the post-receipt RL processes in online retailing.

8.3.3 Descriptive analysis of the post-receipt RL processes in online retailing

The post-receipt RL process starts once a consumer product return arrives at the facility and ends at the redistribution of returned/recovered products to various locations. The post-receipt RL processes identified in the QCA findings were discussed in Chapter 5, including receiving, processing, inspection and sorting, disposition process and redistribution processes. The interview findings confirmed that all the post-receipt RL processes identified in the QCA findings can apply to consumer returns in online retailing. The subsequent sections provide the descriptive analysis of the respective post-receipt RL process, including receiving, processing, inspection, sorting, disposition and redistribution.

8.3.3.1 Descriptive analysis of the receiving process in online retailing

In section 5.3, the QCA findings for the receiving process was presented and discussed. Most findings between the QCA and interviews corresponded for the receiving process. Table 8.8 provides an overview of the findings related to the receiving process in online retailing, including detail on the combined categories and subcategories from the QCA and interview findings, a basic data matrix to compare the QCA and interview findings and supporting quotations from the interviews.

Table 8.8 Comparison between QCA and interview findings for the receiving process

CATEGORIES	SUBCATEGORIES	QCA	INT	SUPPORTING INTERVIEW QUOTATIONS
Characteristics	**Arrival**	X	X	•"[…] to the arrival of the warehouse […]." (P7, owner, 3PRL provider firm) •"If you're doing barcode scanning, you could scan […] for inbound receiving […]." (P1, operations manager, 3PRL provider firm) •"[….] unless you've managed to automate that receiving process, it is more than often manual […]." (P1, operations manager, 3PRL provider firm) •"So, in the facilities, the first activity would take place is to log-in the specific returned product and […] The documentation is checked and verified." (P2, owner, supply chain consultancy firm) •"[...] the logistics part then it arrives at your returns department and now you're going to also pay for the time of your person who's going to receipt it." (P12, Head of logistics, online retailer) •"You can imagine if you've got a warehouse that has limited receiving space […] you need to know what your volumes are going to be for returns […]. So, you can prepare your staff adequately because invariably returns take longer to receive." (P1, operations manager, 3PRL provider firm) •"And then once it's arrived, it will be confirmed into their system, which means that they'll take ownership […]." (P12, Head of logistics, online retailer) •"The driver will then bring it back to the distribution centre, obviously, because the call was already
	Inbound flow	X	X	
	Labour intensive	X	X	
	Time consuming		X	
	Involves technology	X	X	
	Involves documentation	X	X	
	Involves possession		X	
	Involves costs		X	
	Influenced by return volume		X	
	Linked to gatekeeping	X		
	Linked to collection	X		
	Linked to	X	X	

	transportation			logged on the back of the system, the returns team. There's a first line team that does the receiving of all of these returns." (P5, general manager, online retailer) •"[…] then once it's arrived, it will be confirmed into their system […] And then they will put it into an area whereby they still need to analyse what the problem or the fault finding of the problem of an item is." (P12, Head of logistics, online retailer) •"[…] the first activity would take place is to log-in the specific returned product and then to go through a verification and a sortation process." (P2, owner, supply chain consultancy firm) •"There it's a basic process of acknowledgement of parcel, reason verification, and that then there's a decision based on can I reuse the stock or can't I reuse the stock." (P6, logistics manager, multichannel retailer) •"So, it needs to be you need you might have several inbound and outbound legs. You that are for repair, it comes back. You send it back up to the customer, that kind of thing." (P1, operations manager, 3PRL provider firm)
	Linked to processing	X		
	Linked to inspection	X	X	
	Linked to sorting	X	X	
	Linked to disposition	X	X	
	Linked to redistribution	X	X	
Activities	**Identification**	X	X	•"There's a first line team that does the receiving of all of these returns. There is a call logged. […] the admin clerk that receives the item […] can book into this into the system as item received." (P5, general manager, online retailer) •"So, in the facilities, the first activity would take place is to log-in the specific returned product and […] The documentation is checked and verified." (P2, owner, supply chain consultancy firm) •"The staff that's physically going to handle the product from the first time, […] One person offloads then it gets moved on." (P2, owner, supply chain consultancy firm) •"[…] warehouse it will come into our receiving, our receiving will unpack it […]." (P9, regional & online DC manager, online retailer) •"So, in large scale receiving operations, you would have a purchase order that has a booking slot associated with it […]. If you're doing barcode scanning, you could scan, if you have it in a box and receive it, then you have an item count." (P1, operations manager, 3PRL provider firm) •"[…] acknowledged the receipt of that product." (P5, general manager, online retailer)
	Administration and registration	X	X	
	Verification of information	X	X	
	Unloading	X	X	
	Scanning	X	X	
	Movement	X	X	
	Handling	X	X	
	Acknowledge receipt		X	
	Item counting		X	
	Unpacking		X	
	Dispatching /distribution	X		
	Organising/staging & arranging pallets/ products	X		
Facility/area	**Warehouses**	X	X	•"[…] then it'll come back to the Midrand warehouse it will come into our receiving […]." (P9, regional & online DC manager, online retailer) •"[…] if you've got a warehouse that has limited receiving space and you've got fresh product being flown into a distribution centre, you kind of need to you need to know what your volumes are going to be for returns […]." (P1, operations manager, 3PRL provider firm) •"[…] within the returns facility, you've got obviously multiple activities happening […] the courier brings the customer returns to the door, and you've got your unloaders that then unloads the cage […]." (P3, returns manager, online retailer)
	DCs	X	X	
	Returns facilities	X	X	
	Collection facilities	X		
	Processing facilities	X		
	Receiving docks/gates	X		
Parties	**Consumers**	X	X	•"There's a first line team that does the receiving of all of these returns. There is a call logged. The person or the admin clerk that receives the item at the back door has actually got a reverse order […]." (P5, general manager, online retailer) •"That is where the courier brings the customer returns to the door, and you've got your unloaders that then unloads the cage […]." (P3, returns manager, online retailer) •"[…] some kind of documentation that accompanies the order or that can be checked […], that is scanned into the warehouse management system […] so that when there are returns […] the retailer can verify that it's the correct product being returned […]." (P2, owner, supply chain consultancy firm) •"[…] the arrival of the warehouse to know what's coming back to stock control and all that is controlled on an app and that's what we do." (P7, owner, 3PRL provider firm)
	Retailer	X	X	
	Staff	X	X	
	Third parties	X	X	

Source: Compiled by the researcher

Table 8.8 shows that several subcategories assigned to the receiving process in the QCA corresponded to the interview findings. In the subsequent paragraphs, the similarities and differences between the QCA and interview findings on the characteristics, activities, facilities/areas and parties of the receiving process will be provided.

- *Characteristics of the receiving process*

Most categories of the receiving process identified in the QCA findings were *confirmed* in the interview findings. Evidently, participants confirmed that receiving represents the *arrival* and *inbound flow* of product returns at the facility. Moreover, the participants agreed that the receiving process can be *labour-intensive,* mostly because receiving is a manual process. The participants also indicated that the receiving process involves *technology* and *documentation,* which relates to product return scanning, updating the inventory system and verification of delivery documentation (e.g. the waybill or delivery

note). Furthermore, the participants supported several *links between the receiving* process and *other RL processes*, including transportation, inspection, sorting, disposition and redistribution. The link between receiving and *transportation* relates to the delivery of returned products to the facility for receiving activities. Furthermore, the participants indicated that receiving sequentially links with *inspection, sorting* and *disposition*. Therefore, once the returned product enters the facility, inspection, sorting and disposition decision making can take place. Additionally, receiving links with *redistribution* in terms of inbound and outbound flows at the facility with arrival and departure of returned products.

In contrast, the participants *excluded* the *links* between receiving and the *gatekeeping* and *processing* processes. The QCA findings indicated that receiving operations can include the verification of the legitimacy of return information provided by consumers during the gatekeeping processes. In the interview findings, verification of the legitimacy of the return claim is only performed during inspection. Additionally, in the QCA findings *collection* parties can be responsible for collecting and receiving returned products at collection facilities, which was omitted in the interview findings. Nevertheless, the interview findings produced several *new characteristics* for the receiving process. Specifically, the participants indicated that receiving involves *possession* (ownership) of the returned product. In the collection process the courier takes possession of the product and at the facility the online retailer takes possession of the product, demonstrating that transfer of ownership takes place throughout the RL process of consumer returns. Furthermore, the labour-intensive characteristic of receiving emphasises the involvement of *costs* since receiving operations involve labour costs. Moreover, the participants claimed that return receiving can be a *time-consuming process* due to the uncertainties related to returned product condition and volume. Consequently, the receiving process can be *influenced by return volume*, meaning the higher the return volume the more labour-intensive and time-consuming receiving will be.

- *Activities of the receiving process*

Most receiving *activities* identified in the QCA findings *correspond* to the interview findings. Participants corroborated that receiving involves the information flow activities of the *identification, administration, registration* and *verification of information*. However, as mentioned in the previous section, the QCA findings indicated that the verification of information relates to the legitimacy of the return, while the interview findings focused on the verification of documentation. Furthermore, participants supported several product flow activities from the QCA findings, including *unloading, scanning, movement* and *handling*, which reemphasise the labour-intensive and technology characteristics of receiving. The participants *added additional activities* to the receiving process, including acknowledging receipt of the return, item counting and unpacking. *Acknowledgement of receipt* can relate to the transfer of ownership, with the signing of documentation and updating the

system. The acknowledgement can also form part of the status updates given to the consumers to confirm that the returned product arrived at the facility. Furthermore, participants indicated that manual receiving operations, without scanning, may involve *item counting* before products enter the facility. Additionally, *unpacking* can take place, which means that the receiving staff removes product returns from the parcels before inspection.

Nevertheless, the participants *excluded* the dispatch/distribution, organising/staging and arranging of returned products or pallets. The QCA findings indicated that receiving involves returned product *dispatch* or *distribution* into the facility, implying that the receiving area is separate from the facility. The interview findings excluded any reference to a specific receiving area located separately from the facility, which can explain the omission of dispatch/distribution into the facility. Furthermore, *organising/staging* and *arranging returned products or pallets* implies larger return volumes, which might associate with the receiving operations of 3PRL providers working with larger return volume. While larger scale receiving operations might include these activities in online retailing, this study focuses on providing online retailers with a framework for the RLM of consumer returns, not 3PRL providers that specialise in RL. Consequently, *organising/staging* and *arranging returned products or pallets* can be excluded from the receiving process of online retailers.

- *Facilities/areas and parties in the receiving process*

A few *facilities corresponded* between the QCA and interview findings, including warehouses, DCs and returns (RL) facilities. The participants confirmed that online retailers can either use standard FL facilities, like *warehouse* and *DCs*, or dedicated *RL facilities* for product return receiving. However, the interview findings *excluded* collection facilities, processing facilities and receiving docks/areas as facilities/areas that can be used for receiving. As discussed in the pre-receipt RL processes, RL process facilities, like *collection* and *processing facilities*, were excluded from the interview findings, explaining the omission of these facilities in the receiving process. Additionally, the participants excluded reference to a special *receiving area/dock* at the facility, implying that no separate receiving area/dock is used for product return receiving operations.

Finally, all *parties* involved in the receiving process *corresponded* between the QCA findings and interview findings. The participants agreed that *consumers* play a secondary role by acting as suppliers of returned products received at the facility. *Retailers* and *receiving staff* can play primary roles in the receiving processes. For example, the retailer can be responsible for providing the infrastructure for receiving operations and paying receiving costs, and *receiving staff* can be responsible for the receiving activities. Additionally, the participants confirmed that *third parties*, like 3PLs and couriers, can play a secondary role in delivering consumer returns to the facility and providing the parcel and

documentation for receiving operations. Alternatively, if the online retailer outsourced the RL process, a 3PRL provider can perform all the receiving activities on behalf of the online retailer.

Essentially, the descriptive analysis for the receiving process highlighted some similarities and differences between the QCA findings and interview findings. Based on the interview findings from the descriptive analysis, the description provided for the receiving process from the QCA findings (in section 5.3.3), can be adjusted as follows:

> The receiving process of consumer returns in online retailing can be described as the arrival and inbound flow of returned products, which can be labour intensive, time-consuming and influenced by product return volume. Receiving involves technology, documentation and costs and links with other pre- and post-receipt RL processes. The receiving process involves the (1) information flow activities of identification, acknowledgement of receipt, administration, registration, verification and scanning, and (2) product flow activities of unloading, handling, movement, unpacking and counting, which can be performed by the staff of online retailers or 3PRL providers at FL facilities (such as warehouses and DCs) or RL facilities (such as return facilities).

In the next section, the descriptive analysis of the processing process in online retailing will be provided.

8.3.3.2 Descriptive analysis of the processing process in online retailing

In section 5.4, the QCA findings on the processing process (i.e. issuing refunds/credits and shipping exchanges) were presented and discussed. Most QCA findings for the processing process aligned with the interview findings. Table 8.9 provides an overview of the findings related to the processing process in online retailing, including detail on the combined categories and subcategories from the QCA and interview findings, a basic data matrix to compare the QCA and interview findings and supporting quotations from the interviews.

Table 8.9 Comparison between QCA and interview findings of the processing process

CATEGORIES	SUBCATEGORIES	QCA	INT	SUPPORTING INTERVIEW QUOTATIONS
Characteristics	**Internal process**	X	X	•"[…] processing it on the system up until a point of put away or disposal that would be done by the online retailer themselves." (P2, owner, supply chain consultancy firm) •"Without resources then how are you going to do […] processing all of that […]." (P8, logistics manager, multichannel retailer) •"[…] within the warehouse […] you still need the storage location, you know, because you may not process all returns on the same day." (P1, operations manager, 3PRL provider firm) •"[…] reverse logistics, it's all about the time it's taken and the speed at which you've been able to process your requests." (P5, general manager, online retailer) •"[…]to credit your consumer. So now, without a doubt, you need to use the same accounting software." (P5, general manager, online retailer) •"[…] the most important thing because your customer needs to be up to date with what is going on. There's nothing worse than a customer that doesn't know what. What's going on, how far in the process the return is, when are they getting their money? […] from the customer's point of view. So timing and accurate management of the process is critical." (P5, general manager, online retailer) •"[…] in terms of online retailing, the refund process needs to be quite slick and quite fast […]." (P8, logistics manager, multichannel retailer) •"[…] what sort of cost that processing of that reverse logistics has taken […]." (P12, Head of logistics, online retailer) •"Remember, there is still the refund process because that's the most critical part, because I want to see as a customer, I want to see my money in my account right now […]." (P10, Head of Sales and Logistics, OEM/multichannel retailer) •"What are you seeing coming now is more like particularly in fashion, is exchanges." (P1, operations manager, 3PRL provider firm) •"[…] return a product or send it in for repairs if it happens that her unit is damaged and it's irreparable, there will be a service exchange […]." (P10, Head of Sales and Logistics, OEM/multichannel retailer) •"See if they're drop it off at stores then they can get a credit immediately. […]. If they don't and they
	Challenging and complex	X		
	Uncertainty/ variability	X		
	Time-consuming	X	X	
	Requires financial and infrastructure resources	X	X	
	Requires IT	X	X	
	Requires skills/ trained staff	X		
	Require accuracy	X	X	
	Requires speed	X	X	
	Requires economies of scale	X		
	Involves costs	X	X	
	Involves customer service and accounts	X	X	
	Influenced by product type, condition, service levels, channel type and return policies	X	X	
	Influenced by product quantity	X		
	Influenced by return reason		X	

	Linked to CRR	X	X	get a courier to collect it, things happen in the background so the courier will collect it and then they will just have to wait until one day they get a refund." (P8, logistics manager, multichannel retailer) •"[…] part of the terms and conditions […] you will process my credit." (P2, owner, supply chain consultancy firm) •"[…] the credit or the refund is processed at the time the consumer logs the return and the online sales system." (P2, owner, supply chain consultancy firm) •"They will then take the reason for the return and match it up with the actual product to see whether or not it is right or wrong or whether it meets the criteria […]. The customer care department will then make contact with the client to see whether or not there is a credit eligible […]." (P12, Head of logistics, online retailer) •"I'd like to return this and exchange it for a different size. The two processes happen at the same time, trigger the return and trigger the outbound order for the replacement item. OK, so the courier going to fetch the returned item is also dropping off the replacement […]." (P1, operations manager, 3PRL provider firm) •"[…] receiving it back and processing it […] until a point of put away or disposal […]." (P2, owner, supply chain consultancy firm) •"And then the online DC will inspect that product and if everything is fine, they would normally issue a refund." (P13, supply chain manager, multichannel retailer) •"[…] before credit is granted. And then we would also sort that into the various buckets […]." (P4, owner/CEO, 3PRL provider firm) •"This is not a fault and it works perfectly. And when they want to send it back to the customer and deny they refund or whatever or replacement […]." (P1, operations manager, 3PRL provider firm)
	Linked to gatekeeping	X	X	
	Linked to collection	X	X	
	Linked to transportation	X	X	
	Linked to receiving	X	X	
	Linked to inspection	X	X	
	Linked to sorting	X	X	
	Linked to disposition	X	X	
	Linked to redistribution	X	X	
Activities	**Credit/refund authorisation**	X	X	•"[…] we have a platform where they're able to see what product is coming back from the consumers, what state to repair that product is in and whether a credit is viable or not." (P4, owner/CEO, 3PRL provider firm) •"[…] information will be fed back to the customer care department to validate that, that is the original reason for return. The customer care department will then make contact with the client to see whether or not there is a credit eligible […]." (P12, Head of logistics, online retailer) •"[…] to credit your consumer […] you use the same accounting principles, because it's an in and an out transaction, it needs to go to the income statement." (P5, general manager, online retailer) •"[…] cost of processing it onto a system." (P2, owner, supply chain consultancy firm) •"And then the online DC will inspect that product and if everything is fine, they would normally issue a refund." (P13, supply chain manager, multichannel retailer) •"[…] customer has been given an agreement and saying, you know, we'll sort your claim within seven days." (P5, general manager, online retailer) •"And systematically track and update the status of that order […] how far in the process the return is, when are they getting their money?" (P5, general manager, online retailer) •"I'd like to return this and exchange it for a different size. […], so the courier going to fetch the returned item is also dropping off the replacement […]." (P1, operations manager, 3PRL provider firm) •"[…] we will process that order as a return [and] put it back in stock […]." (P9, regional & online DC manager, online retailer)
	Cross-verification of return authorisation	X	X	
	Information sharing and communication	X	X	
	Tracking	X	X	
	Recordkeeping	X	X	
	Data entry/capture	X		
	Issue credits/refunds	X	X	
	Claims settlements and verification of accurate fund transfers	X	X	
	Product exchange	X	X	
	Handling	X		
	Restocking	X	X	
	Delivery		X	
	Pre-disposition decisions	X		
Facility/area	**Centralised Return Centres (CRCs)**	X		•"See if they drop it off at stores then they can get a credit immediately. So, we encourage our customers to go to stores and to return it that way." (P8, logistics manager, multichannel retailer) •"So, you may have a warehouse processing a transaction […]." (P8, logistics manager, multichannel retailer) •"And then the online DC will inspect that product and if everything is fine, they would normally issue a refund." (P13, supply chain manager, multichannel retailer) •"Repairs are done by […] authorised service centres […] if it happens that her unit is damaged and it's irreparable, there will be a service exchange […]." P10, Head of Sales and Logistics, OEM/multichannel retailer) •"[…] returned back to the fulfilment centre […] we will process that order as a return […]." (P9, regional & online DC manager, online retailer) •"[…] a lot of the activities can be done in that decentralised points, that the product can be credited to the customer." (P7, owner, 3PRL provider firm)
	Collection facilities	X		
	Processing facilities	X		
	Retail stores	X	X	
	Warehouses	X	X	
	DC	X	X	
	Repair facilities	X		
	Service centres	X	X	
	Processing stations	X		
	Fulfilment centres		X	
	Decentralised points		X	
Parties	**Consumers**	X	X	•"See if they're drop it off at stores then they can get a credit immediately." (P8, logistics manager, multichannel retailer) •"The customer care department will then make contact with the client to see whether or not there is a credit eligible […]." (P12, Head of logistics, online retailer) •"[…] there's is a refund that comes into play, OK, and the customer will be credited. And that's where the finance team comes into play, making sure that they follow the process from a refund perspective […]." (P10, Head of Sales and Logistics, OEM/multichannel retailer) •"Credit processing site can be outsourced in some cases, but physically processing the return, receiving it back and processing it on the system up until a point of put away or disposal that would be done by the online retailer themselves." (P2, owner, supply chain consultancy firm) •"[…] we have a platform where they're able to see what product is coming back from the consumers, what state to repair that product is in and whether a credit is viable or not." (P4, owner/CEO, 3PRL provider firm) •"[…] you purchase a television set […] and the TV set breaks. […] [we] will come and collect it. But we're not going to give you the money […] we need to get the money back from the supplier first." (P5, general manager, online retailer)
	Retailers	X	X	
	Staff/departments	X	X	
	Third parties	X	X	
	Suppliers		X	
	Wholesalers	X		

Source: Compiled by the researcher

Table 8.9 shows that several subcategories assigned to the processing process in the QCA corresponded to the interview findings. In the subsequent paragraphs the similarities and differences between the

QCA and interview findings for the characteristics, activities, facilities/areas and parties of the processing process will be provided.

- *Characteristics of the processing process*

Most characteristics of the processing process identified in the QCA findings were *supported* by the interview findings. The participants confirmed that processing is an *internal process* that can be *time-consuming.* Most participants indicated that online retailers are responsible for the processing of credits/refunds even if 3PRL providers are involved in the RL process. Additionally, processing can be time-consuming because banks can take time to clear refunds and suppliers, if responsible for processing, can take time to issue a replacement or credit. Participants also agreed about the *requirements* of the processing process, including *financial* and *infrastructure resources*, *IT, accuracy* and *speed.* Therefore, online retailers must focus on resource commitment, systems and efficiency for effective processing of consumer returns.

The participants affirmed that processing involves *costs*, *consumer service* and *accounts*, relating to processing activities, parties and systems. For example, processing costs may include bank charges for refunds, consumer service can be responsible for communicating with consumers regarding the refund and accounting software can be used for accounts reconciliation. Additionally, the interview findings aligned with the QCA findings regarding the *influence of product type, product condition, channel type, service levels* and *return policy* on the processing process. For instance, clothing items and damaged products often associate with exchanges/replacements. Additionally, the channel type can influence the location and speed of processing, for example, multi/omnichannel retailers can use stores for fast processing of consumer returns. In contrast, processing through the online channel can take longer, if conducted at facilities. Consequently, the service levels of the 3PLs in terms of the time to collect and transport returns to the online retailer's facility can impact the processing speed. Moreover, the terms and conditions in the return policy can dictate processing outcomes, for example, opened defective products can be replaced but not refunded.

The interview findings *corroborated* all the *link*s *between processing* and other RL processes that were identified in the QCA findings. Evidently, the participants confirmed that *processing* can *link* with the CRR, gatekeeping, collection, transportation, receiving, inspection, disposition and redistribution processes. Processing can link with the *CRR* and *collection processes* if a credit or refund is issued once the return is logged or collected (e.g. drop-off in store for instant refund). Additionally, credits and refunds can only be issued if the gatekeeping function confirmed the legitimacy of the return, linking processing and *gatekeeping*. Furthermore, the link between processing and *transportation* relates to the use of the same courier for product return collection and replacement/exchange drop-off.

The links between processing and other post-receipt processes mostly relate to the sequence of the return process of the online retailer. Therefore, processing can take place after *receiving* before *inspection* and *sorting*, or after inspection and sorting before *disposition.* Finally, processing can link with *redistribution* if a refund is denied and the returned product must be redistributed back to the original consumer. Essentially, processing can take place at any stage of the RL process, indicating that online retailers must determine time in the RL process to issue credits/refunds or an exchange.

Regarding the *differences*, the interview findings *excluded* the processing characteristics labelled as challenging, complex, uncertainty/variability, requires skilled/trained staff, requires economies of scale and influenced by quantity. The QCA findings indicated that the *challenging* and *complexity* of processing relates to product return *uncertainty* and requirement of *skilled/trained staff*, which were all characteristics omitted from the interview findings. Furthermore, the QCA findings indicated that trained staff can be important for accurate and speedy processing. While speed and accuracy were identified as characteristics in the interview findings, the participants indicated that appropriate information systems can be important for accurate and speedy processing. Lastly, the interview findings excluded reference to *economies of scale* and the influence of *return quantity* on the processing process, implying the return volume might be less important in the processing of consumer returns in online retailing. Nevertheless, the participants *added* that processing can be *influenced by the return reason,* which links with the influence of product type and condition. For example, if the return reason for a clothing item is "wrong size", the processing outcome will be an exchange, or if the return reason is a defect the processing outcome can be a replacement or service exchange.

- *Activities of the processing process*

Like the characteristics, most processing activities identified in the QCA findings *corresponded* with the interview findings. Particularly, the participants agreed that the information flow activities of processing can include credit and refund authorisation, cross-verification of return authorisation, information sharing and communication, tracking, recordkeeping and data entry/capturing. The *credit* and *refund authorisation* and *cross-verification of return authorisation* activity associate with the link between the processing and gatekeeping. Therefore, before the consumer can be credited the validity of the product return must first be established. Additionally, *information sharing* and *communication* can involve telephonic communication to inform the consumer about the acceptance of a credit/refund. Similarly, the *tracking* activity allows for sharing refund or product exchange status updates with consumers. Moreover, *recordkeeping* and *data entry/capturing* involve updating of accounts after credit processing. Lastly, the participants confirmed some of the *cash flow activities* of processing, including *issuing refunds/credits* and *settling of claims,* and the *product flow activities* of *product*

exchanges (or replacements) and *restocking*. Evidently, the interview findings confirmed that the processing process involves information flows, cash flows and product flows in the RL process.

Nevertheless, the interviews *excluded* the *cash flow activity* of *verifying the accuracy of fund transfers*, indicating that the online retailers expect consumers to verify the accuracy of refunds. Furthermore, the participants *excluded handling* and *pre-disposition decisions* as product flow activities but *added delivery*, which relates to the processing of an exchange or replacement. Although handling can be possible due to restocking and delivery of replacement products, pre-disposition decisions mostly associate with inspection activities. Ultimately, the interview findings closely resembled the QCA findings, indicating that most processing activities identified from the QCA can be applicable to the processing of consumer returns in online retailing.

- *Facilities/areas and parties in the processing process*

Like other RL processes, the findings that fewer facilities/areas can be used for processing corresponded between the QCA and interviews. Regarding the *corresponding facilities*, the participants confirmed that retail stores, warehouses, DCs and service centres can be used for the processing process. The *retail stores* relate to the multichannel retailers that can issue refunds in store for drop-off online returns, while *warehouses* and *DCs* can be used for the processing of online channel returns. *Service centres* relate to the repair disposition option and the subsequent processing of a service exchange for irreparable products.

The QCA findings related to the processing of returns included *CRCs*, *collection facilities*, *processing facilities*, *repair facilities* and *processing stations*, which were *excluded* from the interview findings. While CRCs can be a possibility in online retailing, collection facilities and processing facilities was omitted from the interview findings. Since service centres associate with repair activities, a repair facility might be a possibility for the processing of exchanges and replacements. Like the receiving process, the interview findings excluded reference to a dedicated processing station the facility. Ultimately, less attention was paid to allocated spaces within facilities for RL processes and activities. Nevertheless, the participants *added fulfilment centres* as facilities and *decentralised points* as locations that can be used for the processing of consumer returns. Using decentralised points for return processing contradicts the QCA findings related to using centrally located return facilities (i.e. CRCs) for processing. The participants indicated that decentralised points could facilitate speedy processing of consumer returns, which can be important for consumer satisfaction.

Lastly, most *parties* identified in the QCA findings on processing were *confirmed* in the interview findings, including consumers, retailers, staff/departments and third parties. The participants agreed

that *consumers* play a passive role in the processing process by receiving communication and waiting for refund/credit or an exchange. Additionally, the participants confirmed that *retailers* can play significant roles in return processing, including providing the resources and infrastructure for processing, paying processing costs and allocating staff to perform processing activities. Both the QCA and interview findings emphasised the importance of *staff/departments* in the processing process. For example, customer service can be responsible for communication and information sharing, finance can be responsible for issuing credits/refunds and logistics/operations can be responsible for exchanges/replacements.

Moreover, the participants identified *third parties* that can be involved in the processing process, for example, a credit processing site (e.g. credit payment gateways), couriers and 3PRL providers can be involved in return processing. Since processing was identified as an internal process, third parties mostly play secondary roles. For instance, couriers can be responsible for delivering the exchange or replacement product and 3PRL providers can be responsible credit/refund authorisation, enabling online retailers to only issue credits/refunds or replacements for legitimate returns. In terms of the *dissimilarities*, the QCA findings included wholesalers as parties involved in processing. While the study defines an online retailer as any party that sell products directly to consumers through an online channel, *wholesalers* as parties in the RL processes of consumer returns were *excluded* from the interview findings. However, the participants *added suppliers* as parties that can be involved in the processing process of consumer returns, especially for warranty returns. Therefore, the suppliers might be responsible for shipping a replacement or issuing a credit/refund for warranty returns.

Essentially, the descriptive analysis of the processing process emphasised various similarities and a few differences between the QCA findings and interview findings. Based on the interview findings from the descriptive analysis, the description provided for the processing process from the QCA findings (in section 5.4.5), can be adjusted as follows:

> The processing process of consumer returns in online retailing can be described as an internal and time-consuming RL process, which (1) requires financial and infrastructural resources, technology, accuracy and speed, (2) involves costs, consumer service and accounts, (3) can be influenced by product type, product condition, return reasons, service levels, channel type and return policies, and (4) links with other pre- and post-receipt RL processes. The activities of the processing process involve (1) information flow activities, including credit/refund authorisation, recordkeeping, cross-verification of return authorisation, information sharing and communication, tracking and data entry/capturing, (2) cash flow activities, including issuing credits/refunds and settling claims, and (3) product flow activities, including product exchanges, handling, restocking and delivery, which can be performed by the staff/departments of the online retailer, other third parties (credit processing sites, couriers or 3PRL providers) or suppliers in various facilities/locations (stores, warehouses, DCs, fulfilment centres, decentralised points or service centres) for the benefit of the consumer.

In the next section, the descriptive analysis of the inspection process in online retailing will be provided.

8.3.3.3 Descriptive analysis of the inspection process in online retailing

In section 5.5.1, the QCA findings on the inspection process were presented and discussed. Most QCA findings for the inspection process aligned with the interview findings. Table 8.10 provides an overview of the findings related to the inspection process in online retailing, including detail on the combined categories and subcategories from the QCA and interview findings, a basic data matrix to compare the QCA and interview findings and supporting quotations from the interviews.

Table 8.10 Comparison between QCA and interview findings of the inspection process

CATEGORIES	SUBCATEGORIES	QCA	INT	SUPPORTING INTERVIEW QUOTATIONS
Characteristics	**Important**	X	X	•"[…] you know, the physical inspection of the product, […] the training goes without question because […] every facet that we operate with has to be checked and the person doing it has to be suitably qualified to do so." (P7, owner, 3PRL provider firm) •"[…] you've got people that work in home wear, you've got people that work with clothing and uniforms and sporting goods. You've got people with work with electronics, […] So you employ a number of experts in that field." (P5, general manager, online retailer) •"[…] if you return the cell phone with a cracked screen and you say, I've changed my mind, like the evaluators should know that you're not allowed to do that. Or if you return a gaming disk that has already been opened, according to our policy, you're not allowed to do it. […] when a customer return something, for instance, a laptop and we get this very often, the customer returns the laptop and says it's not working. And then when we test it and we see it, it's actually working. And then it turns out that the customer actually just doesn't like the laptop, or the specs are not enough for them. And then we have to obviously reject that return." (P3, returns manager, online retailer) •"Quality is critical. And that's what follows the processes of being evaluated and graded […]." (P10, Head of Sales and Logistics, OEM/multichannel retailer) •"[…] you need sort of sufficient testing capacity if you really want to validate and assess these things. […] you need to build these mechanisms that you can validate every single across a vast array of products." (P1, operations manager, 3PRL provider firm) •"It's the cost of inspecting those goods […]." (P2, owner, supply chain consultancy firm) •"So, are you going to do basic assessment, visual assessment, or are you going to do a full technical assessment?" (P1, operations manager, 3PRL provider firm) •"[…] timeframes are very important […] it has to be inspected within a certain time frame." (P9, regional & online DC manager, online retailer •"Or you have to say my product is low value enough that I can forfeit the inspection and I'll take it at face value, whatever is being collected and returned […] So check it just basically at face value." (P2, owner, supply chain consultancy firm) •"So, when a customer logged their return, they will give a reason as to why they are returning it, whether it is too small, whether it's malfunctioning or whether it's an item that they purchased and it's not as what was on the site. They will then take the reason for the return and match it up with the actual product to see whether or not it is right or wrong or whether it meets the criteria." (P12, Head of logistics, online retailer) •"[…]do the inspection at the time of the collection […]." (P2, owner, supply chain consultancy firm) •"[…] the process is collection, transportation, it is grading or evaluation […]." (P10, Head of Sales and Logistics, OEM/multichannel retailer) •"[…] when the cargo arrives in the warehouse, you have a grading process that comes into play. Where they assess and evaluate the product." (P10, Head of Sales and Logistics, OEM/multichannel retailer) •"And then once it's been inspected, you tell them it's been inspected and you're going to get a refund." (P8, logistics manager, multichannel retailer) •"And then mostly the stock is […] sorted. And there would be a quality check to see is it still usable." (P2, owner, supply chain consultancy firm) •"[…] product that needs to be kept separately before it can be inspected and disposed of […]." (P2, owner, supply chain consultancy firm) •"[…] follows the processes of being evaluated and graded for a resell to salver […]." (P10, Head of Sales and Logistics, OEM/multichannel retailer)
	Complex	X	X	
	Labour intensive	X	X	
	Time-consuming	X		
	Requires skilled staff	X	X	
	Requires infrastructure		X	
	Involves costs	X	X	
	Involves options		X	
	Involves time		X	
	Influenced by product and return type, product quality and return policy	X	X	
	Influenced by channel type	X		
	Influenced by product value		X	
	Linked to CRR and gatekeeping	X	X	
	Linked to collection	X	X	
	Linked to transportation	X	X	
	Linked to receiving	X	X	
	Linked to processing	X	X	
	Linked to sorting	X	X	
	Linked to the disposition / exit options	X	X	
Activities	**Verification of information**	X	X	•"So, the evaluators obviously check the validity of the returns, and they then see perhaps the item might have been misused or whatever the case might be." (P3, returns manager, online retailer) •"[…] employ somebody that's got experience in handling such electronics, for instance, they'll put it to test and right there and then they'll decide, OK, well, you know what, the customer's correct, this item is defective and they can then class that as a supplier claim […]." (P5, general manager, online retailer) •"So, you need sort of sufficient testing capacity if you really want to validate and assess these things." (P1, operations manager, 3PRL provider firm) •"[…] when the cargo arrives in the warehouse you have a grading process that comes into play. Where they assess and evaluate the product." (P10, Head of Sales and Logistics, OEM/multichannel retailer) •"When the unit comes back, it's graded, it is classified as a B-grade it goes into the resale basket […]." (P10, Head of Sales and Logistics, OEM/multichannel retailer) •"And then mostly the stock is kept somewhere until a later stage, until […] a quality check to see if it is still usable." (P2, owner, supply chain consultancy firm) •"[…] to show a customer that, […] once it's been inspected, you tell them it's been inspected […]." (P8, logistics manager, multichannel retailer) •"[…] analysing the fault finding of that product versus the reason […] they're going to communicate
	Product evaluation and assessment	X	X	
	Testing of products	X	X	
	Grading	X	X	
	Determine disposition/ exit options	X	X	
	Product classification	X	X	
	Storage	X	X	
	Disassembly	X		
	Handling		X	
	Communication /notification		X	

				directly with the client or whether they're going to hand it over to customer care." (P12, Head of logistics, online retailer)
Facility/location	**Retail stores/ collection points**	X		•"[…] warehouse it will come into our receiving […] all the returns would have to be assessed by the manager […] to decide whether which route it should take." (P9, regional & online DC manager, online retailer) •"[…] to a dedicated reworks and reverse logistics centre where the product is checked for quality […]." (P7, owner, 3PRL provider firm) •"There are distribution centres that are processing and evaluating returns." (P8, logistics manager, multichannel retailer) •"[…] returned back to the fulfilment centre. Then when it comes into us, we will […] assess the condition of the item." (P9, regional & online DC manager, online retailer)
	Warehouses	X	X	
	Collection facilities	X		
	Processing facilities	X		
	CRCs	X	X	
	Inspection centres	X		
	Disassembly facilities	X		
	Repair facilities	X		
	DC		X	
	Fulfilment centre		X	
Parties	**Consumers**	X	X	•"[…] if you had a team of people that could evaluate at the point of taking it from the customer, you would salvage tons of money and time." (P5, general manager, online retailer) •"[…] when it comes into us, we will process that order as a return, […] assess the condition of the item." (P9, regional & online DC manager, online retailer) •"So, the evaluators obviously check the validity of the returns, and they then see perhaps the item might have been misused or whatever the case might be." (P3, returns manager, online retailer) •"[…] the quality assurance team would be involved in […] physical inspections […]." (P2, owner, supply chain consultancy firm) •"[…] the grading, the evaluation and the storing of the product that should be outsourced." (P10, Head of Sales and Logistics, OEM/multichannel retailer) •"They might be physical inspections from the manufacturer at the at the online retailer's premises to verify that the return goods are in fact the original goods, and not counterfeit goods […]." (P2, owner, supply chain consultancy firm)
	Retailers	X	X	
	Staff/department	X	X	
	Third parties	X	X	
	Manufacturer		X	

Source: Compiled by the researcher

Table 8.10 shows that various subcategories assigned to the inspection process in the QCA findings corresponded with the interview findings. In the subsequent paragraphs, the similarities and differences between the QCA and interview findings regarding the characteristics, activities, facilities/locations and parties of the inspection process will be provided.

- *Characteristics of the inspection process*

Various characteristics assigned to the inspection process *corresponded* between the QCA and interview findings. Particularly, the participants affirmed the *importance* and *complexity* of the inspection process. Inspection can be considered as one of the most important RL processes because inspection enables online retailers to confirm the condition of the returned product and determine the most appropriate disposition option for the returned product. Additionally, inspection can be complex due to the technical knowledge required for effective product inspection. Consequently, the participants confirmed that the inspection process is *labour-intensive* and *requires skilled staff.* Additionally, both the QCA and interview findings indicated that inspection *involves costs*, which can associate with the inspection activities and skilled labour.

Moreover, the participants agreed that the inspection process can be *influenced* by the product and return type, the product quality and the return policy. Specifically, the *product type* can influence the inspection division or product experts responsible for the inspection of specific items, for example, electronic products are usually inspected by electronic specialists. Additionally, the *return type* or reason associates with the inspection outcome. For example, if the consumer claims that a product is defective and the inspector (or evaluator) finds the product in working order, the return might be

rejected. Additionally, the *quality of the product* can associate with the inspection activities of grading. Therefore, high-quality products can be graded as high quality and low-quality products can be graded as low quality. The *return policy* can be an important part of the inspection process since inspectors can use the return policy as a guide to determine the legitimacy of the product return. For example, the return policy stipulates that DVDs must be returned unopened and if the inspector finds an opened DVD, the return can be rejected based on the return policy requirement.

All the *links between the inspection process* and *other RL processes* corresponded between the QCA findings and interview findings. Therefore, the participants verified that inspection could link with the CRR, gatekeeping, collection, transportation, receiving, processing, sorting and disposition processes. The link between inspection and the *CRR process* relates to the matching of the return reason and product condition provided by consumers during the CRR process with the actual condition of the returned product. Similarly, inspection links with *gatekeeping* since inspectors can act as final gatekeepers by accepting or rejecting returns based on the inspection outcomes. Some participants mentioned that early inspection might take place during collection, which links the inspection and *collection* processes. The links between the inspection and *transportation, receiving, processing, sorting* and *disposition* processes relate to the sequence of the RL processes, for example, inspection can take place after transportation, receiving and sorting and before processing and disposition. Lastly, inspection can also link with the disposition process in terms of identifying the appropriate disposition option for the returned product during inspection.

Although most characteristics assigned to inspection corresponded between the interview and QCA findings, a few *differences* were identified. While the participants *excluded* the *time-consuming* characteristic, they *added* that inspection *involves time* that must be measured for efficiency. Furthermore, the *influence of the channel type* on the inspection process was *excluded* but the *influence of product value* on the inspection process was *added*. The participants indicated that a quick visual inspection can be conducted for lower value products but that a more extensive inspection can be conducted for higher value products. Consequently, the inspection process can *involve options*, including basic inspection, visual inspection and full inspection. Evidently, the inspection options can relate to the characteristics of product type, quality and value. Finally, the participants indicated that the inspection process *requires infrastructure* to support inspection activities, for example, appropriate testing mechanisms must be installed for effective product testing during inspection.

- *Activities of the inspection process*

Like the characteristics, most inspection activities identified in the QCA findings *corresponded* with the interview findings. Specifically, the participants supported the information flow inspection activity

of *verification of information,* which associates with the link between inspection and the CRR process. Therefore, the inspector verifies if the product condition and return reason information provided by the consumer during the CRR process matches the physical condition of the returned product. Additionally, most product flow activities corresponded between the QCA and interview findings, including product evaluation and assessment, testing, grading, product classification, determining the disposition/exit option, and storage. *Product evaluation, assessment* and *testing* relates to the identification of the product condition to confirm the legitimacy of return. Similarly, *grading* relates to the identification of the product quality, which enables effective *product classification.* Based on the evaluation, assessment, testing and grading activities, the most appropriate *disposition/exit option* can be *determined.* Lastly, the products can be *stored* before disposition, for example, storing all the defective items for shipment to the supplier.

The QCA findings identified *disassembly* as an activity in the inspection process, which was *excluded* from the interview findings. The disassembly activity might be more appropriate during product recovery, like repairs, where additional inspection can be conducted to identify faulty parts in a product. However, the participants *added handling* as a product flow inspection activity, which emphasises the product evaluation, assessment and testing activities. Additionally, the interview findings *included communication/notification* as an information flow inspection activity. The participants indicated that inspection could involve contacting the consumer for follow-up information regarding the return reason and product condition and communicating the inspection outcomes with the consumer. Additionally, an inspection status notification can be sent to consumers as part of the product return status updates in the return process.

- *Facilities/locations and parties in the inspection process*

Like other RL processes, limited facilities/locations used for inspection matched between the QCA and interview findings. In fact, only *warehouses* and *CRCs corresponded* between the QCA and interview findings. Therefore, the participants indicated that inspection can either be conducted in traditional FL facilities or in dedicated RL facilities, depending on facility/locations strategies of the online retailer. The QCA findings identified various facilities/locations in the inspection process, including *retail stores/collection points, collection facilities, processing facilities, disassembly facilities, inspection centres* and *repair facilities,* which were *excluded* from the interview findings. The interview findings mostly included basic facilities for RL processes with limited specialised facilities for different RL processes, explaining the disparities between the QCA and interview findings. Resultingly, the interview findings *added DCs* and *fulfilment centres* as basic FL facility types that can be used for the inspection of consumer returns.

Lastly, all *parties* identified in the QCA findings were *confirmed* in the interview findings, including consumers, retailers, staff/departments and third parties. *Consumers* play secondary roles in the inspection process by providing information for the verification of information and receiving inspection communication/notifications. Additionally, *retailers* play primary roles by paying inspection costs, providing an appropriate inspection infrastructure and appointing skilled staff for inspection. The participants also confirmed that *staff/departments* play significant roles in the inspection process, including inspection staff (inspectors or evaluators), managers, quality assurance and customer service. Alternatively, *third parties*, like 3PRL providers, perform inspection activities on behalf of online retailers that outsourced inspection. The interview findings *added manufacturers* as parties in the inspection process, which relates to the influence of product type and value on inspection. For instance, a manufacturer of high valued designer product might perform inspection in the facility of the online retailer to identify counterfeit returns.

Essentially, the descriptive analysis for the inspection process demonstrated various similarities and a few differences between the QCA findings and interview findings. Based on the interview findings from the descriptive analysis, the description provided for the inspection process from the QCA findings (in section 5.5.1.5), can be adjusted as follows:

> The inspection process of consumer returns in online retailing can be described as an important, complex and labour-intensive RL process, which (1) requires skilled/trained staff and an infrastructure, (2) involves costs, time and options, (3) can be influenced by product and return type, product quality, product value and the return policy, and (4) links with other pre- and post-receipt RL processes. The activities of the inspection process involve the (1) information flow activities of verifying information and consumer communication/notifications, and (2) product flow activities of product evaluation, assessment, testing, grading and classification, determining disposition/exit options, storage and handling, which can be performed by the staff/departments of the online retailer, 3PRL providers or manufacturers in traditional FL facilities (such as warehouses, DCs and fulfilment centres) or RL processes facilities (CRCs or dedicated RL facilities).

In the next section, the descriptive analysis of the sorting process in online retailing will be provided.

8.3.3.4 Descriptive analysis of the sorting process in online retailing

In section 5.5.2, the QCA findings of the sorting process were presented and discussed. In contrast to the QCA findings, only few participants mentioned the sorting process, which impacts the alignment between the QCA and interview findings. Table 8.11 provides an overview of the findings related to the sorting process in online retailing, including detail on the combined categories and subcategories from the QCA and interview findings, a basic data matrix to compare the QCA and interview findings and supporting quotations from the interviews.

Table 8.11 Comparison between QCA and interview findings of the sorting process

CATEGORIES	SUBCATEGORIES	QCA	INT	SUPPORTING INTERVIEW QUOTATIONS
Characteristics	**Important and complex process**	X		•"And then mostly the stock is kept somewhere until a later stage, until there's enough of it to be sorted." (P2, owner, supply chain consultancy firm)
	Labour intensive	X		•"[…] staff are doing the sorting process […] They need to be trained by brand. So, we've got a cosmetics brand. They need to understand the cosmetics product. If you've got an electronics brand,
	Time-consuming	X	X	

	Requires skilled/trained staff	X	X	they need to understand that because the electronics products and what can go wrong and identify what bucket to put it into." (P4, owner/CEO, 3PRL provider firm) •"[…] the sorting process costs […]." (P4, owner/CEO, 3PRL provider firm) •"[…] if there's a problem with it, they send it back to a returns warehouse […] and we sort through it […]." (P8, logistics manager, multichannel retailer) •"[…] credit is granted. And then we would also sort that into the various buckets […]." (P4, owner/CEO, 3PRL provider firm) •"[…] the first activity would take place is to log-in the specific returned product and then to go through a verification and a sortation process." (P2, owner, supply chain consultancy firm) •"We'll verify that what the consumer says they are returning has indeed been returned […]. And then we would also sort that into the various buckets […]." (P4, owner/CEO, 3PRL provider firm •"[…] it goes through a whole sorting process […] the most common buckets really are good stock […] Packaging is really not too much of an issue. So, it will be a packaging bucket, a good stock return bucket and repair buckets, which is more a consumer thing where it comes back, and the product needs to be repaired." (P4, owner/CEO, 3PRL provider firm) •"[…] we would also sort that into the various buckets for resale distribution […]." (P4, owner/CEO, 3PRL provider firm)
	Involves costs	X	X	
	Influenced by product type and characteristic	X	X	
	Influenced by product condition and return type	X	X	
	Influenced by product quality	X		
	Influence by return volume		X	
	Linked to gatekeeping	X	X	
	Linked to collection	X		
	Linked to transportation	X		
	Linked to receiving	X	X	
	Linked to processing	X	X	
	Linked to inspection	X	X	
	Linked to disposition	X	X	
	Linked to redistribution	X	X	
Activities	**Verification of information**	X	X	•"We'll verify that what the consumer says they are returning has indeed been returned. So, they said they're returning a cell phone when the boxes arrived with a brick in it before credit is granted. And then we would also sort that into the various buckets […]." (P4, owner/CEO, 3PRL provider firm) •"[…] we sort through it and we separate main supply of faults so manufacturing type faults verses our own handling faults." (P8, logistics manager, multichannel retailer) •"[…] it goes through a whole sorting process […] the most common buckets really are good stock […] We would then manage that repair within our network of repair agents and the fourth bucket, and fifth bucket really is a destruction bucket where a product you can't do anything with, so it needs to be destroyed." (P4, owner/CEO, 3PRL provider firm) •"And then mostly the stock is kept somewhere […] until there's enough of it to be sorted." (P2, owner, supply chain consultancy firm) •"But physically on the floor, because of your segregation processes that are required in floor space that you need for returns and handling product […]." (P2, owner, supply chain consultancy firm)
	Updating information on systems	X		
	Product evaluation	X		
	Determine disposition/exit options	X	X	
	Product classification and grouping	X	X	
	Separation	X	X	
	Storing	X	X	
	Moving products	X		
	Handling		X	
Facility/location	**Stores or collection points**	X		•"[…] send it back to a returns warehouse […] and we sort through it […]." (P8, logistics manager, multichannel retailer) •"So, the sorting process in our distribution centres […]." (P8, logistics manager, multichannel retailer) •"But if you've got sort of a thousand returns, passing although a thousand returns are pretty small […] if you do big electronics, really what you also want there is a little repair centre right next door so you can house a repair centre and the sorting facilities." (P4, owner/CEO, 3PRL provider firm)
	Warehouses	X	X	
	Collection facilities	X		
	Inspection centres	X		
	Centralised return centre (CRC)	X		
	Processing facilities	X		
	Disassembly facilities	X		
	Refurbish facilities	X		
	Redistribution facilities	X		
	DCs		X	
	Repair centre		X	
	Sorting facilities		X	
Parties	**Consumers**	X	X	•"We'll verify that what the consumer says they are returning has indeed been returned […]. And then we would also sort that into the various buckets […]." (P4, owner/CEO, 3PRL provider firm) •"[…] send it back to a returns warehouse […] and we sort through it […]." (P8, logistics manager, multichannel retailer) •"[…] any staff are doing the sorting process […]." (P4, owner/CEO, 3PRL provider firm) •"[…] once we've got the product back into our facility, it goes through a whole sorting process […]." (P4, owner/CEO, 3PRL provider firm)
	Retailers	X	X	
	Third parties	X	X	
	Staff	X	X	

Source: Compiled by the researcher

Table 8.11 shows that a few subcategories assigned to the sorting process in the QCA findings corresponded with the interview findings. In the subsequent paragraphs, the similarities and differences between the QCA and interview findings of the characteristics, activities, facilities/locations and parties of the sorting process will be provided.

- *Characteristics of the sorting process*

Several characteristics of the sorting process *corresponded* between the QCA and interview findings. The participants indicated that the sorting process can be *time consuming* because returned products might be stored before sorting can be conducted. Additionally, the participants confirmed that the sorting process *involves costs* and *requires skilled/trained staff* because effective disposition depends on accurate sorting. Both the QCA and interview findings identified *product type/characteristic, product condition* and *return type* as factors that can *influence* the sorting process. Linking with the skilled/trained staff requirement, the product type can influence the types of skills needed for the sorting process. Furthermore, product condition and return type can influence the grouping of products, for example, B2C unwanted returns and products in new/unused condition can be sorted into a resale category, and service returns or products in defective condition can be sorted into a repair category. The *links* between the *sorting process* and other RL processes mostly corresponded between the QCA and interview findings. The participants confirmed that sorting can link with *gatekeeping, receiving, processing, inspection, disposition* and *redistribution* processes. These links are mostly sequential, for example, sorting can take place after gatekeeping, receiving or inspection and before disposition and redistribution. However, sorting also links with the disposition and redistribution processes in terms of grouping product returns, for example, sorting products into the repair category and redistribution category.

Regarding the *differences*, the interview findings *excluded* the sorting characteristics labelled as important, complex, labour intensive, influenced by product quality and linked to collection and transportation processes. Although the participants omitted clear reference to the *importance*, *complexity* and *labour-intensive* characteristics, it was implied in their discussions that sorting can be important, complex and labour-intensive. Specifically, their mentioning of the need for skilled staff to accurately sort products for disposition emphasises the importance and complexity of sorting. Furthermore, the physical involvement of staff in the sorting process points to the labour-intensive characteristic of sorting. Similarly, like the product condition, the *product quality* can influence the sorting process, for example, good-quality products can be sorted into a resale category. Subsequently, these characteristics can be appropriate for the sorting process of consumer returns in online retailing and will subsequently be added to the interview findings. However, the *links* between *sorting* and the *collection* and *transportation* processes can be *excluded* since sorting mostly takes place after receiving, processing and inspection. Finally, the interview findings *added product volume* as a factor that can *influence* the sorting process. The participants indicated that sorting requires larger return volumes, which implies that sorting of a few return products might be unnecessary.

- *Activities, facilities/locations and parties of the sorting process*

Most sorting *activities corresponded* between the QCA and interview findings. Particularly, the participants confirmed that the sorting process can involve the information flow activity of *verification of information.* Therefore, depending on the RL operations of the online retailers or 3PRL provider, verification of product return information provided by the consumer can take place during the sorting process. This finding links with the product flow activity of *product evaluation,* which enables sorting staff to not only confirm the legitimacy of the return but also to *determine* the best *disposition/exit option*. Furthermore, the participants corroborated the product flow sorting activities of *product classification and grouping, separation* and *storage,* which emphasises the influence of product type, product condition, return type and return volume on the sorting process. While the participants *omitted* the *movement* activity, they *added handling* as a sorting activity. Since returned products are classified, grouped and stored, both movement and handling can be important activities in the sorting process.

In contrast to the other categories of sorting, the findings on *facilities/locations* used for sorting largely differ between the QCA and interviews. In fact, the *only corresponding* facility between the QCA and interview findings was a returns *warehouse.* Evidently, the interview findings *excluded* stores/collection points, collection facilities, inspection centres, CRCs, processing facilities, disassembly facilities, refurbishment facilities and redistribution facilities. Since sorting requires higher return volumes and online returns to store can be limited, *stores/collection points* can be excluded as locations from the sorting process. Moreover, the interview findings omitted any mention of *collection, inspection, processing, disassembly* and *redistribution facilities* in the RL processes of consumer returns in online retailing. While *CRCs* can be a possibility for sorting operations in online retailing, the limited interview findings for sorting can explain the exclusion of CRCs. As mentioned in the descriptive analysis of consumer return types (section 8.3.1), refurbishment was excluded from the findings as a disposition option, which explains the omission of *refurbishment facilities.* Nevertheless, the participants *added DCs, repair centres* and *sorting facilities*, indicating that traditional FL facilities, recovery facilities and RL process facilities can form part of the sorting process in online retailing.

Lastly, *all parties* identified in the QCA findings for the sorting process were *confirmed* in the interview findings, including consumers, retailers, third parties and staff. Specifically, both the QCA and interview findings indicated that *consumers* play secondary roles in the sorting process in terms of providing information for verification in the sorting process. While the interview findings excluded specific reference to *retailers* and *third parties,* two participants, including a multichannel retailer and a 3PRL provider, explained their sorting processes, confirming the QCA findings. Lastly, *sorting staff* can be involved in the sorting process, linking with the sorting characteristic of skilled/trained staff for the sorting process.

Essentially, the descriptive analysis for the sorting process demonstrated various similarities and a few differences between the QCA findings and interview findings. Based on the findings from the descriptive analysis, the description provided for the sorting process from the QCA findings (in section 5.5.2.5), can be adjusted as follows:

> The sorting process of consumer returns in online retailing can be described as an important, complex, labour-intensive and time-consuming RL process, which (1) requires skilled/trained staff, (2) involves costs, (3) can be influenced by product type, characteristics, condition, return type and return volume, and (4) can be linked with other pre- and post-receipt RL processes. The activities of the sorting process involve the (1) information flow activity of verifying product return information provided by consumers, and (2) product flow activities of product evaluation, determining disposition/exit options, product classification and grouping, separation, storage, handling and movement, which can be performed by staff of the retailer or 3PRL providers in traditional FL facilities (warehouses and DCs), RL processes facilities (sorting facilities) and recovery facilities (repair facilities).

In the next section, the descriptive analysis of the disposition process in online retailing will be provided.

8.3.3.5 Descriptive analysis of the disposition process in online retailing

In section 5.6, the QCA findings of the disposition process was presented and discussed. The disposition process consisted of general disposition processes and disposition/exit options. This section mostly focusses on a general overview of the disposition process in online retailing, excluding details for each disposition and exit option. Additionally, the QCA findings included the outcomes (benefits) of the disposition process, which were excluded from the descriptive analysis since the outcomes form part of the reflexive TA (from section 8.4). Consequently, the descriptive analysis for the disposition process only focuses on the standard RL process categories of characteristics, activities, facilities and parties.

The description created for the disposition process from the QCA findings, in section 5.6.6, included combined characteristics, activities, facilities/locations and parties for the general disposition process and disposition/exit options, which were used as a basis for the descriptive analysis. Therefore, the description of the disposition process holistically represented the QCA findings for the disposition process, which can enable a holistic comparison with the interview findings. Resultingly, the descriptive analysis will be based on the description of the disposition process (excluding the outcomes), and not the QCA quotation tables created for the general disposition process in section 5.6.1. Table 8.12 provides an overview of the findings related to the disposition process in online retailing, including detail on the combined categories and subcategories from the QCA and interview findings, a basic data matrix to compare the QCA and interview findings and supporting quotations from the interviews.

Table 8.12 Comparison between QCA and interview findings of the disposition process

CATEGORIES	SUBCATEGORIES	QCA	INT	SUPPORTING INTERVIEW QUOTATIONS
Characteristics	**Important process**	**X**	**X**	•"So, I think it's very important […] what do you do with that product when it's coming back and it's not resalable? You know, do you just try and mark it down and send it to outlets stores, sell it to third parties,
	Complex process	**X**	**X**	

	Time-consuming	X	X	can you maybe do something with it, do you fix it? So, I think it's because there is resources, cost and time." (P13, supply chain manager, multichannel retailer) •"[…] you need a level of expertise to repair those items […]." (P1, operations manager, 3PRL provider firm) •"[…] own in-house [IT] platforms […] [for] understanding the state of repair of the products and where their product is going to." (P4, owner/CEO, 3PRL provider firm) •"And your technical product, consumer electronics. How do you know that customer's data isn't on their product? […] you've got staff that are competent to clear a hard drive." (P1, operations manager, 3PRL provider firm) •"[…] it needs to get onto the shelf ASAP within a specific timeframe and be put up for sale within a specific timeframe." (P9, regional & online DC manager, online retailer) •"And you've got to make sure that it's de-branded because you don't want it going back into a secondary market with your brand." (P1, operations manager, 3PRL provider firm) •"Is it good for resale, is not good for resale we return it to the supplier? Is it damaged? No, it all takes a different route depending on what the condition is." (P9, regional & online DC manager, online retailer) •"[…] a repackaging element where it needs to be repackaged […] they want to put that back into the into a sales pipeline […]." (P4, owner/CEO, 3PRL provider firm) •"Salvage companies will buy the products at a B-grade […]. And then those guys will obviously resell again to end users at 40 percent or 50 percent less." (P10, Head of Sales and Logistics, OEM/multichannel retailer) •"[…] you have got an agreement with a firm whereby any item that's delivered that's malfunctioning, you can have it directly exchanged with that supplier or manufacturer, then that will be the action." (P12, Head of logistics, online retailer) •"You need one or two partners at most that are willing to take the entire consignment of stock for a set price […] and they can then decide to sell it through various used platforms […]." (P5, general manager, online retailer) •"So, from there on, we decide whether the packaging is damaged. If the packaging is damaged, then we will contact our supplier and explain to the supplier […] and let them know that this item has come back." (P9, regional & online DC manager, online retailer) •"[…] in the food industry, it's sell-off as reworks for animal feed production as well as farming activities […]." (P11, Demand and sales manager, FMCG distributor) •"[…] if you've got a large organisation, you can try and sell off inhouse […] three or four times a year." (P1, operations manager, 3PRL provider firm) •"And like the example of technology […] it becomes obsolete very quickly and […] you just made the decision to move it." (P1, operations manager, 3PRL provider firm) •"[…] white goods, there's no expiry on it. So, we can put it back in stock […]." (P9, regional & online DC manager, online retailer) •"[…] if the item is in good condition and the customer wants a refund, then it will just be placed back into stock […]." (P3, returns manager, online retailer) •[…] this item is defective […] they will book into the stock as a supplier warranty claim where it will then follow the route of lodging the call with the supplier." (P5, general manager, online retailer) •"[…] the odd sort of customer returns that come back in. And those were largely […] handled as donations such a small volume that the brand doesn't really worry about it […]." (P1, operations manager, 3PRL provider firm) •"[…] policies […] give you clear indication what needs to be done with return stock." (P11, Demand and sales manager, FMCG distributor) •"[…] a product of that particular manufacturer, whether it's a nick on the corner of the box or whether it's expired, it gets incinerated." (P7, owner, 3PRL provider firm) •"[…] because the CPA […] if there's a scratch or a nick or a cosmetic damage, that kind of stuff, you've got to be able to specify it. And that in itself, if you got high volumes of product. Are you going to really be able to do it and are you cannibalising your sales? So, moving it through secondary and tertiary channels is really your only option." (P1, operations manager, 3PRL provider firm) •"We need to send it back for credit […] we send a courier to go and deliver the parcel with the defective items in it." (P3, returns manager, online retailer) •"There it's a basic [receiving] process of acknowledgement of parcel […] and that then there's a decision based on can I reuse the stock or can't I reuse the stock." (P6, logistics manager, multichannel retailer) •"[…] of lodging the call with the supplier. The customers in turn receive credit or they've received a replacement item […] the defective item is then made the problem of the supplier to come and collect and replace or credit the business." (P5, general manager, online retailer) •"[…] product that needs to be kept separately before it can be inspected and disposed of […]." (P2, owner, supply chain consultancy firm) •"[…] it goes through a whole sorting process […] So it will be a […] repair buckets […] the product needs to be repaired." (P4, owner/CEO, 3PRL provider firm) •"[…] for repair, it comes back. You send it back up to the customer […]." (P1, operations manager, 3PRL provider firm)
	Requires skilled staff/ expertise	X	X	
	Requires resources	X	X	
	Requires technology	X	X	
	Requires equipment	X		
	Requires speed		X	
	Involves costs	X	X	
	Involves time		X	
	Involves options/ alternatives	X	X	
	Involves routes, channels, destinations and markets	X	X	
	Involves risk	X	X	
	Involves discounted prices	X	X	
	Involves negotiation contracts and partnerships	X	X	
	Involves information sharing	X	X	
	Influenced by industry, product and organisation type	X	X	
	Influenced by product characteristics, condition and quality	X	X	
	Influenced by return type/reason & volume	X	X	
	Influenced by return policies	X	X	
	Influenced by manufacturer specs	X	X	
	Influence by legislation	X	X	
	Linked to gatekeeping	X		
	Linked to collection	X		
	Linked to transportation	X	X	
	Linked to receiving	X	X	
	Linked to processing	X	X	
	Linked to inspection	X	X	
	Linked to sorting	X	X	
	Linked to redistribution	X	X	
Activities	**Administration**	X	X	•[…] it's all the processing and admin around it and repackaging if necessary and reselling and liquidating and destruction. (P4, owner/CEO, 3PRL provider firm) •"[…] because now the product could be handled into your facility, then it has to be booked up to a repair agent […] and it has to be booked back into your site. So, then it goes back to stock and then it can be dispatched again." (P2, owner, supply chain consultancy firm) •"They will obviously liaise with the supplier to get the item repaired […]." (P3, returns manager, online retailer) •"We can resell it. […] It goes through a value-added system. They check it and they reintroduce it into the stock inventory network for resale." (P3, returns manager, online retailer) •"[…] there's a decision based on can I reuse the stock or can't I reuse the stock. If I can't reuse the stock, it's a destroy or sell to a job lot buyer." (P6, logistics manager, multichannel retailer) •"[…] a repackaging element where it needs to be repackaged […] they want to put that back into the into a sales pipeline, that packaging needs to be changed." (P4, owner/CEO, 3PRL provider firm)
	Booking		X	
	Scanning	X	X	
	Remarketing	X		
	Communication	X	X	
	Product examination/ evaluation	X	X	
	Disposition decisions	X	X	
	Repackaging	X	X	
	Restocking/return to inventory	X	X	
	Disassembly	X	X	
	Fixing	X	X	

	Cleaning	X	X	•"[…] we have people that break down computer equipment and take out the coil and the wire and all this kind of thing." (P7, owner, 3PRL provider firm) •"[…] they'll steam iron the clothing to make sure it's crisp and fresh and ready for resale just to make sure that it's wrinkle free." (P5, general manager, online retailer) •"[…] we actually go and say, well, we'll fix it ourselves and then we'll try and resell […]." (P13, supply chain manager, multichannel retailer) •"[…] the reverse logistics […] You still need to pick and pack them after you process them." (P3, returns manager, online retailer) •"[…] for repair, it comes back. You send it back up to the customer […]." (P1, operations manager, 3PRL provider firm) •"[…] consolidate and ship back to supplier […]." (P1, operations manager, 3PRL provider firm) •"[…] we carry out the function […] repurposing, storage and disposal." (P7, owner, 3PRL provider firm)
	Treatment	X	X	
	Packing	X	X	
	Storage	X	X	
	Shipment	X	X	
	Delivery	X	X	
	Handling	X	X	
	Loading	X		
	Replacement and upgrade	X		
	(Re)Testing	X		
	Reselling	X	X	
	Trading	X		
	Charging	X		
Facilities/ locations and markets	**Stores**	X	X	•"[…] if it's good stock the stores just put it back into on the shelf for sale again […]." (P8, logistics manager, multichannel retailer) •"So, we also have a recovery department, in our warehouse […]." (P3, returns manager, online retailer) •"[…] arrived at DC […] this item is defective and they can then class that as a supplier […]." (P5, general manager, online retailer) •"We run our returns distribution centre centrally […] there's a decision based on can I reuse the stock or can't I reuse the stock […]." (P6, logistics manager, multichannel retailer) •"[…] there is a little repair centre right next door […]." (P4, owner/CEO, 3PRL provider) •"[…] repairs are done by […] the authorised service centres." (P10, Head of Sales and Logistics, OEM/multichannel retailer) •"[…] the decision will be can it go back into the business […] so the main sales pipeline or must it be liquidated in a secondary channel somewhere." (P4, owner/CEO, 3PRL provider firm) •"Clothing that often finds its way quite nicely into secondary markets." (P1, operations manager, 3PRL provider firm) •"[…] the manager of the fulfilment centre […] have to decide which route it should take. […]." (P9, regional & online DC manager, online retailer)
	Warehouses	X	X	
	DCs	X	X	
	CRCs	X	X	
	Repair facilities	X	X	
	Recovery/service centres	X	X	
	Collection facilities	X		
	Processing facilities	X		
	Disassembly facilities	X		
	Refurbishment facility	X		
	Primary market	X	X	
	Secondary market	X	X	
	Fulfilment centre		X	
Parties	**Consumers**	X	X	•""[…] the "request for credit" team where we work with the suppliers hand in hand. When we get the item that the customer returns and says that it's faulty, we will create an RFC back to the supplier for them to either credit us […]." (P3, returns manager, online retailer) •"[…] put away or disposal that would be done by the online retailer themselves." (P2, owner, supply chain consultancy firm) •"[…] the manager of the fulfilment centre […] have to decide which route it should take." (P9, regional & online DC manager, online retailer) •"[…] the reverse logistics manager is actually managing the inventory component. What are we going to do with the stock? How are we going to handle it? How are we going to disposition it?" (P1, operations manager, 3PRL provider firm) •"And then internally it'll be logistics, transport management, really distribution, merchandise and planning also gets involved in that because they often advise on where stock needs to go." (P6, logistics manager, multichannel retailer) •"[…] we carry out the function, […] repurposing, storage and disposal." (P7, owner, 3PRL provider firm) •"Or is it in such a condition that we cannot resell it on our website and then we have to use external parties like Cash Crusaders and all of that to obviously to get rid of it." (P3, returns manager, online retailer) •"Salvage companies will buy the products at a B-grade […]. And then those guys will obviously resell again to end users […]." (P10, Head of Sales and Logistics, OEM/multichannel retailer) •"[…] and then if all else fails, they'll try and resell the stuff to second-hand dealers." (P5, general manager, online retailer) •"[…] consumer thing where it comes back, and the product needs to be repaired. We would then manage that repair within our network of repair agents […]." (P4, owner/CEO, 3PRL provider firm)
	Retailers	X	X	
	Staff	X	X	
	Suppliers/ vendors	X	X	
	Third parties	X	X	

Source: Compiled by the researcher

From Table 8.12 it is evident that both the QCA of RL literature and the interviews with industry experts produced comprehensive findings with various subcategories for the disposition process. In the subsequent paragraphs the similarities and differences between the QCA and interview findings for the characteristics, activities, facilities/locations and parties of the disposition process will be provided.

- *Characteristics of the disposition process*

Most characteristics of the disposition process *corresponded* between the QCA and interview findings. The participants confirmed that the disposition process can be *important*, *complicated* and *time-consuming* because of the various options and parties involved in disposition. Additionally, the

participants agreed that *skilled/trained staff* with the necessary expertise can be pivotal for effective dispositioning, reemphasising the complexity of the disposition process. Moreover, the participants verified that the disposition process *requires resources* and *technology*, which can explain the *costs* associated with disposition activities. Evidently, for an effective disposition process, online retailers must recognise the importance and complexity of the disposition process and provide the necessary financial, human and IT resources.

Both the QCA and interview findings indicated that the disposition process *involves various options/alternatives.* Generally, the participants confirmed that direct reuse, repair, selling on secondary markets, selling to third-party buyers and ship to the vendor can be disposition/exit options for consumer returns in online retailing. However, the biggest difference between the QCA and interview findings was the refurbishment option, which was omitted from all interview findings. Consequently, from a South African perspective, the refurbishment option was excluded as a disposition option. However, the interview findings produced several other options that were excluded from the QCA (because of a lack of findings or being outside the scope of the study). For example, the participants mentioned selling product returns as scrap and donations as disposition options, which were excluded from the QCA because of limited findings. Moreover, recycling, destroy and disposal were excluded from the QCA findings because these options were beyond the scope of the study. However, the participants identified these options as viable for online retailing, especially for specific product types (such as books and food). Lastly, participants added internal staff sales as a disposition option that can be appropriate for online retailing.

For other corresponding "involvement characteristics", the participants indicated that various disposition options *involve* different *routes,* which directs returned products to *different channels, destinations* and *markets.* Furthermore, the participants confirmed that the disposition process *involves risks,* like sales cannibalisation, which can occur if new products at higher prices in the primary market must compete with returned products at *discounted prices* in the secondary markets. Moreover, both the interview and QCA findings mentioned that the disposition process involves *negotiations, contracts/agreements* and *partnerships.* Specifically, through negotiations, online retailers can establish contracts/agreements with suppliers and partnerships with third-party buyers. Additionally, the participants agreed that *information sharing* can be an important part of the disposition process because of contracts and partnership relationships.

All the *"influenced by characteristics"* of the disposition process *aligned* between the QCA and interview findings, including industry, product and organisation type, product characteristics, condition and quality, return type/reason, volume and policy, manufacturer specifications and legislation. For example, the food *industry* can include the disposition/exit options of destroy, composting and disposal,

while the fashion industry can include the exit options of secondary markets and donations. Likewise, *product types* can influence the disposition options, for instance, books can be recycled, clothes can be donated and electronics can be repaired. Additionally, larger *organisations* can consider internal staff sales for effective disposition of returned products. *Product characteristics* can influence the disposition process, for example, technology products require speedy disposition to avoid obsolete stock. Furthermore, the *product condition* can influence the disposition choice and supplier agreement, for instance, based on the supplier agreement products in defective condition can be shipped to the supplier. The *quality* of the product can influence the market/destination, for example, lower quality products can be more appropriate for secondary or tertiary markets.

The *return type* can associate with the disposition option (also see section 8.3.1), like warranty returns of defective products can be directed to suppliers for repair. Similarly, *return volume* can influence the choice of disposition options, for instance, lower return volumes can be more appropriate for donations and larger volumes for selling to third-party buyers (e.g. auctioneers and jobbers). The *return policy* can also play a role in the disposition process, for example, the return policy might stipulate that defective products can only be repaired and not replaced. Similarly, if a *manufacturer specified* that returned products are to be destroyed for brand protection, the only disposition option available can be incineration. Lastly, *legislation,* like the Consumer Protection Act (CPA), can stipulate that slightly damaged products can be resold on the primary channel only at a discount and with a clear description of the products' condition.

Most of the *links between the disposition process* and other RL processes corresponded between the QCA and interview findings. Specifically, disposition can link with *transportation* through the disposition activities related to shipment and delivery. The link between disposition and the *receiving* process can be sequential, meaning that after arrival a decision can be made regarding the best disposition options. The link between disposition and *processing* relates to warranty returns, for example, consumers can only receive a replacement or credit once the supplier confirmed the validity of the return. Additionally, *inspection* and *sorting* activities include disposition decisions, which establishes a link with the disposition processes. Finally, the link between disposition and *redistribution* relates to the transportation of returned/recovered products to the supplier, back to the consumer or to the markets.

While most of the disposition characteristics aligned between the QCA and interview findings, a few *differences* were identified. The interview findings *omitted equipment* as a disposition process requirement. Only the repair and refurbishment options associated with equipment in the QCA findings, indicating that the disposition process in general can exclude equipment as a requirement. Additionally, the interviews *excluded links* between the disposition and *gatekeeping* and *collection*

processes because these processes take place early in the RL process. Nevertheless, the interviews produced *new characteristics*, including the requirement of speed and involvement of time. Particularly, the disposition process *requires speed* for the disposition of certain product categories (e.g. clothing, food and technology) that can quickly go out of fashion, expire or outdated. Subsequently, the participants indicated that the disposition process *involve time* that must be measured for optimum economic recovery of consumer returns in online retailing.

- *Activities of the disposition process*

Various disposition activities *corresponded* between the QCA and interview findings, including information flow, product flow and cash flow activities. Particularly, the participants affirmed that the disposition process include the information flow activities of *administration* and *communication.* Since returned products can be sent for repairs, sold to third-party buyers or shipped to the supplier both administration and communication are needed. Additionally, communication with the consumer can occur, especially for warranty or service returns of products that can be returned to the consumer or replaced with another item. Furthermore, most product flow activities corresponded between the QCA and interview findings, including product examination/evaluation, disposition decisions, repackaging, restocking/returned to inventory, disassembly, fixing, cleaning, treatment, handling, packing, storage, shipment and delivery. *Product examination/evaluation* can be important to *determine* the best *disposition option* and identify recovery activities. For example, if the packaging is damaged the product can be *repackaged* and *restoked/returned to inventory* or if the product is faulty or beyond repair the product can be *disassembled* and/or *fixed.* Similarly, returned clothing with possible makeup and deodorant marks can be *cleaned* and *treated*. Additionally, returned products destinated for other locations can be *packed, stored, shipped* and *delivered.* The *handling* activity takes place throughout the disposition process as part of the other product flow activities from product examination to delivery. Lastly, the participants reemphasised the significance of *reselling* as a cash flow activity in disposition, which enables cost recovery from returned products.

The QCA findings included other information flow, product flow and cash flow *activities* that were *omitted* from the interviews. Specifically, the interview findings excluded scanning and remarketing as information flow activities. While scanning was excluded from the interviews, online retailers that use scanning at their facilities might scan returned products at arrival (see section 8.3.3.1) and departure for disposition. Evidently, scanning can form part of the disposition process in online retailing. Contrastingly, the interview findings omitted any reference to *remarketing,* implying that remarketing activities might be unnecessary in online retailing. For example, if the online retailer partners with a third-party buyer, only communication is needed for the reselling transaction. Likewise, if online

retailers resell returned products on the website or ship returned products to the supplier, no remarketing is needed.

In terms of the product flow activities, the interviews excluded *loading, replacement, upgrade* and *(re)testing.* While loading can be a possibility for the shipment of returned products to other locations in the disposition process, replacement and upgrade largely associate with refurbishment and other product recovery activities. Since refurbishment was omitted from the interview findings, the replacement and upgrade activities can be excluded. Furthermore, the participants indicated that retailers are rarely involved in specialised recovery activities, implying that further testing beyond inspection might be unnecessary. For the cash flow activities, the participants omitted *trading* and *charging* as disposition activities in online retailing. The trading activity might be more appropriate for parties operating in the secondary markets and reverse SC, which associates with the buying and selling of used/recovered products. Additionally, the participants excluded charging as a potential disposition activity, which mostly associate with product recovery. While consumers might be charged for the repair of service returns, returns under warranty excludes charging. Consequently, charging for product recovery might occur less often in the disposition process of consumer returns in online retailing. Nevertheless, the participants *added* the information flow activity of *booking,* which relates to the repair option. Since online retailers use third parties for product repair, booking a repair can occur in the disposition process of consumer returns.

- *Facilities/areas and parties in the disposition process*

Few *facilities/locations* used for the disposition process *corresponded* between the QCA and interview findings. The participants agreed that retail *stores* can be used for the direct reuse of online product returns. Moreover, the participants confirmed that traditional FL facilities, like *warehouses* and *DCs* can be used for the disposition of consumer returns in online retailing. Additionally, RL facilities, like *CRCs,* can be used for disposition decisions and activities, and recovery facilities, like *repair facilities* and *recovery/service centres,* can be used for the repair disposition option. In terms of the locations, both the QCA and interview findings identified *primary markets* and *secondary markets* as destinations in the disposition process, emphasising the shipping, delivery and reselling activities. Like other RL processes, the interview findings *excluded collection, processing, disassembly* and *refurbishment facilities* in the disposition process of consumer returns. However, the participants *added fulfilment centres* as facilities that can be used for disposition decisions and activities.

Finally, the interview findings *corroborated all* the disposition process *parties* identified in the QCA findings. Specifically, the participants confirmed that *consumers* can represent either the (1) original consumers that act as the suppliers of returned products for disposition and receivers of repaired

products, and or (2) the second consumers responsible for buying returned/recovered products in the secondary or primary markets. Additionally, *online retailers* play significant roles in terms of providing resources, skilled staff and funds for disposition, establishing departments, contracts and partnerships, returning repaired products to original consumers and reselling returned products to second consumers and other parties through primary or secondary channels. Moreover, various *staff/departments* of online retailers can be involved in the disposition activities, including (1) RL or general managers, making disposition decisions, (2) recovery or RL departments, performing various information and product flow disposition activities, and (3) other functional departments, responsible for the transportation, redistribution and allocation of returned products in the disposition process.

However, like the QCA findings, the participants indicated retailers in the disposition process can include *second retailers*, acting as buyers and resellers of consumer returns. Furthermore, *suppliers* are responsible for honouring agreements, accepting consumer returns from online retailers, and repairing or replacing returned products under warranty. Lastly, several *third parties* aligned between the QCA and interview findings, including (1) 3PRL providers, responsible for disposition activities on behalf of online retailers, (2) third-party buyers, like salvagers, dealers and brokers, responsible for the buying and selling of returned products, and (3) third-party recovery specialists, like repairers, responsible for product repairs. Evidently, the disposition process in online retailing involves various parties with diverse roles needed for effective disposition and value recovery from consumer returns.

Essentially, the descriptive analysis for the disposition process emphasised various similarities and a few differences between the QCA findings and interview findings. Based on the discussion of findings for the descriptive analysis, the description created for the disposition process from the QCA findings (in section 5.6.6), can be reformulated as follows:

> The disposition process of consumer returns in online retailing can be described as an important, complex and time-consuming RL process, which (1) requires skilled/trained staff, resources, technology and speed, (2) involves costs, time, options/alternatives, routes, channels, destinations, markets, risks, discounted/lower prices, negotiations, contracts/agreements, partnerships and information sharing, (3) can be influenced by industry and organisation type, product type, characteristics, condition and quality, return type/reasons, volume and policies, manufacturer specifications and legislation, and (4) links with other pre- and post-receipt RL processes. The disposition process can include the (1) information flow activities of administration, scanning, booking and communication, (2) product flow activities of product examination/evaluation, disposition decisions, repackaging, restocking/return to inventory, disassembly, fixing, cleaning, treatment, packing, storage, loading, shipment, delivery and handling, and (3) cash flow activity of reselling, which can be performed by the staff/departments of online retailers or 3PRL providers in traditional FL facilities/locations (such as stores, warehouses, DCs and fulfilment centres), RL process facilities (such as CRCs) and recovery facilities (such as repair facilities and recovery/service centres). The aims of the disposition process can include (1) recovery of returned products through direct reuse and repair, (2) shipment of returned/recovered products to the suppliers or original consumers, (3) reselling of returned products in primary markets, and (4) selling of returned/recovered/used products to staff or second consumers, second retailers or third-party buyers in secondary markets.

In the next section, the descriptive analysis of the redistribution process in online retailing will be provided.

8.3.3.6 Descriptive analysis of the redistribution process in online retailing

Limited participants mentioned the term redistribution or the final transportation of returned/recovered products after disposition. In the QCA findings, the redistribution process, discussed in section 5.7, included any form of exit transportation, including redelivery of products to original consumers, shipment of consumer returns to suppliers and transporting returned products to other locations and markets. Therefore, any reference to transportation after disposition decision-making in the interview findings were included in the descriptive analysis. Furthermore, like the disposition process, the QCA findings included outcomes of redistribution, which were excluded from the descriptive analysis.

Table 8.13 provides an overview of the findings related to the redistribution process in online retailing, including detail on the combined categories and subcategories from the QCA and interview findings, a basic data matrix to compare the QCA and interview findings and supporting quotations from the interviews.

Table 8.13 Comparison between QCA and interview findings of the redistribution process

CATEGORIES	SUBCATEGORIES	QCA	INT	SUPPORTING INTERVIEW QUOTATIONS
Characteristics	**Exit of RL**	X	X	•"[…] then it's your second delivery or redelivery costs." (P10, Head of Sales and Logistics, OEM/multichannel retailer) •"The longer it's out of the market, the less money you're making, it becomes less desirable." (P1, operations manager, 3PRL provider firm) •"[…] they reintroduce it into the stock inventory network for resale." (P5, general manager, online retailer) •"This is not a fault and it works perfectly. And when they want to send it back to the customer and deny they refund or replacement […]." (P1, operations manager, 3PRL provider firm) •"So, then they will engage the supplier and say, listen, I've got 10 items of yours […] And then we […] send a courier to go and deliver the parcel with the defective items in it." (P3, returns manager, online retailer) •"[…] you now redistribute the stock to a store that needs it […]." (P6, logistics manager, multichannel retailer) •"[…] you might have several inbound and outbound legs […] for repair, it comes back. You send it back up to the customer, that kind of thing." (P1, operations manager, 3PRL provider firm) •"E retailer […] send a courier, a reverse logistics company to fetch it, to deliver and bring it back? Redeliver it." (P7, owner, 3PRL provider firm) •"[…] it has to be booked up to a repair agent or to repairer on site, and it has to be booked back into your site […] and then it goes back to stock and then it can be dispatched again." (P2, owner, supply chain consultancy firm) •"And then we would also sort that into the various buckets for resale distribution […]." (P4, owner/CEO, 3PRL provider firm)
	Costly	X	X	
	Time-consuming	X		
	Requires speed	X	X	
	Requires resources	X		
	Involves technology	X		
	Involves networks	X	X	
	Involves product reuse	X	X	
	Influenced by product type and quality (AD)	X		
	Influenced by product condition	X	X	
	Influenced by return type	X	X	
	Influenced by demand	X	X	
	Influenced by legislation	X		
	Linked to collection and transportation	X	X	
	Linked to receiving	X	X	
	Linked to processing	X	X	
	Linked to inspection	X		
	Linked to sorting	X	X	
	Linked to disposition	X	X	
Activities	**Remarketing**	X		•"So, then they will engage the supplier and say, listen, I've got 10 items of yours […] And then […] we send a courier to go and deliver the parcel with the defective items in it." (P3, returns manager, online retailer) •"So, you'll have the same basically forward and the reverse logistics, you […] also need storage […] you still need to dispatch items […] pick and pack them after you process them." (P3, returns manager, online retailer) •"[…] shipping those items off to either job lot buyers or auctioneers because they will not come and fetch it." (P12, Head of logistics, online retailer) •"And then we would also sort that into the various buckets for resale distribution […]." (P4, owner/CEO, 3PRL provider firm) •"E retailer […] send a courier, a reverse logistics company to fetch it, to deliver and bring it back? Redeliver it." (P7, owner, 3PRL provider firm)
	Communication		X	
	Packing	X	X	
	Ship/dispatch	X	X	
	Delivery	X	X	
	Storage	X	X	
	Reselling	X	X	
	Loading	X		
	Retesting	X		
	Cleaning	X		
	Repackaging	X		
	Relabelling	X		
Facility/location	**Retail stores**	X	X	•"[…] back to the central distribution centre […] you now redistribute the stock to a store that needs it?" (P6, logistics manager, multichannel retailer) •"You put it up, you redistribute that to your main centres from a from a centralised warehouse to the customer's." (P12, Head of logistics, online retailer) •"[…] gaining more popularity now is liquidation channel. So, you take those [returned] products, and you would send it into a market at a fraction of price […]." (P4, owner/CEO, 3PRL provider firm)
	Warehouses	X	X	
	DCs	X	X	
	Markets	X	X	
	CRCs	X		
	Processing facilities	X		

	Disassembly facilities	X		
	Redistribution facility	X		
Parties	**Consumers**	X	X	•"[…] you redistribute that to your main centres […] to the customer's." (P12, Head of logistics, online retailer) •"E retailer […] send a courier, a reverse logistics company to fetch it, to deliver and bring it back? Redeliver it." (P7, owner, 3PRL provider firm) •"So, then they will engage the supplier and say, listen, I've got 10 items of yours […] And then they send the courier to come and collect it or we send a courier to go and deliver the parcel with the defective items in it." (P3, returns manager, online retailer) •"[…] send these products back to the distributer […] so we can send it back to the right supplier […]." (P1, operations manager, 3PRL provider firm)
	Retailers	X	X	
	Suppliers	X	X	
	Third parties	X	X	
	Distributors	X	X	

Source: Compiled by the researcher

Table 8.13 shows that a few subcategories assigned to the redistribution process in the QCA findings corresponded with the interview findings. In the subsequent paragraphs, the similarities and differences between the QCA and interview findings of the characteristics, activities, facilities/locations and parties of the redistribution process will be provided.

- *Characteristics of the redistribution process*

While the interview findings related to redistribution were limited, several redistribution characteristics *aligned* between the QCA and interview findings. Specifically, the participants confirmed that the redistribution process is *costly* and *requires speed.* Since redistribution involves transportation of returned/recovered products to various locations, general shipment/dispatch, transportation and redelivery expenses can be incurred in the redistribution process. Furthermore, like the disposition process, redistribution requires speed since the longer the returned products are stored before redistribution to the markets the greater the value loss. Furthermore, the participants agreed that redistribution *involves networks* since returned/recovered products must be transported to various locations through a network structure. Additionally, redistribution associates with *product reuse,* which can include the redelivery of returned products to the original consumer for re-consumption or to another location for reuse.

Both the QCA and interview findings showed that the redistribution process can be *influenced by product condition, return type* and *demand.* For instance, a false failure return of a product in a non-defective condition can be redistributed back to the original consumers. Additionally, participants indicated that product demand can determine the appropriate destination of the returned product. Most *links between redistribution* and *other RL processes coincided* between the QCA and interview findings. Specifically, the link between redistribution and the *collection* and *transportation processes* relates to the same network of parties used to collect, transport and redeliver product returns. Furthermore, the link between redistribution and *receiving* relates to the inbound and outbound flows of returned/recovered to and from the facility. The link between redistribution and *processing* relates to the denial of a refund and delivery of the returned product back to the original consumer. Additionally, the link between redistribution and *sorting* relates to the grouping of returned products in a

"redistribution for resale" category. Lastly, the links between redistribution and *disposition* relate to the shipment, transportation and delivery of returned/recovered products during or after disposition.

Few disposition characteristics from the QCA findings were *excluded* from the interview findings, namely that the process is an exit process, is time-consuming, requires resources, involves technology and influenced by product type, product quality and legislation. Although the interview findings excluded the term exit or final, no other processes after redistribution (or final transportation) were discussed by the participants. Consequently, redistribution can be viewed as an exit RL process. Apart from the reference to speed, participants omitted any other reference to time in the redistribution process, which explains the omission of the *time-consuming* characteristic. Furthermore, redistribution can use the same resources and/or parties as other RL and FL processes, which eliminate the need for specialised *resources*. Similarly, participants excluded reference to *technology* in the redistribution process, indicating that redistribution can be a more manual RL process. While the disposition process can be *influenced by product type* (e.g. food must be destroyed) and *legislation* (e.g. specify the condition of products), these factors may be less important in redistribution. However, like product condition, *product quality might influence* the redistribution process since it impacts the sales channel in the disposition process (e.g. selling low quality products to third-party buyers or in secondary markets). Therefore, if online retailers resell lower quality products in the secondary market, the product quality can impact the market destination in the redistribution process.

- *Activities of the redistribution process*

Fewer redistribution activities *corresponded* between the QCA and interview findings. However, the participants confirmed that the product flow activities of redistribution can include *packing, shipping/dispatching, delivery* and *storage.* Therefore, the product flow activities in redistribution associate with the outbound flows of returned/recovered products from the facility. Additionally, the participants agreed that the redistribution process involves the cash flow activity of *reselling*, relating to the delivery of returned/recovered products for resale in the primary or secondary channels.

Several activities identified in the QCA findings for the redistribution process were *excluded* from the interview findings. Particularly, the participants omitted the information flow activity of *remarketing.* As mentioned in section 8.3.3.5 (the disposition process activities), remarketing was excluded from the interview findings as an activity that can occur in the RLM of consumer returns. Nevertheless, the participants *added* the information flow activity of *communication* to the redistribution process, relating to product return shipment arrangements with suppliers. In terms of the product flow activities, the interviews *excluded loading, retesting, cleaning, repackaging and relabelling.* Since redistribution involves packing and shipment, the *loading* activity can be *included* in the redistribution process.

However, retesting, cleaning, repackaging and relabelling can be excluded since these activities in the QCA findings associated with specialised redistributor parties that perform value-added activities on returned products before redistribution. From the interview findings, the redistribution is a basic process with activities mostly relating to the transportation of returned/recovered products to various locations, excluding product recovery activities.

- *Facilities/locations and parties of the redistribution process*

Like other RL processes, limited *facilities/locations* associated with the redistribution process *corresponded* between the QCA and interview findings. However, the participants agreed that *stores* can be used for the redistribution of online product returns based on demand. Additionally, traditional FL facilities can be used for the redistribution of returned products, including *warehouses and DCs.* Lastly, the interview findings confirmed that *markets* can be locations in the redistribution process, relating to the reselling activity. The *facilities excluded* from the redistribution process were *CRCs*, *processing facilities*, *disassembly facilities* and *redistribution facilities*. Since CRCs can be used in the disposition process, online retailers might use CRCs for the redistribution process. The other facilities were omitted from the interview findings, explaining the exclusion of processing, disassembly and redistribution facilities from the redistribution process.

Most *parties* involved in the redistribution process *aligned* between the QCA and interview findings. *Consumers* play secondary roles by representing the original consumer that receives the returned/recovered back or second consumers in the markets that purchase returned/recovered products. *Online retailers* can be involved in the redistribution activities of communication, shipment/dispatch and redelivery activities. Alternatively, online retailers can use *3PLs/couriers* or *3PRL providers* for the redistribution of consumer returns, limiting the redistribution activities to communication, packing and storage. Furthermore, *suppliers* can be involved in the arrangement of transportation and receipt of consumer product returns from online retailers. Finally, *distributors* can be involved in the transportation of returned products to the suppliers. However, the QCA findings included redistributors as specialised parties in the redistribution process, which was omitted from the interview findings. Subsequently, redistributors are excluded as parties from the RL process of consumer returns in online retailing.

Essentially, the descriptive analysis for the redistribution process demonstrated various similarities and differences between the QCA and interview findings. Based on the discussion of findings for the descriptive analysis, the description created for the redistribution process from the QCA findings (in section 5.7.6), can be reformulated as follows:

> The redistribution process of consumer returns in online retailing can be described as a costly and exit process in RL, which (1) requires speed, (2) involves networks and product reuse, (3) can be influenced by product condition

and quality, return type and demand, and (4) links with other pre- and post-receipt RL processes. The redistribution process can include the (1) information flow activity of communication, (2) product flow activities of storage, packing, loading, shipping/dispatch and delivery, and (3) cash flow activity of reselling, which can be performed by online retailers, distributors and/or 3PL/3PRL providers in traditional FL facilities/locations (such as stores, warehouses and DCs), RL process facilities (such as CRCs) and market locations. The aims of the redistribution process include preparing of returned/recovered products for transportation to suppliers, original consumers, third-party buyers or second consumers in primary or secondary markets.

In the next section, the descriptive analysis summary of the post-receipt RL processes in online retailing is provided.

8.3.3.7 Descriptive analysis summary of the post-receipt RL processes in online retailing

Based on the reformulated descriptions provided in section 8.3.3, Table 8.14 provides a data matrix, comparing the overlapping characteristics, activities, facilities/locations and parties (occurring in two or more) of the post-receipt RL processes in online retailing.

Table 8.14 Descriptive analysis data matrix for post-receipt RL processes

	Subcategory	Receiving	Processing	Inspection	Sorting	Disposition	Redistribute
Characteristics	Important			X	X	X	
	Complex			X	X	X	
	Labour intensive	X		X	X		
	Time-consuming	X	X			X	
	Requires skilled/trained staff			X	X	X	
	Requires resources/infrastructure		X	X		X	
	Requires technology		X			X	
	Requires speed		X			X	X
	Requires accuracy		X				
	Involves technology	X				X	
	Involves costs	X	X	X	X	X	X
	Involves time			X		X	
	Involves options			X		X	
	Influenced by return volume	X			X	X	
	Influenced by product type		X	X	X	X	
	Influenced by product characteristics			X		X	
	Influenced by product condition		X	X	X	X	X
	Influenced by return type/reason		X	X	X	X	X
	Influenced by product quality			X		X	X
	Influenced by channel/organisation type		X			X	
	Influenced by return policies		X	X		X	
	Links with CRR		X	X			
	Links with collection		X	X			X
	Links with gatekeeping		X	X	X		
	Links with transportation	X	X	X		X	X
	Links with receiving		X	X	X	X	X
	Linked with processing		X	X	X	X	X
	Links with inspection	X	X	X	X	X	
	Links with sorting	X	X	X		X	X
	Links with disposition	X	X	X	X		X
	Links with redistribution	X	X		X	X	
Activities	Administration	X				X	
	Verification of information	X	X	X	X		
	Scanning	X				X	
	Information sharing/ communication		X	X		X	X
	Movement	X			X		
	Handling	X	X	X	X	X	
	Product evaluation/assessment			X	X	X	
	Product classification/grouping			X	X		
	Disposition decision making			X	X	X	

	Subcategory	Receiving	Processing	Inspection	Sorting	Disposition	Redistribute
Facilities/locations	Restocking		X			X	
	Storage			X	X	X	X
	Packing					X	X
	Delivery		X			X	X
	Shipment					X	X
	Reselling					X	X
	Stores		X			X	X
	Warehouses	X	X	X	X	X	X
	DCs	X	X	X	X	X	X
	Returns facilities/ CRCs	X		X		X	X
	Fulfilment centres		X	X		X	
	Service centres		X			X	
	Repair facilities				X	X	
	Markets					X	X
Parties	Consumers	X	X	X	X	X	X
	Retailer	X	X	X	X	X	X
	Staff/departments	X	X	X	X	X	
	Third parties	X	X	X	X	X	X
	Suppliers/manufacturers		X	X		X	X

Source: Compiled by the researcher

Table 8.14 shows that several subcategories were assigned to three or more post-receipt RL processes, with only few overlapping subcategories assigned to two post-receipt RL processes. From the table, several important observations can be made from the most significant subcategories (assigned to three or more processes) in the post-receipt RL process.

For the *characteristics*, inspection, sorting and disposition processes can be *important* and *complex* and *require skilled/trained staff*, indicating the need for online retailers to allocate sufficient and appropriate human resources for effective inspection, sorting and disposition of consumer returns. Furthermore, the receiving, inspection and disposition processes can be *time consuming*, implying that online retailers must consider developing strategies to reduce and monitor receiving, inspection and disposition lead time. Processing, inspection and disposition *require resources/infrastructure*, which means that online retailers might need to allocate various resources for successful processing, inspection and disposition processes. Furthermore, *speed* can be an important requirement in processing, disposition and redistribution, suggesting that online retailers establish speedy and efficient processing, disposition and redistribution processes. *Costs* associate with *all post-receipt processes*, indicating that online retailers need to identify cost strategies to control and reduce the costs of post-receipt RL processes.

All post-receipt RL processes, except receiving, can be *influenced by product condition* and *return/type reasons*, which means that online retailers can enhance visibility in the RL process for efficient post-receipt RL processes in the facility. Similarly, most post-receipt RL processes, except receiving and redistribution, can be *influenced by product type*, suggesting that online retailers with assorted product categories can establish flexible return procedures for the effective processing, inspection, sorting and disposition of consumer returns. Furthermore, receiving, sorting and disposition can be *influenced by*

return volume, indicating that online retailers can benefit from developing return forecasting strategies for receiving and consider return volume for effective sorting and disposition processes. *Product quality* can *influence* inspection, disposition and redistribution processes, which means that online retailers can implement mechanisms to determine returned product quality for effective inspection, disposition and redistribution processes. Additionally, the *return policy* can influence processing, inspection and disposition, suggesting that online retailers should align the terms and conditions of the return policy with the decision-making activities in processing, inspection and disposition.

Regarding the *links between the RL processes*, processing, inspection and disposition processes *link* with the *collection process*, which suggests that online retailers can consider integrating these processes. Similarly, processing, inspection and sorting *link with the gatekeeping process*, indicating that online retailers can benefit from integrating gatekeeping with the processing, inspection and sorting processes. All post-receipt RL processes, except sorting, *link with the transportation process*, implying that online retailers should integrate pre-receipt transportation with post-receipt RL processes. Furthermore, *all post-receipt RL processes* are *linked* (except inspection and redistribution), which indicates that online retailers must coordinate and integrate post-receipt RL processes for the effective management of consumer returns.

The post-receipt RL processes in online retailing share several common *activities*. Specifically, most RL processes, except disposition and redistribution, can include *verification of information*, which means that online retailers can implement verification mechanisms for effective receiving, processing, inspection and sorting processes. Similarly, most RL processes, except receiving and sorting, involve some form of *information sharing* and *communication*, which suggests that online retailers can benefit from establishing effective communication platforms and encouraging internal and external integration for effective processing, inspection, disposition and redistribution processes. All RL processes, except redistribution, involve *handling* as a product flow activity, emphasising that effective product return handling practices must be implemented for efficient receiving, processing, inspection, sorting and disposition processes.

The inspection, sorting and disposition processes involve some form of *product evaluation/examination* and *disposition decision making*, indicating that staff involved in inspection, sorting and disposition requires product knowledge and skill to effectively identify the best disposition option for maximum value recovery. Most RL processes, except receiving and processing, involve *storage*, suggesting that online retailers must allocate sufficient storage space for effective inspection, sorting, disposition and redistribution activities. Lastly, processing, disposition and redistribution can involve *delivery*, which means that online retailers must consider transportation options and arrangements for effective processing, disposition and redistribution processes.

Regarding the *facilities/locations*, *stores* can be used for processing, disposition and redistribution processes, implying that multi/omnichannel retailers can consider using their stores as locations for processing, disposition and redistribution activities. All post-receipt RL processes can be conducted in *warehouses* and *DCs*, indicating that online retailers can use their traditional FL facilities for the receiving, processing, inspection, sorting, disposition and redistribution of consumer returns. *Centralised return centres (CRCs)* can associate with most post-receipt RL processes, except processing and sorting, suggesting that online retailers can use dedicated and centrally located RL facilities for product return receiving, inspection, disposition and redistribution.

For the *parties*, all post-receipt RL processes involve *consumers*, *retailers* and *third parties*, which emphasises that online retailers need to focus on external integration for the establishment of effective post-receipt RL processes. Additionally, all post-receipt RL processes, except redistribution, involve *staff/departments*, suggesting that online retailers need to focus on human resource development and management for effective post-receipt RL processes. Finally, most RL processes, except receiving and sorting, involve *suppliers/manufacturers*, indicating that online retailers can benefit from focusing on strengthening supplier relationships, coordination and integration for effective processing, inspection, disposition and redistribution processes.

Essentially, the descriptive analysis confirmed, removed from and added to the QCA findings for an in-depth understanding and description of consumer return types and RL processes in online retailing. While several differences were identified between the QCA and interview findings in the descriptive analysis, the interviews with industry experts confirmed most categories/subcategories assigned to consumer return types and RL processes in the QCA of RL literature. These descriptive analysis findings will form part of the final framework for the effective RLM of consumer returns in online retailing, presented in Chapter 9. In the next section, the first theme from the reflexive TA of the interviews with industry experts will be presented, analysed and discussed

8.4 THEME 1: PREVENTION AND CONTROL FOR THE EFFECTIVE RLM OF CONSUMER RETURNS

Theme 1 involves return prevention and control initiatives for the effective RLM of consumer returns in online retailing. According to Lamba *et al.* (2020:381), high consumer returns make RL inevitable for online retailers. In fact, the influx of product returns in online retailing is so high that many retailers find it increasingly challenging to control (Bozzi *et al.* 2022:27). While online retailers can reduce consumer returns, they can never eliminate it; hence, they need to implement prevention and control measures to manage consumer returns effectively and efficiently. All participants mentioned throughout their interview discussions the importance of product return prevention and control in

online retailing. Therefore, "prevention and control" was identified as RLM factors, which means that online retailers must pay attention to return prevention and control for the effective RLM of consumer returns. The following quotations convey this importance:

> […] if you do it right, the first time, as I always mentioned [to] you, it reduces or mitigates the reverse logistics to a certain extent, [but] because reverse logistics is inevitable, you are going to have returns. […] the question is, how do you reduce the volume?" (P10, Head of Sales and Logistics, OEM/multichannel retailer)

> "[…] you are always going to have an element of returns. But you can reduce, I believe you can reduce the percentage of returns. (P12, Head of logistics, online retailer)

> "[…] returns are always kind of like an afterthought for a lot of companies. So, if you don't manage it proactively and like every single day, it is something that can get out of hand extremely quickly." (P3, returns manager, online retailer)

> "[…] you don't want to resell bad stuff. You don't want to be known in the trade as the guy that takes back rubbish [by accepting damaged/used product returns] and sends you [the new consumer] back rubbish [by reselling damaged/used returned products]." (P5, general manager, online retailer)

Figure 8.3, in section 8.2.2, provides an overview of theme 1, including the subthemes and related categories. Figure 8.5 provides a snapshot derived from Figure 8.3, highlighting Theme 1 – *Prevention and control for the effective RLM of consumer returns*.

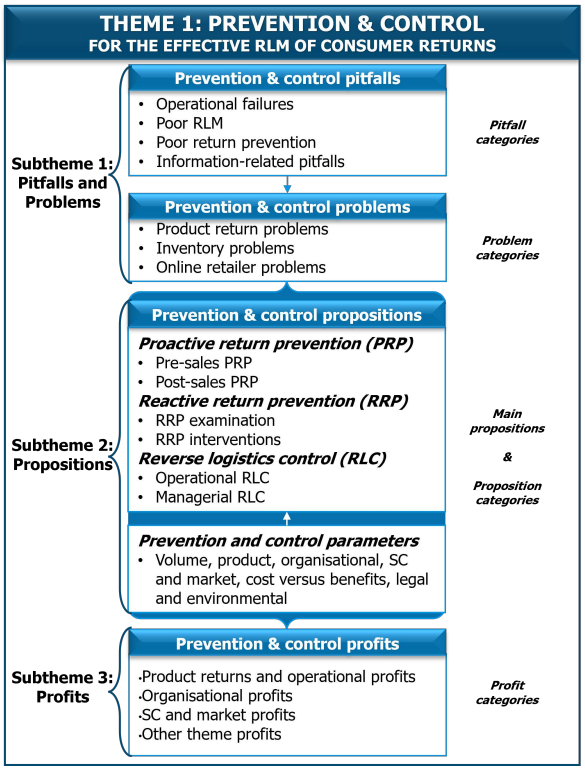


Figure 8.5 Overview of Theme 1 – Prevention and control for the effective RLM of consumer returns
Source: Compiled by the researcher

In the subsequent sections, a detailed overview, analysis and discussion of the interview findings for each subtheme, including prevention and control pitfalls and problems (subtheme 1), prevention and control propositions (subtheme 2) and prevention and control profits (subtheme 3) will be given. The section concludes with a framework, summary and overall analysis of the prevention and control findings for the effective RLM of consumer returns in online retailing.

8.4.1 Prevention and control pitfalls and problems – Subtheme 1

As illustrated in Figure 8.5, and discussed in section 8.2.2., the prevention and control pitfall categories include operational failure, poor RLM, poor return prevention and information-related pitfalls, and the prevention and control problem categories include product return, inventory and online retailer problems. Based on the interview findings, Figure 8.6 provides a detailed overview of the prevention and control pitfalls and problems in RL that will be discussed in this section.

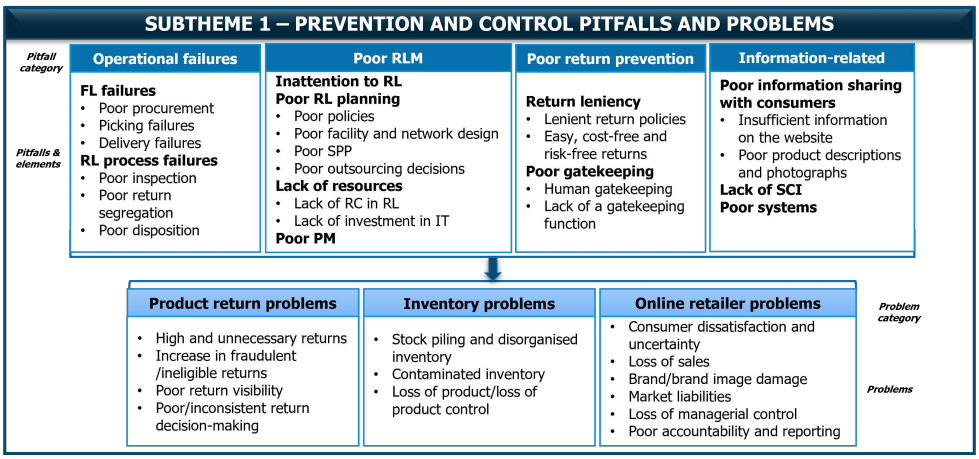


Figure 8.6 Detailed overview of prevention and control pitfalls and problems
Source: Compiled by the researcher

Based on the interview findings, Figure 8.6 shows the *prevention and control pitfall* categories with related pitfalls and pitfall elements (if applicable), and the *prevention and control problem* categories with related problems, which can hamper the effective RLM of consumer returns in online retailing. Section 8.2.2 provides details regarding the presentation and format of the pitfalls and problems applicable to each theme. In the subsequent sections, the prevention and control pitfall categories of operational failure, poor RLM, poor return prevention and information-related and associated pitfalls, pitfall elements and product return, inventory and online retailer problems will be discussed. The section concludes with a framework and summary of findings to demonstrate the relationship between specific prevention and control pitfalls and problems.

8.4.1.1 Operational failure pitfalls and related prevention and control problems

As shown in Figure 8.20, operational failures as a prevention and control pitfall category involves the prevention and control pitfall subcategories of FL failures and RL process failures, which can result in various product return, inventory and online retailer problems. FL failures and RL process failures as operational failure pitfalls with related prevention and control problems will be discussed in the subsequent sections.

8.4.1.1.1 FL failure pitfalls and related prevention and control problems

The FL failure pitfalls involve the elements of poor procurement practices, picking failures and delivery failures, which can contribute to various prevention and control problems, including product return, inventory and online retailer problems. Particularly, participants indicated that *poor procurement practices* can involve purchasing poor- or low-quality products, which can lead to unnecessary product returns (product return problem) and contaminated inventory (inventory problem). Additionally, poor procurement practices can result in consumer dissatisfaction and a loss of sales (online retailer problems) since consumers may share their bad experiences about the quality of the products. The following quotations illustrate the impact of poor procurement practices:

> "And, you know, obviously, if you're getting too many failures there's a procurement issue." (P4, owner/CEO, 3PRL provider firm)
>
> "[…] if you've sold 30 items and 20 has been returned, then there's a problem with that product. […] It might be a default [defect] […]." (P12, Head of logistics, online retailer)
>
> "So, people return stock to us for a variety of reasons. One is that the merchandise quality doesn't perform to their expectations. So, it could be a manufacturing fault. […] And so, they [the consumers] buy it [a garment], […] then they find that there's a thread pulled or something's wrong or they wash the garment, and they find that it's shrunk. From a quality point of view that isn't good." (P8, logistics manager, multichannel retailer)
>
> "But people, the consumers talk amongst each other about the product quality, and you start losing sales because of a bad experience that one consumer had with the product that was bought online that had a defect […]." (P2, owner, supply chain consultancy firm)

Picking failures as a FL failure pitfall involves picking errors and poor product handling practices, which can contribute to product return problems and online retailer problems. Picking errors may be errors of selecting (1) a wrong item, (2) a correct item but in the wrong size, colour or other variation, or (3) near dated or expired stock, which can lead to high and unnecessary returns (product return problems). Additionally, poor product handling practices may involve using dirty hands or inappropriate handling of products during picking and packing, which can lead to consumer dissatisfaction (online retailer problem) and unnecessary returns. The following quotations demonstrate the prevention and control problems related to the picking failures:

> "[…] pick accuracy is a big driver of returns for obvious reasons." (P5, general manager, online retailer)
>
> "[…] if you think about a large distribution centre […] the errors that come in from a picking team, […] with a business that sells millions of items every month, you're bound to find somewhere that there was a miss pick whether they picked the yellow one instead of a blue one […]." (P5, general manager, online retailer)
>
> "[…] you do get problematic areas of stock returns, obviously the expiry date." (P11, Demand and sales manager, FMCG distributor)
>
> "Now you are putting it somewhere where a picker that handled 6000 items today takes their dusty hands and they touch the top of that lampshade and it's got two big thumbprints on it. And books, I mean, people that love reading, they are particular about books. If you got dirty hands and you pick a book without a plastic sleeve that would be soiled, they'll [the consumers will] send it back […] [and say] I didn't buy a book with somebody else's thumbprints on the front cover. So, the packaging and picking integrity outside of the accuracy, that's really important because a lot of comebacks are because of customers saying […]. Take it back. I want another one." (P5, general manager, online retailer)

Delivery failures as the final FL failure pitfall involves wrong, delayed and late deliveries and poor parcel handling in the delivery process, which can result in product return problems and online retailer

problems. Particularly, participants indicated that wrong deliveries and delays in or late deliveries can result in dissatisfied consumers (online retailer problem) that may decide to purchase the item from another online or multi/omnichannel retailer and return the product or cancel the order, resulting in unnecessary returns (product return problem) and a loss of sales (online retailer problem).

Moreover, a poor delivery experience may increase fraudulent returns (product return problem) since consumers might purposively damage the product and return it out of spite. Additionally, poor delivery experiences can result in brand image damage (online retailer problem) through consumer complaints on social media. Lastly, poor handling of the parcel in the delivery process involves outer package (e.g. delivery box) damages, which can increase consumer uncertainty (online retailer problem) about the condition of the product, resulting in unnecessary returns (product return problem). These findings can be demonstrated by the following quotations:

> "I picked up that due to delays in the service level, that the customer no longer requires the item. So, I would say I put that at about 15 percent. And it's more the customer's requirement of an item at a specific time. And if it doesn't reach them at a specific time they go onto the website, they cancel and they return. They purchase it elsewhere." (P9, regional & online DC manager, online retailer)

> "[…] you can have the best website in place or online system in place, but if the customer does not receive his product on time, I can tell you now that customer will be so angry or frustrated, you'll definitely return that product there is no doubt about it." (P10, Head of Sales and Logistics, OEM/multichannel retailer)

> "Some customers will end up deciding, you know what, I'm going to be vindictive and say, because you provided me with such below par service, substandard service mediocrity, I'm going to show you something and I'm going to show you that I will damage this product […] [and] you do not want the noise levels […] the customer goes to social media badmouthing your company." (P10, Head of Sales and Logistics, OEM/multichannel retailer)

> "It's the outer box sometimes. So, the customer sees that the outer box is damage and all of a sudden, he says, no way, geez, I'm not going to take this unit. And I'm afraid that probably the unit inside could be damaged." (P10, Head of Sales and Logistics, OEM/multichannel retailer)

A few studies in the reviewed literature indicated that high consumer returns in online retailing can be attributed to quality problems, late or wrong deliveries (Ashan & Rahman 2022:138; De Araújo *et al.* 2018:348), delivery damages (Lamba *et al.*2020:381) and packaging damages (Hjort *et al.* 2019:779). Therefore, FL failures can be problematic for online retailers causing various product return problems, inventory problems and online retailer problems, which can hamper the effective RLM of consumer returns.

8.4.1.1.2 RL process failure pitfalls and related prevention and control problems

Although RL can be the result of problematic forward practices, *RL process failures* can exacerbate prevention and control problems. Associating with both poor prevention and poor control practices, the RL process failure pitfalls involve poor return inspection, poor return segregation and poor return disposition.

Particularly, *poor return inspection* can involve uneducated and untrained RL staff that either accept ineligible product returns (e.g. accepting an opened DVD classified as non-returnable in the return

policy) or place damaged/defective/used products back in stock, resulting in (1) high and unnecessary returns, an increase in fraudulent/ineligible returns and poor return decision-making (product return problems), (2) contaminated inventory due to mixing new and returned products (inventory problem), and (3) potential brand image damage (online retailer problem). The following quotations illustrate the impact of poor return inspection:

> "So, we have seen that with a lot of untrained people, they will accept the return that the customer has misused and in which case they should have actually declined it and send it back to the customer." (P3, returns manager, online retailer)

> "If your evaluators are stupid, they'll put [new/unused returned] products into bad stock, which are not supposed to be there, or they'll put [damaged/used returned] products into good stock that are not supposed to be there either. And you create a perpetual problem of returns because these guys are not doing the job correctly […] you don't want to resell bad stuff. You don't want to be known in the trade as the guy that takes back rubbish [by accepting damaged/used product returns] and sends you [the new consumer] back rubbish [by reselling damaged/used returned products]." (P5, general manager, online retailer)

Similarly, *poor return segregation* involves mixing returned products with new products by using the same area in the facility for returned products and new products. Subsequently, the online retailer may contaminate their inventory (inventory problem) through poor return segregation, which may involve reselling defective/damaged/used products or even counterfeit products, leading to high and unnecessary returns (product returns problems) and potential brand/brand image damage (online retailer problem). The following quotation supports this finding:

> "[…] keep the return segregated from, call it, clean stock that hasn't been dispatched so that you don't have cross contamination of items and possibilities of counterfeit goods, for example, entering your supply chain through a back door or having defective merchandise entering your supply chain again." (P2, owner, supply chain consultancy firm)

The RL process failure pitfall of *poor return disposition* involves poor or no disposition activities, which can result in inventory and online retailer problems. Particularly, poor disposition activities involve incompetent/untrained disposition staff, failing to de-brand returned products or clear personal information from returned computers and devices before resale on the secondary market, resulting in potential brand damage and market liabilities (online retailer problems). Additionally, no disposition activities means that online retailers ignore returned products after processing (i.e. refunds or replacements), causing stock pileups, a loss of products (inventory problems) and a loss of sales (online retailer problem). For example, storing and disposing resalable returned products instead of returning it to inventory for resale. The following quotations demonstrate poor disposition as a RL failure pitfall:

> "And you've got to make sure that it's de-branded because you don't want it going back into a secondary market with your brand. Or with your warranty slips. And your technical product, consumer electronics, how do you know that the customer's data isn't on their product? […] You as [the online retailer] must make sure that you've got staff that are competent to clear a hard drive. But if the power supply is gone, you can't access the hard drive, [and] now somebody comes along, fixes the power supply and then they are able to access the hard drive you've got a potential liability in your hand." (P1, operations manager, 3PRL provider firm)

> "[…] [the returned products] get left for six months before somebody, when it's starting to encroach on warehouse space, and somebody says, we've got to get this nonsense out of here, and that gets thrown in the back of a skip waste bin […]." (P7, owner, 3PRL provider firm)

Limited studies in the reviewed literature identified RL process failures as a pitfall that can lead to unnecessary returns, contaminated inventory, brand damage and a loss of sales. However, Ermes and Niemann (2023:7) noted that the risk of poor inspection in the RL process can cause an increase in damaged product returns. Furthermore, Senthil *et al.* (2018:718) indicated that poor storage of returned products can cause damage, which further increases future damaged product returns. Lastly, Ahsan and Rahman (2021:21) and Bozzi *et al.* (2022:12) identified that mishandling of product returns can cause brand damage and a loss of market share. Evidently, the impact of poor return segregation and return disposition practices extend the literature, highlighting practices that online retailers could avoid.

8.4.1.2 Poor RLM pitfalls and related prevention and control problems

Poor RLM as a prevention and control pitfall category involves the pitfalls of inattention to RL, poor RL planning, lack of resources and poor performance measurement (PM) in RL (see Figure 8.20), which will be discussed in subsequent sections with related prevention and control problems.

8.4.1.2.1 Inattention to RL pitfall and related prevention and control problems

Inattention to RL as a prevention and control pitfall means that online retailers treat RL as an "afterthought" and consider it as unimportant, resulting in loss of managerial control (online retailer problem). Furthermore, linking with the RL process failure pitfalls (section 8.4.1.1.2), participants indicated that failure to pay attention to RL means that online retailers often ignore product returns, contributing to inventory problems, like contaminating inventory through poor return segregation practices and a loss of product/product control. Additionally, contaminating inventory means that online retailers can resell damaged/defective products, leading to high and unnecessary returns (product return problems). The consequences of inattention to RL as a poor RLM pitfall can be demonstrated by the following quotations:

> "[…] returns are always like an afterthought for a lot of companies. So, if you don't manage it proactively and like every single day, it is something that can get out of hand extremely quickly." (P3, returns manager, online retailer)

> "So, warehouses and processes are geared for the perfect delivery. You hardly find any organisations that open up and start with new facilities, with reverse logistics in mind […]. They'll put it [the returned products] in a little corner in the south wing and say, well, if something comes back, let's just bring it to that door. And then soon they find out that it's a completely different set of events to what you normally do [in forward logistics]. You have to segregate the [forward logistics and reverse logistics] processes completely, otherwise you sit with problems of mixing good and bad stock." (P5, general manager, online retailer)

> "[…] reverse logistics […] doesn't receive focus. It doesn't receive attention […] [returned products] eventually gets swept out and thrown away, it is pilfered, etc." (P7, owner, 3PRL provider firm)

While various studies in the reviewed literature indicated the negative impact of inattention to RL on the management of consumer returns (Bozzi *et al.* 2022:11; Davidavičienė & Al Majzoub, 2021:6), no research was found that identifies the product return and inventory problems associated with inattention to RLM. Therefore, this study adds to the literature by suggesting other problems associated with

inattention to RLM, which must be noted and avoided by online retailers for the effective RLM of consumer returns.

8.4.1.2.2 Poor RL planning pitfalls and related prevention and control problems

Poor RL planning involves the pitfall elements of poor policies, poor facility and network design, poor strategic planning and procedures (SPP), and poor outsourcing decisions, which can lead to product return, inventory and online retailer problems. Particularly, online retailers that implement *poor return policies* without the required specifications of clear product return conditions can receive high and unnecessary returns (product return problems) and a loss of sales (online retailer problem), as implied in the following quotation:

> "[…] your policy needs to be sound […] You're talking to somebody that bought two million rands worth of electronics with you, and they don't want to pay you. Or they are saying that your product is substandard, and they want to send it back. So, if you don't have a robust returns policy, you're going to get a hiding [with high product returns]." (P5, general manager, online retailer)

Additionally, linking with the pitfalls of RL process failures (section 8.4.1.1.2) and inattention to RL (section 8.4.1.2.1), online retailers often *design* their *facilities* and *networks* to be conducive for FL operations, which might not be suitable for RL processes. For example, not allocating a separate receiving gate and separate area in the facility for product returns can result in the inventory problems of disorganised inventory and contaminated inventory (e.g. mixing products by using the same receiving gate for new and returned product). Additionally, using a decentralised network design for product return gatekeeping and inspection activities can lead to inconsistent product return decision-making (product return problem) and consumer uncertainty (online retailer problem). The following quotations support these findings:

> "[…] because the facilities are not designed for reverse logistics, everything comes through one door. So, you're sitting with large things [like new products] on top of small things [like returned products] and it's a complete mess […] I think the one thing that gets neglected the most is the actual practical layout of the facility that needs to be conducive to a good return logistics process." (P5, general manager, online retailer)

> "[…] you do not want six or seven reclaim centres where the six or seven people that handled electronics all have a different view of what is used. Because that creates uncertainty with the consumer." (P5, general manager, online retailer)

Poor SPP involves a lack of strategic planning for RL, a lack of adding disposition decisions in strategic planning and poor standardisation/formalisation of RL processes and procedures, which can contribute to inventory, online retailer and product return problems. Particularly, online retailers that fail to strategically plan for RL and include disposition decisions in their strategic plans can risk product return stockpiling in the warehouse (inventory problem), potential brand damage and market liabilities (online retailer problems). For example, lacking a strategic plan for RL and disposition can lead to improper disposition activities, like not preparing products for resale on the secondary markets, which can result in market liabilities. Subsequently, a lack of strategic planning for RL and disposition

contributes to the RL process failure pitfall element of poor disposition of returns (see section 8.4.1.1.2).

Similarly, a lack of a strategic plan for handling product returns can lead to pilferages (a loss of product through theft), and the possibility of returned products ending up in black or informal markets (loss of product control) (inventory problems), which can damage the brand/brand image of the online retailer. Additionally, failure to standardise/formalise RL procedures and processes can result in poor/inconsistent product return decision making (product return problems), a loss of product/product control (inventory problem) and a loss of managerial control (online retailer problem). The following quotations expand on these findings:

> "You need to have a [strategic] plan for [reverse logistics]. […] [product returns] can't be building up in your warehouse. That's often the starting point. What are we going to do with the stuff in the warehouse? […] And how do we make sure we get it [the returned products] out of there in a way that we're not going to incur any potential liability […]." (P1, operations manager, 3PRL provider firm)

> "[…] your biggest damages of your brand could be the product finding its way into illegal or illegitimate markets. […] That's one example of justification of why it [reverse logistics] should be in your strategic plan." (P7, owner, 3PRL provider firm)

> "[…] I think they would be delinquent in any way to not including that disposal in their strategic planning […] you [will] find that product at every […] spaza store. It can only destroy the brand." (P7, owner, 3PRL provider firm)

> "[…] your [reverse logistics] activity of your teams, it has to be standardised. There cannot be any room for debate. The moment, there's debate people have different opinions, they make different decisions." (P5, general manager, online retailer)

> "Well, if you do not have the standard processes and regulations in place and policies, you do get the people selling off or taking stock or hand it out to staff and then [the] just say, but we weren't aware that it's not allowed. Where your policy and guidelines give you clear indication what needs to be done with return stock." (P11, Demand and sales manager, FMCG distributor)

Finally, *poor outsourcing decisions* involve online retailers that either (1) outsource the entire RL function to third parties without ensuring that the 3PL/3PRL provider can be trusted with product returns or capable in managing product returns or (2) partially outsource RL to capable 3PRL providers due to distrust. On the one hand, online retailers that outsource the entire RL function to 3P(R)L providers that lack product return inspection capabilities and standardised policies and procedures for RL may experience an increase in fraudulent/ineligible returns (product return problem), a loss of products/product control (inventory problems), brand/brand image damage and market liabilities (online retailer problems). On the other hand, online retailers that partially outsource RL to capable 3PRL providers can contribute to the prevention and control problems of a loss of managerial control, poor accountability and poor reporting (online retailer problems). The following quotations demonstrate the impact of poor outsourcing decisions as a poor RL planning pitfall element:

> "[…] if you outsource it [your reverse logistics] and the outsource company is selling it [the returned products] off to the man on the street […] you […] [are] liable for that." (P11, Demand and sales manager, FMCG distributor)

> "And I think our supply chains are too immature to successfully outsource the entire reverse logistics portion. And again, in South Africa, there's too much opportunity to open up yourself for fraud and other types of interactions. And it could devalue your brand when you allow that to be completely outsourced without inspection." (P2, owner, supply chain consultancy firm)

> "[…] someone needs to be in control of the whole circle. So, we've dealt with one or two brands where they just want us [the 3PRL provider] to do an element of the returns or the reverse logistics process, which is very bitty. You know, if anybody needs to take accountability, where do you point the accountability finger to if you've got different people doing different elements of the process? Whereas if it's fully outsourced, […] you just speak to the company who is managing the entire reverse logistics process […]. So, the reporting is much easier […]." (P4, owner/CEO, 3PRL provider firm)

Some of these findings aligned with a few studies in the reviewed literature, including the impact of (1) poorly designed return policies on the performance and sales of the online retailer (Davidavičienė & Al Majzoub, 2021:19), (2) poor strategic planning on the control of product returns (Badenhorst, 2022:229; Chen *et al.* 2017:26; Karlsson *et al.* 2023:8) and (3) outsourcing to 3P(R)L providers that lack skills and expertise on inventory control in RL (Tavana *et al.* 2016:554).

However, this study extends the literature by identifying the impact of poor facility and network design, poor standardisation/formalisation of RL processes and procedures and partial outsourcing to capable 3PRL providers on return prevention and control. Additionally, this study discovered various product return, inventory and online retailer problems that can be the results of poor RL planning. Subsequently, this study emphasises that online retailers can experience additional problems with poor return policies, facility and network design, SPP and outsourcing decisions that hampers the effective RLM of consumer returns.

8.4.1.2.3 Lack of resources pitfalls and related prevention and control problems

A lack of resources as part of the poor RLM prevention and control pitfall category involves a lack of resource commitment (RC) in RL and a lack of investment in IT resources, which can result in various product return, inventory and online retailer problems

A *lack of RC* in RL involves failure to allocate sufficient resources for RL, which can contribute to inventory and online retailer problems. Particularly, failing to commit resources for RL can contribute to poor RLM, resulting in the online retailer problem of a loss of managerial control. Additionally, a lack of RC in RL can include the failure to allocate financial resources to establish or design a facility to manage product returns, linking with the pitfalls of RL process failures (i.e. poor return segregation) and poor RL planning (i.e. poor facility design) (sections 8.4.1.1.2 and 8.4.1.2.2). Subsequently, failure to commit resources for product return segregation can result in disorganised inventory, contaminated inventory (i.e. mixing new and returned stock), a loss of product/product control (inventory problems), unnecessary returns (product return problem), potential brand/brand image damage and market liabilities (online retailer problems). The following quotations demonstrate these findings:

> "Without resources [for RL] then how are you going to do [and manage] it? […] If you don't invest in resources, you're not going to be able to do [and manage] any of it." (P8, logistics manager, multichannel retailer)

> "[…] everything comes through one door. So, you're sitting with large things [like new products] on top of small things [like returned products] and it's a complete mess […] And I think that's where a lot of businesses missed the mark […] I mean, you can speak to anybody that opens up a new business. They're not going to build a fancy

> design and layout the fancy warehouse for returns. They're going to say, no, of course not. We're going to spend our money on the good stuff [not returns]." (P5, general manager, online retailer)
>
> "I think it is because the online retailer that doesn't [commit resources to RL] […] will be behind in the marketplace […]. You need to have the right space also at your facility. You deal with returns when it does come back so that you can keep the return segregated from, call it, clean stock that hasn't been dispatched so that you don't have cross contamination of items and possibilities of counterfeit goods, for example, entering your supply chain through a back door or having defective merchandise entering your supply chain again." (P2, owner, supply chain consultancy firm)

A *lack of investment* in *IT resources* means that online retailers lack the capability to track the movement of product returns, which can lead to an increase in unnecessary and fraudulent returns, poor return visibility (product return problems), a loss of product/product control (inventory problems), potential market liabilities and poor accountability (online retailer problems). The following quotations depict the impact of a lack of investment in IT resources for RL:

> "You want to make sure that your parcels return to you […], you want to be able to see that stuff, and if you don't invest in systems and information technology […] it's very difficult to manage that and actually proactively get the visibility [of product returns]." (P13, supply chain manager, multichannel retailer)
>
> "[Investment in IT for RL is important] […] because it's a stock that's been returned, it's not stock going out of the system. So, it's basically stock that is nowhere or it's not been accounted since it left the customer till it's been returned to our depot. So, if there's no […] systems in place, you run the risk of potential fraud and potential risk that products may end up being [back] in the [forward logistics] system, which can be problematic." (P11, Demand and sales manager, FMCG distributor)

Various studies in the reviewed literature concur with the interview findings on the impact of inadequate financial resources, lack of facility infrastructure resources and a lack of investment in IT resources on the prevention and control of product returns. For example, a lack of financial resources can hamper the implementation of appropriate product tracking and tracing systems (Jović *et al.* 2020:160; Frei, *et al.* 2020:1619) needed for managing product return uncertainties in terms of volume, frequency and source (Mathu & Khunou, 2021:443). Furthermore, inadequate facility infrastructure causes uncertainties and operational inefficiencies, which can hamper planning, management and control of RL processes (Badenhorst, 2022:330; Meyer *et al*. 2017:12, 13). Similarly, a lack IT resources can hamper product return visibility and the ability to track fraudulent returns (Zhang *et al.* 2023:2, 10). Subsequently, the findings of this study reemphasise the harmful impact of a lack of resources on the management of consumer returns.

8.4.1.2.4 Poor performance measurement (PM) pitfall and related prevention and control problems

The final poor RLM pitfall entails poor PM in RL, which can result in prevention and control problems associated with product returns, inventory and the online retailer. Participants indicated that poor PM in RL can hamper RLM, leading to the online retailer problem of a loss of managerial control. Subsequently, a lack PM in RL can reduce an online retailer's capability to control the flow of product returns, which, like a lack of investment in IT resources (section 8.4.1.2.3), can result in a loss of product/product control (inventory problems), unnecessary or fraudulent returns (product return problems) and potential market liabilities (online retailer problem).

Additionally, failure to measure the performance of staff responsible for handling returned products can lead to stockpiling in the facility (inventory problem), which links to the poor RLM pitfall of inattention to RL. Furthermore, online retailers that fail to centralise and apply PM for RL across functional departments can contribute to accountability and reporting problems (online retailer problems). The following quotations support these findings:

> "And if you don't measure [RL], you can't manage it. So, whether it's reverse or not reverse, if you don't have a measurement process in place, you will not be able to manage something. It's impossible." (P6, logistics manager, multichannel retailer)

> "So, if there's no control measurements […] in place, you run the risk of potential fraud and potential risk that [returned] products may end up being [back] in the [forward logistics] system, which can be problematic." (P11, demand and sales manager, FMCG distributor)

> "[Performance measurement is important for RL] or else we're going to have a second warehouse full of goods and nothing is happening." (P9, regional & online DC manager, online retailer)

> "[…] the company needs to be looked at a centralised bit of information so that all the reporting [for RL] is on the same bit of information. So, the worst thing that can happen is that different departments get measured on different things and they are reporting on different aspects […]." (P8, logistics manager, multichannel retailer)

Poor PM in RL was identified by various studies in the reviewed literature as detrimental to the management and control of product returns and the RL function (Badenhorst, 2022:229; Lamba *et al.* 2020:385; Solati *et al.* 2023:14). In fact, Solati *et al.* (2023:14) found that a lack of a proper performance measurement system is the most significant barrier to effective RLM, emphasising the significance of effective PM practices in RLM. However, this study added further insight into the specific prevention and control problems that can be the result of poor PM, contributing to the motivation of implementing appropriate PM practices for the effective RLM of consumer returns.

Essentially, poor RLM involves the prevention and control pitfalls of inattention to RL, poor RL planning, lack of resources and poor PM, which can lead to various product return, inventory and online retailer problems. Subsequently, the impact of poor RLM on the ability of online retailers to prevent and control product returns, emphasises the importance of implementing efficient and effective RLM practices for the effective RLM of consumer returns.

8.4.1.3 Poor return prevention pitfalls and related prevention and control problems

As illustrated in **Figure 8.20**, poor return prevention as a prevention and control pitfall category involves return leniency and poor gatekeeping, which can lead to product return, inventory and online retailer problems.

Return leniency as a pitfall involves the pitfall elements of lenient return policies, and easy, cost-free and risk-free returns, which can lead to problems related to product returns, inventory and the online retailer. Particularly, a *lenient return policy* can entail a no-questions-asked return policy (e.g. allowing any product returns), which can increase fraudulent or ineligible returns (product return problem). Additionally, online retailers with *easy, cost-free* and *risk-free* returns can create a return culture, which

can lead to the (1) product return problems of high and unnecessary returns and an increase in fraudulent/ineligible returns, (2) inventory problem of contaminated inventory through potential counterfeit product returns, and (3) online retailer problem of a loss of sales (e.g. a consumer buying a dress in two sizes, keeping the correct-sized dress and returning the wrong-sized dress). The following quotations expand on these findings:

> "[…] a no-questions-asked return policy […] it's difficult to say no to those customers, but your customers take chances. So, you do need a [robust] policy." (P8, logistics manager, multichannel retailer)

> "It's very easy to return. And mostly there's no cost involved in returning. So, there's no risk for the purchaser in buying any of the product […] that may perhaps not be suitable when it comes […]." (P2, owner, supply chain consultancy firm)

> "You know, I think [online retailers are] just […] [creating a] culture of returns, […] whilst it is a very nice sales tool to say, well, if you don't like it, bring it back, I'm not sure how sustainable that's going to be […]." (P7, owner, 3PRL provider firm)

> "I've seen in the marketplace and people that shared this with me and because it is so easy [to return] and there are such a variety of online retailers […] it's very easy to buy something at one online retailer and return it to another online retailer where you basically duplicate the transaction and then claim a return from it. And some of the online retailers are also selling counterfeit goods or goods that are not in the right format." (P2, owner, supply chain consultancy firm)

> "I think with clothing, specifically people just buy, and they know there's no risk, so they over purchase […] And that's what a lot of people are telling me […]. I'll buy three pairs of shoes, […] the same model, different colours, and I'll decide at home which one is the one that I like [and return the rest]." (P2, owner, supply chain consultancy firm)

Closely related to return leniency, *poor gatekeeping* as a poor return prevention pitfall involves the pitfall elements of human gatekeeping and a lack of a gatekeeping function, which can result in several product return problems. Participants indicated that *human gatekeeping* can be problematic for online retailers since consumers might convince staff to accept ineligible product returns that fall outside the return policy parameters (e.g. accepting returns outside the return time limit of 30 days), which increases fraudulent and ineligible returns (product return problem). Additionally, using untrained or less skilled operational staff for product return gatekeeping can lead to poor and inconsistent return decision-making and an increase in unnecessary returns (product return problems). Human gatekeeping as a pitfall element can be demonstrated by the following quotations:

> "So, often what happens is [the consumer says] 'I would like to return this laptop'. So, I [the consumer] phone the contact centre and I spin them a whole story about how I'm very poor and I bought this to talk to my grandchildren who are all overseas. […] now there is this whole story behind this return, and [as the contact centre agent] my heart goes out to this person. And so, I authorise the return. The fact of the matter, this person [the consumer] bought the item two years ago and it's out of warranty and it is not returnable. Once you've agreed to pick it up, there's an expectation in the customer's mind that there's going to be an outcome [of accepting the return]." (P1, operations manager, 3PRL provider firm)

> "[…] an operational person with trying to decide at their level, I'm going to give [or allow] this [return], I'm going to give [or allow] that [return]. It's going to go haywire. Hence you need [a] gatekeeping process and [managers as gatekeeping] people." (P6, logistics manager, multichannel retailer)

Similarly, a *lack of a gatekeeping function* can lead to high and unnecessary returns and an increase in fraudulent returns (product return problems) since consumers might abuse a lenient return system. Additionally, failure to implement a gatekeeping function before the returns arrive at the facilities can result in a loss of products (inventory problem) and poor accountability (online retailer problem). For

example, the consumer claimed the return reason as unwanted, but a damaged item arrives at the warehouse, resulting in blame shifting between the consumer and courier. The following quotations substantiate these findings:

> "[…] gatekeeping is the correct word because if people simply return things because Retailer C will just take it back, don't worry […] [and] those floodgates will open, and people will abuse the system. People will buy the dinner jacket because they want to look suave with a date tonight and tomorrow, they are sitting back and saying that it's too small. And so, consumers are much more 'skelm' [untrustworthy] than we give them credit for. So, there are people that absolutely abuse the system." (P5, general manager, online retailer)

> "[…] a product that comes back and is broken, that's a very difficult one from an online point of view, because where was it broken when consumers are not going to take responsibility for it and the transporter is going to tell you it is broken when they collected it. So, there you would need verification at [the] collection point […]." (P4, owner/CEO, 3PRL provider firm)

These observations about to poor return prevention pitfalls and related problems fall in line with the reviewed literature. Specifically, various studies identified that return leniency associated with lenient and no-questions-asked return policies and cost/risk-free returns contribute to (1) higher returns (Andresen & Istad, 2019:57; Ashan & Raham, 2021:24), (2) opportunistic buying and return behaviour of dishonest consumers (Nel & Badenhorst, 2020:121; Zhang *et al.* 2023:10), (3) fraudulent returns, like returning counterfeit or lower-quality products (Shi *et al.* 2021:2172; Nel & Badenhorst, 2020:119; Zhang *et al.* 2023:6), and (4) brand image damage, a loss of consumers and a loss of sales (Ashan & Raham, 2021:24). While Hjort *et al.* (2019:775) agreed that gatekeeping in the warehouse associate with higher unnecessary returns in online retailing, no research was found that identified the impact of human gatekeeping on return prevention and control. Evidently, this study provides new insight into the problems that can arise from poor gatekeeping practices in online retailing. Essentially, online retailers need to implement return prevention practices that addresses return leniency and poor gatekeeping for the effective RLM of consumer returns in online retailing.

8.4.1.4 Information-related pitfalls and related prevention and control problems

The final prevention and control pitfall category involves information-related pitfalls, including poor information sharing with consumers, a lack of supply chain integration (SCI) and poor systems (see **Figure 8.20**), which can result in product return, inventory and online retailer problems.

Poor information sharing with consumers involves the pitfall elements of insufficient information on the website and poor product descriptions and photographs, which can result in product return and online retailer problems. Particularly, the participants mentioned that *inadequate information on the website* can lead to high and unnecessary returns (product return problems), consumer uncertainty and a loss of sales (online retailer problems). For example, only providing delivery information after the payment was made can be problematic if the consumer needs the product earlier than the estimated delivery date. In this case the consumer might decide to visit a bricks-and-mortar retailer to buy the

product and return the online purchased product once received, resulting in an unnecessary return and a loss of sale.

Furthermore, the participants indicated that *poor product descriptions* and *photographs* can increase false failure returns (e.g. the consumer thinks a non-defective product is defective because of unclear instructions) and unwanted returns (e.g. the consumer returns a product because the website photo is different from the actual product), resulting in high and unnecessary returns (product return problem) and consumer dissatisfaction and uncertainty (online retailer problems). The consequences of poor information sharing with consumers can be illustrated in the following quotations:

> "One of the things that I see systems lacking is the ability for the consumer or the purchaser to know when the delivery will take place. You have to go through the whole process of making the purchase. And at the very last step, you only get confirmation of when the delivery will take place. And often that is in such a way that you can't backtrack out of the transaction, meaning you now order a product, but on the final confirmation, it tells you it's only going to get to you in 10 days' time where the consumer then actually needs the product sooner. They then go to the nearest brick and mortar shop, purchase the same product, and again, knowing they can return the online purchase basically for free at a later stage." (P2, owner, supply chain consultancy firm)

> "[…] [the product] might be unwanted […] because the product description didn't tie to the customer's expectation […]. You might say something is defective […] but when you drill down, you might actually find that there's a degree of user ignorance [due to inadequate product descriptions]. So, particularly consumer electronics, this thing doesn't do what I expected it to do, but you need some technical knowledge to be able to operate it." (P1, operations manager, 3PRL provider firm)

> "[…] the dumbest thing you can do is to use old or dated or incorrect photography." (P5, general manager, online retailer)

> "[…] often the returns are [received] […] [because] the consumer didn't quite get the product that they were hoping for […], the product was very different to what was shown in the pictures […]." (P2, owner, supply chain consultancy firm)

While poor information sharing with consumers associates with problems related to product return prevention, a *lack of SCI* associates with problems related to product return control. For instance, a lack of integration between online retailers and couriers/3PLs can result in poor return visibility (product return problem) and the potential loss of the product/product control (inventory problem) due to the inability to track the product from the consumer's location to the facility. The following quotation supports this finding:

> "Look, I think couriers is the other leg that you want to integrate [with] […] for the majority of online retailers, that's a major challenge, trying to figure out where is my parcel between the customer and the DC. Because it's not my own employee, it's a courier [employee] that may have done one of ten things with that parcel." (P5, general manager, online retailer)

Finally, *poor systems* associate with the lack of investment in IT resources as a lack of resources pitfall element. Subsequently, poor systems represent manual operations, which makes return prevention and control problematic. Particularly, online retailers with poor systems may experience an increase in fraudulent product returns, poor return visibility, poor/inconsistent return decision-making (product return problems), a loss of product/product control (inventory problem), market liabilities and a loss of managerial control (online retailer problems). The following quotations illustrate the impact of poor systems on product return prevention and control:

> "[…] reverse logistics is simply not possible without a solid technology platform, because what you'll end up doing is you'll sit in a position where you manually logging things in, but you've got no idea of who's doing what, [and] how to track it." (P5, general manager, online retailer)
>
> "[…] the [online] system leads you through each step of the way with photographs and processes. But if it's a very basic system, you won't have that consistency [in accepting or rejecting product returns] across." (P8, logistics manager, multichannel retailer)
>
> "So, if there's no […] systems in place, you run the risk of potential fraud and potential risk that [returned] products may end up being [back] in the [forward logistics] system, which can be problematic." (P11, demand and sales manager, FMCG distributor)

The interview findings related to poor information sharing with consumers, lack of SCI and poor systems resonate with several studies in the reviewed literature. Specifically, poor information sharing with consumers on the website can increase product returns (Bozzi *et al.* 2022:28; Zhang *et al.* 2022:3188) and enhance consumer uncertainty and dissatisfaction (Bozzi *et al.* 2022:28). Additionally, a lack of SCI and poor systems can hamper product return visibility (Badenhorst, 2022:330; Zhang *et al.* 2023:7) and the ability to track and control returned products (Bozzi *et al.* 2022:19) as well as increase fraudulent returns (Zhang *et al.* 2023:7). Consequently, for the effective RLM of consumer returns, online retailers need to address the respective information-related prevention and control pitfalls to eliminate the resulting problems associated with product returns, inventory and the online retailer.

Essentially, a few studies from the reviewed literature align with the interview findings related to prevention and control pitfalls and problems. However, this study discovered several new prevention and control pitfalls and problems, which online retailers can identify and mitigate for the effective RLM of consumer returns. The next section summarises the interview findings for the prevention and control pitfalls and problems that can hamper the effective RLM of consumer returns.

8.4.1.5 Framework and summary of findings of prevention and control pitfalls and problems in RLM

The interview findings presented in section 8.4.1 shows that various prevention and control pitfalls and problems can hamper the effective RLM of consumer returns in online retailing. Online retailers need to identify the prevention and control pitfalls and problems and understand the cause-and-effect relationship between the prevention and control pitfalls and problems, which can guide them with the implementation of appropriate practices to mitigate specific pitfalls and problems. Figure 8.**7** provides an overview demonstrating the links between the prevention and control pitfalls and problems in RLM.

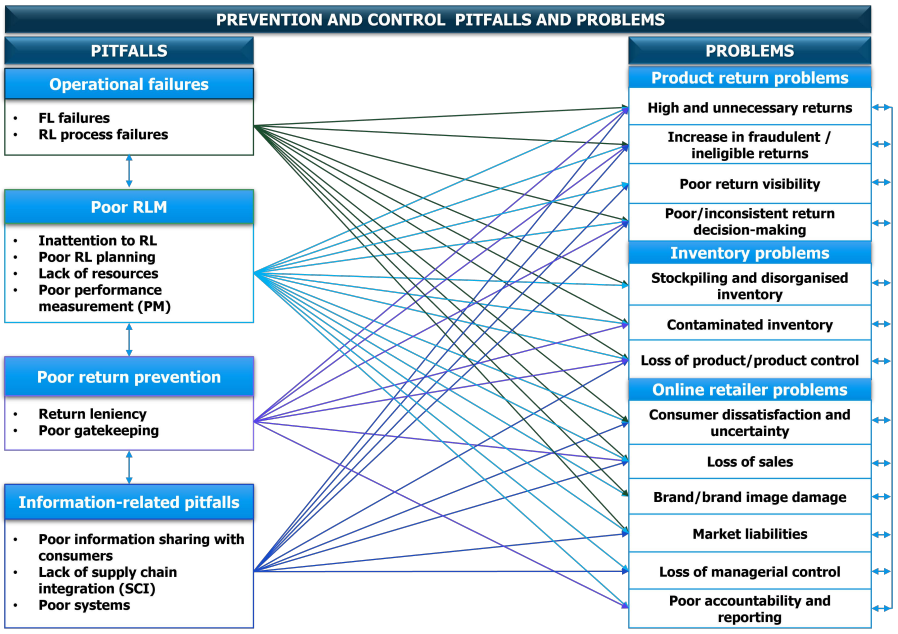


Figure 8.7 Relationship between prevention and control pitfalls and problems in RLM
Source: Compiled by the researcher

Figure 8.**7** provides an overview of the relationship between prevention and control pitfalls and specific prevention and control problems that can hamper the effective RLM of consumer returns. The links between the prevention and control pitfalls and problems in RL can demonstrate the most problematic factors in RL, which must be first addressed by online retailers that experience problems related to prevention and control in RL. Additionally, the framework illustrates links between the prevention and control pitfalls (the arrows on the left reaching more than one subcategory on the right), as well as the links between the prevention and control problems (short blue arrows on the right), which can be important considerations in identifying the most significant pitfalls and problems.

Specifically, the framework demonstrates that poor RLM can be the most significant prevention and control pitfall category, resulting in various product return, inventory and online retailer problems. Consequently, online retailers that experience prevention and control pitfalls related to poor RLM, including inattention to RL, poor RL planning, a lack of resources and poor PM, can expect all the product return, inventory and online retailer problems. Therefore, online retailers must address poor RLM pitfalls first for effective prevention and control in RL.

Additionally, the framework shows that the biggest consequences of the prevention and control pitfall categories can be the product return problems of high and unnecessary returns, increase in fraudulent/ineligible returns and poor/inconsistent return decision-making, the inventory problem of loss of product/product control and the online retailer problem of a loss of sales. Subsequently, online retailers with operational failures, poor RLM, poor return prevention and information-related pitfalls can expect high and unnecessary returns, increase in fraudulent/ineligible returns, poor/inconsistent

return decision-making, a loss product/product control and a loss of sales, which can hamper the effective RLM of consumer returns.

From the findings presented in section 8.4.1, examples of links between the prevention and control pitfalls include the links between (1) inattention to RL (poor RLM pitfall) and RL process failures (operational failures pitfall), (2) poor RL planning (poor RLM pitfall) and return leniency (poor return prevention pitfall) and (3) a lack of resources (poor RLM pitfall) and poor systems (information-related pitfall). Subsequently, addressing inattention to RL can help address RL process failures, addressing poor RL planning can help address return leniency and addressing a lack of resources can help address poor systems. Therefore, online retailers must identify and address the prevention and control pitfalls that contribute to other prevention and control pitfalls first.

Similarly, examples of links between prevention and control problems include the links between (1) high and unnecessary returns (product return problem) and a loss of sales (online retailer problem), (2) increase in fraudulent returns (product return problem) and contaminated inventory (inventory problem), (3) poor return visibility (product return problem) and poor accountability (online retailer problem), (4) inconsistent return decision-making (inventory problem) and consumer uncertainty (online retailer problem), (5) contaminated inventory (inventory problem) and brand/brand image damage (online retailer problem), and (6) a loss of product/product control and market liabilities (online retailer problem). Consequently, addressing high and unnecessary returns can help address a loss of sales, addressing fraudulent returns can help address contaminated inventory, addressing poor return visibility can help address poor accountability, inconsistent return decision-making can help address consumer uncertainty, addressing contaminated inventory can help address brand/brand image damage, and addressing a loss of product/product control can help address market liabilities. Evidently, online retailers must identify and address the prevention and control problems that contribute to other prevention and control problems first.

Nevertheless, online retailers may experience specific prevention and control pitfalls and related prevention and control problems that requires identification for the effective RLM of consumer returns. Subsequently, Table 8.15 provides a detailed summary of the interview findings, demonstrating links between the prevention and control pitfalls, pitfall elements (if applicable), and the specific prevention and control problems that online retailers can encounter.

Table 8.15 Prevention and control pitfalls and related problems

Pitfall category	Pitfalls	Pitfall elements	Product return problems	Inventory problems	Online retailer problems
Operational failures	***FL failures***	Poor procurement	•Unnecessary returns	•Contaminated inventory	•Consumer dissatisfaction •Loss of sales
		Picking failures	•High and unnecessary returns	-	•Consumer dissatisfaction

Pitfall category	Pitfalls	Pitfall elements	Product return problems	Inventory problems	Online retailer problems
		Delivery failures	•Unnecessary returns •Increase in fraudulent returns	-	•Consumer dissatisfaction and uncertainty •Loss of sales •Brand image damage
	RL process failures	Poor inspection	•High and unnecessary returns •Increase in fraudulent/ ineligible returns •Poor/inconsistent return decision-making	•Contaminated inventory	•Brand/brand image damage •
		Poor return segregation	•High and unnecessary returns	•Contaminated inventory	•Brand/brand image damage
		Poor disposition	-	•Stockpiling •Loss of product	•Loss of sales •Brand damage •Market liabilities
Poor RLM	***Inattention to RL***	-	•High and unnecessary returns	•Contaminated inventory •Loss of product/product control	•Loss of managerial control
	Poor RL planning	Poor return policies	•High and unnecessary returns	-	•Loss of sales
		Poor facility & network design	•Poor/inconsistent return decision-making	•Disorganised inventory •Contaminated inventory	•Consumer uncertainty
		Poor SPP	•Poor/inconsistent return decision-making	•Stockpiling •Loss of product/product control	•Brand/brand image damage •Market liabilities •Loss of managerial control
		Poor outsourcing decision-making	•Increase in fraudulent/ineligible returns	•Loss of product/product control	•Brand/brand image damage •Market liabilities •Loss of managerial control •Poor accountability and reporting
	Lack of resources	Lack of RC in RL	•Unnecessary returns	•Disorganised inventory •Contaminated inventory •Loss of product /product control	•Brand / brand image damage •Market liabilities •Loss of managerial control •Poor accountability and reporting
		Lack of investment in IT resources	•Unnecessary returns •Increase in fraudulent returns •Poor return visibility	•Loss of product/product control	•Market liabilities •Poor accountability
	Poor PM	-	•Unnecessary returns •Increase in fraudulent returns	•Stockpiling •Loss of product/product control	•Market liabilities •Loss of managerial control •Poor accountability and reporting
Poor return prevention	***Return leniency***	Lenient return policies	•Increase in fraudulent/ ineligible returns	-	-
		Easy, cost-free and risk-free returns	•High and unnecessary returns •Increase in fraudulent/ ineligible returns	•Contaminated inventory	•Loss of sales
	Poor gatekeeping	Human gatekeeping	•Unnecessary returns •Increase in fraudulent/ ineligible returns •Poor/inconsistent return decision-making	-	-
		Lack of a gatekeeping function	•High and unnecessary returns •Increase in fraudulent/ ineligible returns	-	•Poor accountability
Information-related pitfalls	***Poor information sharing with consumers***	Insufficient information on the website	•High and unnecessary returns	-	•Consumer uncertainty •Loss of sales
		Poor product descriptions & photos	•High and unnecessary returns	-	•Consumer dissatisfaction
	Lack of SCI	-	•Poor return visibility	•Loss of product/product control	-
	Poor systems	-	•Increase in fraudulent returns •Poor return visibility •Poor/inconsistent return	•Loss of product/product control	•Market liabilities •Loss of managerial control

Pitfall category	Pitfalls	Pitfall elements	Product return problems	Inventory problems	Online retailer problems
			decision-making		

Source: Compiled by the researcher

Table 8.15 summarises the findings for subtheme 1, linking the prevention and control pitfalls, pitfall elements and resulting problems. Online retailers can use the table to identify prevention and control pitfalls and related elements with corresponding prevention and control problems, which can help them to address specific prevention and control pitfalls and problems in RL.

For example, online retailers that use staff for gatekeeping (human gatekeeping pitfall element of a poor gatekeeping) in RL can identify the resulting product return problems of unnecessary returns, increase in fraudulent/ineligible returns and poor/inconsistent return decision-making, which might motivate them to implement an online gatekeeping function. Additionally, online retailers that experience, for example, stockpiling as a prevention and control inventory problem can investigate the possible causes that may include the RL process failure pitfall element of poor disposition, and the poor RL planning pitfall elements of poor SPP and poor PM. Subsequently, online retailers that experience product return stockpiling can identify that they must prioritise addressing RL process failure and poor RL planning pitfalls.

Moreover, online retailers can use the table to identify the most problematic prevention and control pitfalls and/or pitfall elements and the most significant prevention and control problems in RL that they must address or avoid for effective RLM. For instance, the most problematic prevention and control pitfall includes poor PM in RL, associating with eight prevention and control problems, which means that online retailers must avoid or address poor PM in RL for effective prevention and control of consumer returns. This finding corresponds with Solati *et al.* (2023:14) who identified poor PM in RL as the most significant barrier in RLM. Similarly, other problematic prevention and control pitfalls/pitfall elements, associating with seven prevention and control problems, that online retailers need to address include poor outsourcing decisions (poor RL planning pitfall) and lack of RC in RL (lack of resources pitfall). Subsequently, poor RLM can be detrimental to effective prevention and control in RL, emphasising the importance of implementing practices to improve RLM.

Finally, online retailers can identify that the problem of unnecessary returns (linked to 14 pitfall elements), followed by high returns and a loss of product/product control (linked to nine pitfall elements), can be the most significant prevention and control problems in RL, which may motivate them to implement various RL practices for improved return prevention and control.

Although online retailers can focus on addressing specific prevention and control pitfalls and related problems to improve return prevention and control in RL, they can gain even more advantages by

identifying and implementing appropriate prevention and control propositions in RL. Subsequently, the next section focuses on the prevention and control propositions for the effective RLM of consumer returns.

8.4.2 Prevention and control propositions – Subtheme 2

As illustrated in Figure 8.5, and discussed in section 8.2.2., the main prevention and control propositions, including *proactive return prevention* (PRP) (section 8.4.2.1), *reactive return prevention* (RRP) (section 8.4.2.2), *reverse logistics control* (RLC) (section 8.4.2.3) and *prevention and control parameters* (section 8.4.2.4), consist of proposition categories, key practices/parameters and support RL practices, which can be implemented and considered for the effective RLM of consumer returns. Based on the interview findings, Figure 8.8 provides a detailed overview of the prevention and control propositions in RL.

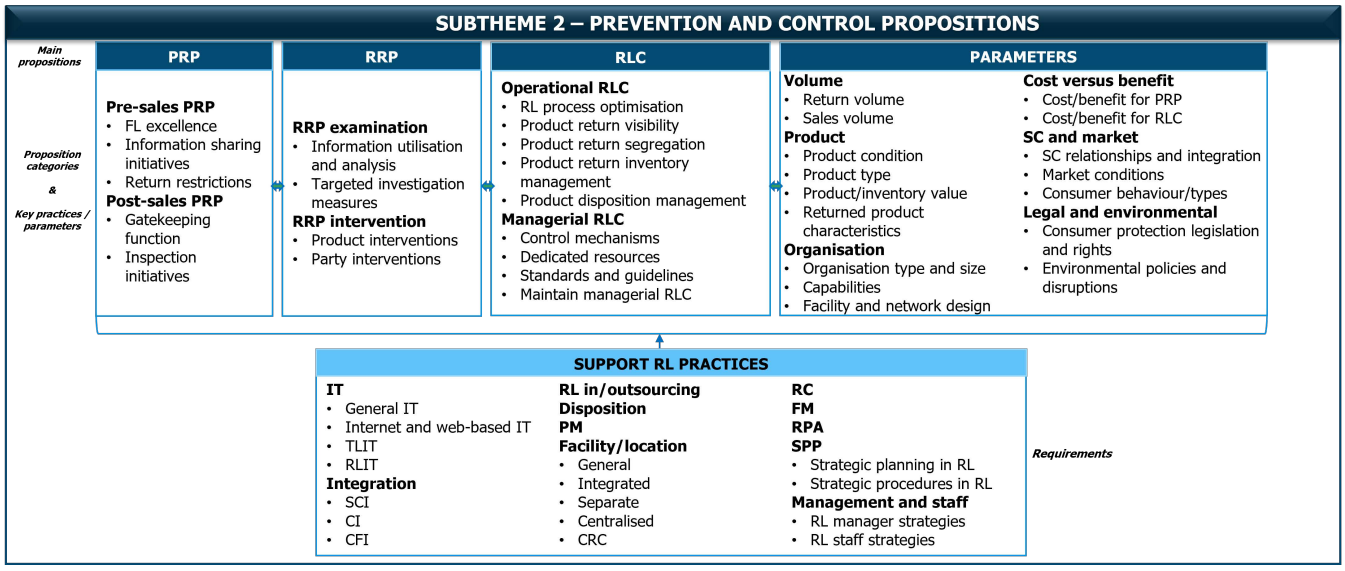


Figure 8.8 Detailed overview of prevention and control propositions in RL
Source: Compiled by the researcher

Figure 8.8 shows the main prevention and control propositions (headings), proposition categories (subheadings in bold) and key practices/parameters (bulleted), and the support RL practices (bottom of Figure 8.8). In section 8.2.2, details regarding the presentation and format of the propositions applicable to each theme were provided, including key practice/parameter elements (not listed in **Figure 8.15** but included in the discussion of the key practices/parameters). Based on **Figure 8.15**, the main prevention and control propositions, including proposition categories, key practices/parameters, key practice/parameter elements (if applicable) and support RL practices, will be discussed in the subsequent sections. This section concludes with a prevention and control proposition framework and a summary of the findings, demonstrating the links between the prevention and control propositions.

8.4.2.1 Proactive return prevention (PRP) propositions

According to Dobson (2023:10), online retailers must implement any method thinkable to proactively prevent products returns. PRP as a main prevention and control proposition involves the proposition categories of *pre-sales PRP* and *post-sales PRP*, which can be implemented to address various prevention and control pitfalls and problems. The PRP proposition categories of pre-sales PRP and post-sales PRP will be described and analysed.

8.4.2.1.1 Pre-sales PRP

Pre-sale PRP as a proposition category involves the key practices of *FL excellence*, *information sharing initiatives* and *return restrictions* (see **Figure 8.15**), which can address several prevention and control pitfalls and problems. These key practices will be described in the subsequent paragraphs.

- *FL excellence for pre-sales PRP*

FL excellence as a key pre-sales PRP practice involves several key practice elements, which include the 6 Rs of logistics, effective procurement and inbound inspection, and FL staff education.

Specifically, the *6 Rs of logistics* for FL excellence involves delivering the *right product*, in the *right quantity*, in the *right condition*, at the *right place*, at the *right time*, to the *right customer*. The 7th R of logistics include the "right price", which might entice the consumer to purchase the product in the first place. However, the right price never surfaced in the interview findings as a RL factor, justifying the 6 Rs of logistics to proactively prevent consumer returns. The following quotations illustrate the importance of the 6 Rs of logistics for pre-sales PRP:

> "[…] if you can provide an exceptional forward logistics, your reverse logistics will reduce. No doubt about it." (P10, Head of Sales and Logistics, OEM/multichannel retailer)

> "Firstly, you have to ensure [that] the right goods get to the right customer at the right time. So, that is basically what it is and in the right condition […] if you get that right from an outgoing perspective, you will see your returns being minimised." (P9, regional & online DC manager, online retailer)

> "So, it's about ensuring that the right product was sent to the right customer […]." (P2, owner, supply chain consultancy firm)

Furthermore, the participants suggested that online retailers can focus on pick accuracy, control and integrity to ensure that the *right product* in the *right quantity* and in the *right condition* is delivered to the consumer. Similarly, online retailers can use effective packaging and reduce handling activities to ensure that products are delivered in the *right condition*. Moreover, online retailer can implement consumer identification measures (such as a pin number) to ensure that the *right customer* receives the *right product*. Some of these examples can be demonstrated by the following quotations:

> "[…] the way that you reduce returns is accuracy. You triple check on your accuracy of your picking." (P7, owner, 3PRL provider firm)

> "[…] the right product must be the right item, it must be the right size, it must be the right colour variant, etc. […] because often […] the consumer will say, well, I have ordered green and you've sent me blue […] there's not enough checking on what's being sent to the consumer." (P2, owner, supply chain consultancy firm)

> "So, the packaging and picking integrity outside of the accuracy, that's really important, because a lot of comebacks are because of customers saying […]. It looks like it went through war before it got to my door. Take it back. I want another one." (P5, general manager, online retailer)

> "And ensure that the product is adequately packaged so that when it does go to the consumers [it is] not broken or torn or doesn't look shabby. I think that way would minimise it." (P4, owner/CEO, 3PRL provider firm)

> "Anything that has been handled quite a few times has a risk or exposure of being damaged. So, we try and reduce the amount of times that an item is handled, meaning that to reduce the probability of damages." (P10, Head of Sales and Logistics, OEM/multichannel retailer)

> "[…] the consumer often […] [is] not physically present to sign for and open the parcel […]. So, it's very much checking on the outside [of the parcel] […] [to] see that you've given the right thing [the product] to the right person [the consumer]. (P2, owner, supply chain consultancy firm)

Additionally, participants indicated that online retailers could benefit by focusing on the perfect order ratio to ensure that the *right product* in the *right condition* and in the *right quantity* is delivered to the *right consumer* at the *right time*, which can prevent unnecessary and fraudulent product returns. Evidently, online retailers must focus on providing consumers with exceptional FL delivery service for effective pre-sales PRP, as emphasised in the following quotations:

> "And the most important thing is to ensure that we achieve a perfect order ratio […] making sure that there's no errors in the delivery, making sure that there's no damages, [so that] there's no returns. [We are] making sure that we deliver on the correct delivery dates, making sure that the correct quantities […] matches the order […]. So, we believe that quality is critical." (P10, Head of Sales and Logistics, OEM/multichannel retailer)

> "[…] we try to reduce the amount of times […] the customer goes to social media badmouthing your company […]. And the way you do it again is by providing the best customer service […] because if you providing this customer with the most exceptional service from the get go and he receives his product, I can tell you now already he'll embrace it. Some customers will end up deciding, you know what, I'm going to be vindictive and say, because you provided me with such below par service, substandard service mediocrity, I'm going to show you something and I'm going to show you that I will damage this product [and return it fraudulently]." (P10, Head of Sales and Logistics, OEM/multichannel retailer)

Subsequently, *implementing the 6 Rs of logistics* can help online retailers address the FL inefficiency pitfall elements of picking failures and delivery failures, which involves the (1) product return problems of high and unnecessary returns and an increase in fraudulent returns, and (2) online retailer problems of consumer dissatisfaction (e.g. receiving a damaged product), consumer uncertainty (e.g. receiving products with damaged outer packaging), a loss of sales (e.g. late deliveries causing consumers to shop elsewhere) and brand image damage (see section 8.4.1.1.1).

Online retailers can perform *effective procurement* and *inbound inspection* to address poor procurement as a FL failure pitfall element, which can reduce unnecessary product returns, contaminated inventory, consumer dissatisfaction and a loss of sales (see section 8.4.1.1.1). For instance, online retailers can find suppliers with higher quality products and perform more effective inbound receiving inspection to ensure that any visible defects and dead-on-arrival products can be identified before damaged/defective products are placed in inventory and sold to online consumers. This finding can be demonstrated by the following quotation:

> "[To avoid or reduce consumer returns] improve the quality of your merchandise, […] make sure that the inbound inspection of all your products is high […] and embedded into your buying practices […]." (P8, logistics manager, multichannel retailer)

Finally, participants indicated that online retailers could *educate FL staff* for FL excellence to proactively prevent consumer returns. Particularly, the participants suggested that online retailers train FL staff to understand RL and the implications of FL failures as drivers of consumer product returns. Therefore, understanding RL may motivate FL staff to be more attentive during product picking, packing and handling. The following quotation support this finding:

> "[…] just as well as you understand the forward logistics, you have to understand, it's a must, that you understand reverse logistics. […] if you've got a team being responsible for forward logistics and they do not understand […] [that] forward logistics can contribute to reverse logistics, then you shouldn't have them there. And that's the reason why it's important that you train your individuals." (P10, Head of Sales and Logistics, OEM/multichannel retailer)

Since the establishment of FL excellence focuses on FL efficiencies, limited RL support practices can be used for the effective implementation of FL excellence as pre-sales PRP. Nevertheless, online retailers can implement (as supported by literature) return prevention and avoidance (RPA) practices (section 6.9.3) and the RL staff strategies of developing and implementing RL training and education programmes (section 6.9.5).

The interview findings in this section are in line with the pre-sales return avoidance and prevention practices identified from the reviewed literature, including (1) quality management and control (Davidavičienė & Al Majzoub, 2021:19; Euchi *et al. 2*019:49), (2) reduction of picking and delivery errors (Bozzi *et al.* 2022:20; Hjort *et al.* 2019:779) to deliver products in the right condition and quantity (Heyns & Kilbourn, 2022:11), (3) appropriate packaging, (4) the right product to the right consumer (Hjort *et al.* 2019:776, 779) and (5) effective procurement (Zhang *et al.* 2017:156). While Bozzi *et al.* (2022:30) found that managers involved in logistics are aware of the impact of consumer returns, no study identified training of FL staff as a pre-sales PRP measure. Therefore, this study provides a new avenue for online retailers to proactively reduce unnecessary returns.

Essentially, FL excellence can help online retailers address the prevention and control pitfall of FL failures (operational failure pitfall) as well as the prevention and control problems of high and unnecessary returns, an increase in fraudulent returns (product return problems), contaminated inventory (inventory problem), consumer dissatisfaction and uncertainty, a loss of sales and brand image damage (online retailer problems).

- *Information sharing initiatives for pre-sales PRP*

Information sharing initiatives as a key pre-sales PRP practice involves initiatives, including product descriptions, photography and consumer education (key practice elements), which can help consumers make better purchasing decisions.

For *product descriptions,* the participants suggested that accurate metadata on the website (e.g. correct specifications and size guides) and detailed and informative product descriptions can reduce returns. Regarding *photography,* the participants indicated that the online images must accurately reflect the actual product through in-house photography. Lastly, participants mentioned several *consumer education* initiatives for pre-sales PRP, including (1) videos/video links (e.g. YouTube links) to educate consumers on the correct use of the product, (2) product reviews, using verified shoppers (consumers) to educate or inform potential buyers on product quality, performance, usage and other characteristics, and (3) showrooming, providing consumers the opportunity to physically view products at a physical location before buying it online. These suggestions can be demonstrated by the following quotations:

> "[…] make sure that your online image reflects exactly what the customer's going to get, so that it doesn't confuse them with colour or quality. And make sure that the metadata on your website […] is 100 percent accurate so that the sizes and weights and dimensions are all 100 percent right." (P8, logistics manager, multichannel retailer)

> "[…] we had four in-house photography rooms. We would make sure that the visual that you get is actually the same as when you get the real item in your hands. It should look the same and it must be in detail. And where possible, you must have a YouTube link. Show a little video, show what it can do. So, it's all about visibility and information, give them the specifications, drill down into the specs. It's a lot of people that understand all this [product] information. Let them review it, make sure the [potential] customer understands, if it's cotton, you're going to have a shrinkage issue. You might have a three to 10 percent shrinkage. […] So, the more information […] the better, because that will entice the customer to make a better choice at the end of the day." (P12, Head of logistics, online retailer)

> "[…] the best way to minimise it […] [is to] educate the consumer as to what they're getting […]." (P4, owner/CEO, 3PRL provider firm)

> "I think if you can get it over to the customer […] in terms of what they're buying, […] like I said, showrooming or videos […]." (P13, supply chain manager, multichannel retailer)

As support RL practices online retailers can implement (as supported by literature) the consumer integration (CI) strategy of consumer education initiatives (section 6.4.2) and the RPA strategy of consumer support initiatives (section 6.9.3). The interview findings related to information sharing initiatives for pre-sales PRP correspond to various studies in the reviewed literature, including (1) accurate size guides and fit information (Bozzi *et al.* 2022:15; Hjort *et al.* 2019:778), (2) detailed and informative product descriptions (Gustafsson *et al.* 2021:877; Hjort *et al.* 2019:777; Nel & Badenhorst, 2020:127; Zhang *et al.* 2017:156), (3) appropriate and realistic photography (Bozzi *et al.* 2022:15; Hjort *et al.* 2019:778), and (4) consumer education initiatives (Mostert *et al.* 2017:10), including online videos (Bozzi *et al.* 2022:15; Nel & Badenhorst, 2020:127), product reviews (Li *et al.* 2021:1824) and showrooming (Bozzi *et al.* 2022:14).

Subsequently, this study reaffirms the importance of various consumer information sharing initiatives for pre-sales PRP, which can help online retailers address the prevention and control pitfall of poor information sharing with consumers (information-related pitfall) and related problems of high and unnecessary returns (product return problem), and consumer dissatisfaction and uncertainty (online retailer problems).

- *Return restrictions for pre-sales PRP*

Return restrictions for pre-sales PRP involves the key practice elements of developing and implementing robust policies and clearly communicating return conditions and policies to consumers. Particularly, participants suggested that online retailers *develop* and *implement robust return policies* with stricter return conditions, like a shorter return period (e.g. 14 days instead of 30 days) or charging return costs (e.g. administrative or transportation fees). Developing and implementing robust return policies can help online retailers avoid potential situations of receiving an influx of returns for large orders and reduce the possibility of fraudulent returns, as suggested in the following quotations:

> "[…] your policy needs to be sound […] You're talking to somebody that bought two million rands worth of electronics with you, and they don't want to pay you. Or they are saying that your product is substandard, and they want to send it back. So, if you don't have a robust returns policy, you're going to get a hiding [with high product returns]." (P5, general manager, online retailer)

> "Probably what you can do is reduce the amount of days or clemency that a customer has available to return […] have certain clauses in place so, […] within that two weeks that customer could damage a product. He could damage the product himself and say that he wants to return it. So, have some sort of a [restrictive return] policy […]." (P10, Head of Sales and Logistics, OEM/multichannel retailer)

> "[…] they will reduce the number of returns if they do attach a cost to the return." (P2, owner, supply chain consultancy firm)

Additionally, participants suggested that online retailers clearly *communicate return conditions* and *return policies* to consumers on their websites for pre-sales PRP. For example, warning consumers that no returns will be accepted for used, worn or opened products, which can reduce fraudulent product returns. Furthermore, online retailers can reduce unnecessary and ineligible product returns by clearly indicating non-returnable products. The following quotations convey these findings:

> "You need to be very clear. Your website needs to be clear from the get-go. You need to say to your consumer in the fine print that if you buy this jacket and you wear it, no matter what […] we're not going to take it back […] to minimise that risk [of fraudulent returns]." (P5, general manager, online retailer)

> "[…] you must have a very clear returns policy on [the website] […] I think that's a great way to try to avoid unnecessary returns." (P3, returns manager, online retailer)

> "[…] you have to be clear with your customer. You have to standardise that […] You have to be clear about what's acceptable and what's not accepted and what product can be returned and what product is likely to get refunded. So, if somebody buys underwear and they send it back, you're not going to get a refund for it, or you don't take it back […]." (P13, supply chain manager, multichannel retailer)

Evidently, as support RL practices for the creation of effective return restrictions, online retailers can implement (as supported by literature) the CI strategies of consumer communication and information (section 6.4.2), and RPA strategies of clear return policies and return restrictions (section 6.9.3). The

interview findings related to return restrictions for pre-sales PRP align with the findings of Zhang *et al.* (2023:10), who indicated that stricter return policies and clearly communicated return policies and procedures can reduce unnecessary and fraudulent consumer returns. Additionally, Andresen and Istad (2019:8) agree that a clear return policy can be important for decreasing the number of consumer returns in online retailing.

Consequently, return restrictions for pre-sales PRP can help address the prevention and control (1) pitfalls of poor RL planning (poor RLM), return leniency (poor return prevention) and poor information sharing with consumers (information-related pitfall), and (2) problems of high and unnecessary returns, increase in fraudulent/ineligible returns (product return problems) and consumer uncertainty (online retailer problem).

8.4.2.1.2 Post-sales PRP

As illustrated in **Figure 8.15**, post-sales PRP as a proposition category involves the key practices of gatekeeping and inspection initiatives, which can address several prevention and control pitfalls and problems. These key practices will be described in the subsequent paragraphs.

- *Gatekeeping initiatives for post-sales PRP*

Gatekeeping initiatives as a key post-sales PRP practice involve the prevention of unnecessary and fraudulent returns through online authorisation and an appropriate gatekeeping function (key practice elements). Specifically, some participants indicated that online retailers must digitise their return policies and use non-human *online authorisation* procedures to automatically reject invalid product returns, which can avoid unnecessary, fraudulent and ineligible returns (product return problems). The following quotations show the value of online authorisation as a gatekeeping practice for post-sales PRP:

> "I think being able to validate returns on the front end is critical. So, your returns policy is translated into your online functionality. So, if I wanted to add something your system knows when I bought it, it knows what the rules are for the particular reason I'm returning it […] that authorisation piece doesn't need human interaction." (P1, operations manager, 3PRL provider firm)

> "So, often what happens is [the consumer says] 'I would like to return this laptop'. So, I [as the consumer] phone the contact centre and I spin them a whole story […], and [as the contact centre agent] my heart goes out to this person. And so, I authorise the return. The fact of the matter [is], this person [the consumer] bought the item two years ago and it's out of warranty and it is not returnable […]. So, avoiding that on the front end by digitising your returns policy […]. Your computer system understands what the product is and when they [the consumer] bought it, what the return parameters are for that item, what the policy is for that item and allows that customer to return it or rejects the return with treatable messaging. That avoids those sorts of fraudulent returns right at the outset." (P1, operations manager, 3PRL provider firm)

Other participants indicated that human involvement in gatekeeping can still prevent unnecessary and fraudulent returns, provided that online retailer establish an *appropriate gatekeeping function*. For instance, online retailers can request photos of products to assess the condition of the product before

accepting the return or restrict call centre agents in using the online authorisation system and order/invoice numbers to determine the validity of the product return request. Additionally, online retailers can use managers as gatekeepers, avoiding acceptance of ineligible product returns and poor/inconsistent return decision-making (product return problem). The following quotations illustrate the importance of establishing an appropriate gatekeeping function for post-sales PRP:

> "So, when it comes to Retailer D, there is certain criteria that needs to be done right. So, when a customer logs a return, they obviously need to take a photo of an item, a picture of something so that the person [gatekeeper] can see that item has been used. It obviously gets declined right away […]. I think that's a great way to try to avoid unnecessary returns." (P3, returns manager, online retailer)

> "I think you should have the algorithms in place in the system […] the system will say. All right, Mr. X, you would like to return your product […] just click on this website or on this link and you will go through the whole [return authorisation] process […]. So, the gatekeeping mechanism should be there on the website. Or if it happens that he [Mr. X] decides to contact the call centre because he does not have access to the website […] the call centre enters his order number, and you [the call centre agent] can say, all right, Mr. X, based on this, you bought this product probably three months ago and unfortunately, we cannot entertain your return." (P10, Head of Sales and Logistics, OEM/multichannel retailer)

> "[…] some things [like return authorisation] need decisions at a higher [managerial] level. You never want to confuse an operational person with trying to decide at their level [where they might decide], I'm going to give [or accept] this [return], I'm going to give [or accept] that [return]. It's going to go haywire. Hence you need [a] gatekeeping process and [managers as gatekeeping] people." (P6, logistics manager, multichannel retailer)

As support RL practices for the effective implementation of gatekeeping, online retailers can implement (as supported by literature) the (1) Internet and web-based IT strategies of developing online return capabilities and using the Internet and website for RL (section 6.3.2), (2) CI strategies of consumer communication, information sharing and interaction (section 6.4.2), (3) RPA strategy of implementing gatekeeping practices (section 6.9.3), and (4) RL manager strategy of assigning experienced managers to RL (section 6.9.5). Nevertheless, implementing gatekeeping for post-sales PRP can be dependent on the effective implementation of return restrictions (key pre-sales PRP practice) to proactively prevent unnecessary and fraudulent returns.

The interview findings related to gatekeeping for post-sales PRP correspond with the findings of Hjort *et al.* (2019:774, 778), who identified that early gatekeeping at the point of the consumer return request, asking for photos and verifying order numbers can help post-sales avoidance of unwanted consumer returns. However, this study uniquely identifies that digitising return policies and online authorisation can automatically reject fraudulent returns, implying that online retailers must integrate their return policy parameters into their online functionality for effective post-sales PRP. Additionally, using managers for gatekeeping to avoid ineligible product returns and poor/inconsistent return decision-making extends return prevention and avoidance literature.

Essentially, gatekeeping initiatives as a key post-sales PRP practice can address the prevention and control (1) pitfalls of a lack of resources (poor RLM), return leniency, poor gatekeeping (poor return prevention) and poor systems (information-related pitfall) and (2) problems of high and unnecessary

returns, increase in fraudulent/ineligible returns and poor/inconsistent return decision-making (product return problems).

- *Return inspection initiatives for post-sales PRP*

Closely related to gatekeeping, participants suggested the implementation of return inspection initiatives as a key practice for post-sales PRP. Return inspection initiatives include the key practice elements of preventative inspection at consumer locations and preventative inspection at online retailer locations.

While inspection mostly takes place after the receiving process in the warehouse (see section 5.4), some participants suggested that online retailers could use dedicated staff to perform *preventative inspection at consumer locations* before collection, ensuring that the return reasons given by consumers are valid. For example, due to user error a consumer might believe that a product is faulty, resulting in logging a return and claiming that the product is defective. Subsequently, by inspecting "defective" products at consumer locations, dedicated staff might facilitate consumers with operating the product, complementing information sharing initiatives (e.g. providing detailed product instructions) as a key pre-sales PRP practice (section 8.4.2.1.1) to prevent "false failure" returns. Apart from preventing unnecessary product returns, preventative inspection at consumer locations can address problems related to a loss of products (inventory problem) and poor accountability (online retailer problem). The following quotations highlight the importance of preventative inspection at consumer locations:

> "[…] let's put a dedicated team in there that are our first line evaluators […] that can go to the customer and say, you know what, before I take this laptop from you, can we quickly do one, two, three and four, maybe solve it right there." (P5, general manager, online retailer)

> "But if a product comes back and it's broken, that's a very difficult one from an online point of view. Because where was it broken when consumers are not going to take responsibility for it and the transporter is going to tell you it is broken when they collected it. So, there you would need verification at [the] collection point […]." (P4, owner/CEO, 3PRL provider firm)

Nevertheless, most participants described *preventative inspection* at *online retailer locations*. Particularly, the participants indicated that online retailers could implement proper verification processes, allow supplier/manufacturer inspection and/or use dedicated RL disposition staff to prevent unnecessary and fraudulent product returns (e.g. counterfeit and used products). Likewise, participants indicated that online retailers must train inspection staff to make correct decisions about the condition of the product and on consumer behaviour to prevent unnecessary false failure returns. Additionally, online retailers can use their return policies to train inspection staff to detect potential fraudulent product returns, emphasising the importance of return restrictions (such as a robust return policy) for PRP. These findings can be illustrated by the following quotations:

> "And the only way you're going to really minimise [a fraudulent return] is that when it arrives, make sure the verification is correct […]. I don't think you can stop the fraudulent intent, but you can stop fraud from happening through a proper verification process." (P4, owner/CEO, 3PRL provider firm)

> "And they [the inspectors] might be external parties […]. They might be physical inspectors from the manufacturer at the online retailer's premises to verify that the return goods are in fact the original goods and not counterfeit goods." (P2, owner, supply chain consultancy firm)

> "But the value-add team, they would have to take that garment out of the bag […] to see whether there are any makeup marks or any dirt marks […] to see whether it's actually been worn. If so, they'll return it to the customer, and say, you know what, you wore it, we've got lipstick, mascara or deodorant or perfume on the jacket, we can't resell it. Sorry you take it [back], you keep it." (P5, general manager, online retailer)

> "Rather educate the staff to filter the decision properly. So, train the inspectors on how to manage your actual product. And that would reduce the number of comebacks you get […]. Train them on consumer behaviour, saying before you tell me that the product is broken, you know, just try one, two and three and [the consumers], they'll say, oh, OK, now that works perfectly." (P5, general manager, online retailer)

> "[…] we have a returns policy and whenever we train the people, we obviously use the policy as kind of a guideline to evaluate your return. […] a lot of untrained people, they will accept the return that the customer has misused and in which case they should have actually declined it and send it back to the customer. Training is of the utmost importance." (P3, returns manager, online retailer)

As support RL practices for the implementation of return inspection initiatives, online retailers can implement (as supported by literature) the (1) supply chain integration (SCI) strategies of SC collaboration, cooperation and strategic sharing of responsibilities (section 6.4.1), (2) CI strategies of consumer support initiatives, communication, information sharing and interaction (section 6.4.2), (3) resource commitment (RC) strategy of human RC (section 6.9.1), (4) RPA strategy of consumer support initiatives (section 6.9.3), and (5) RL staff strategies of establishing a RL function, developing RL skills/knowledge and implementing RL training and education (section 6.9.5).

While home inspection as a preventative initiative corresponds with the findings of Hjort *et al.* (2019:775), this study added inspection at online retailer locations as an initiative to proactively prevent consumer returns. Therefore, multiple inspection initiatives, including home inspections, dedicated and trained RL staff and manufacturer inspections, can be considered by online retailers for post-sales PRP. Additionally, this study shows that return inspection initiatives as a key post-sales PRP practice can address the prevention and control (1) pitfalls of RL process failures (operational failure), lack of resources (poor RLM), return leniency, poor gatekeeping (poor return prevention), poor information sharing with consumers and a lack of SCI (information-related pitfall), and (2) problems of high and unnecessary returns, increase in fraudulent/ineligible returns, poor return decision-making (product return problems), contaminated inventory, a loss of product (inventory problems), consumer dissatisfaction and uncertainty, loss of sales, brand image damage, market liabilities (e.g. reselling counterfeit or defective stock) and poor accountability (online retailer problems).

Essentially, the findings presented in section 8.4.2.1 shows that the PRP propositions of pre-sales PRP and post-sales PRP can help address various prevention and control pitfalls and problems, which can help online retailers with the effective RLM of consumer returns.

8.4.2.2 Reactive return prevention (RRP) propositions

RRP as a main prevention and control proposition involves the proposition categories of *RRP examination* and *RRP intervention* to prevent future product returns, which can be regarded as the opposite of PRP (proactive return prevention) practices. Nevertheless, RRP propositions can complement the PRP propositions to holistically prevent and avoid product returns and address prevention and control pitfalls and problems. In the subsequent sections, RRP examination and RRP intervention as RRP proposition categories will be described and analysed.

8.4.2.2.1 RRP examination

RRP examination as a RRP proposition category involve the key practices of *information usage and analysis* and *targeted investigation measures* (see **Figure 8.15**) to examine the causes of consumer returns, which will be discussed in the subsequent sections.

- *Information usage and analysis for RRP examination*

Participants identified several sources of information that online retailers can use and analyse for RRP examination. Particularly, participants suggested that online retailers use and analyse consumer feedback and complaints data, product return data and KPI data (key practice elements) as sources of information to examine product return reasons. For instance, establishing robust consumer feedback loops to analyse *consumer feedback* and *complaints data* can help online retailers identify problems in the FL process and procurement, complementing the key pre-sale PRP practice of FL excellence (section 8.4.2.1.1). Additionally, online retailers can encourage information sharing between departments and in the SC to analyse consumer feedback and complaints data to prevent future returns. Using consumer feedback and complaints data for RRP examination can be demonstrated by the following quotations:

> "[…] you have robust feedback loops. So, when returns do happen, you're able to understand why. Look, you will always get a certain level of returns. But when they're driven by either operational process or [the] product itself, unless you're getting that feedback [from consumers], you're not going to fix these processes, you just exacerbate the problem. So, I think that those are probably key." (P1, operations manager, 3PRL provider firm)

> "[…] the customer wasn't happy and complained, you know, the customer always complained due to something that was an error in their order or there was a missed delivery or delay and 90 percent [are] related to returns. So, it just becomes so important for us because this is where we improve our business. You know, we pull from the complaints [data] to iron out the creases […]." (P9, regional & online DC manager, online retailer)

> "Our supply chain will interact with our sales department or the sales executives and, [an] investigation and communication between various functions will be done with the customer to see where the problem is." (P11, demand and sales manager, FMCG distributor**)**

Moreover, online retailers can obtain *product return data* from appropriate IT systems, like AI and predictive analytics software, to identify problems with products or brands associated with high returns. Additionally, a dedicated RL manager can be used to analyse product return data and perform a root

cause analysis for return reasons. Alternatively, 3PRL providers with specialised return data capabilities can be used to explore return reasons related to defects. Subsequently, using and analysing product return data can help online retailers identify and mitigate the FL failure pitfall elements of poor procurement and delivery efficiencies (section 8.4.1.1.1). The following quotations support these findings:

> "I think [using IT to manage RL] helps you understand product behaviour, too. So, we are able to identify which brands have more issues, which brands need more robust packaging, which brands are more reliable versus unreliable brands […]." (P4, owner/CEO, 3PRL provider firm)

> "If you have that manager […] I think it would be good for someone to watch over it and to see if it can be used through AI and predictive analytics. You could start collecting information to see now three bags of cat food [was] returned. There seems to be a problem with a specific product line with a specific batch, or I'm finding that all of these brands of computers are being returned […]." (P2, owner, supply chain consultancy firm)

> "[…] looking at a root cause analysis as to what are the causes of the returns. I mean, it could be a myriad of things. It could be damages, it could be product issues, it could be actual products or dead-on-arrival products being latent damages, et cetera." (P10, Head of Sales and Logistics, OEM/multichannel retailer)

> "I would definitely outsource reverse logistics and I would use a company that is specialised with it, because your [product return] data then becomes more relevant […]. So, [for] example, you can then pick out [and identify] if you've sold 30 items and 20 has been returned, then there's a problem with that product. […] It might be a default, it might be malfunctioning, it might be wrongly manufactured." (P12, Head of Logistics, online retailer)

Finally, participants suggested that online retailers use and analyse *KPI data*, like product return metrics and SC metrics, for RRP examination. Particularly, online retailers can use returns versus sales percentage as a product return metric to identify and examine causes of high product returns. Additionally, the product return metric of return reasons and SC metrics of supplier performance (e.g. percentage of defects) and 3PL performance (e.g. percentage of damages) can be used to examine FL failures that cause high and unnecessary returns. These findings can be demonstrated by the following quotations:

> "I think one of the most important things that we use is the percentage of returns versus sales. So, we measure […] every unit or every order that goes out, two percent or four percent or six percent of it comes back. And obviously, if you have an influx on that, if it [your returns] goes above a certain percentage, you need to start looking internally and find out why it is happening and what you can do to mitigate it." (P3, returns manager, online retailer)

> "So, it's important to measure why things are coming back, you need to understand if, for instance, 20 percent of your returns has a reason of damaged, then you know you've got an investigation to do within your picking and your delivery teams. Why are the things being damaged in-transit or is it a bad supplier? Is it a supplier problem?" (P5, general manager, online retailer)

> "So, we obviously check the fraction of how many items that goes out for delivery gets damaged by the courier." (P3, returns manager, online retailer)

As support RL practices for effective information usage and analysis, online retailers can implement (as supported by literature) the (1) general IT strategy of developing and using IT with information management capabilities (section 6.3.1), (2) SCI strategy of SC knowledge and information sharing (section 6.4.1), (3) CI strategy of consumer input (section 6.4.2), (4) cross-functional integration (CFI) strategies of communication, knowledge sharing and information sharing between functions (section 6.4.3), (5) RL outsourcing strategies of selecting 3P partners and developing PM (performance measurement) for 3P partners (section 6.5.1), (6) PM strategies of developing appropriate KPIs and

evaluating and analysing performance results (section 6.7.1), (7) RPA strategies of identifying product return drivers and using return analytics (section 6.9.3) and (8) the RL manager strategy of assigning a RL expert manager (section 6.9.5).

Various studies in the reviewed literature aligns with the interview findings on the use and analysis of information for RRP examination, including the use of (1) consumer feedback and product return analytics (Hjort *et al.* 2019:779), (2) AI and technologies for return rate and reason tracking (Bozzi *et al.* 2022:15; Zhang *et al.* 2023:11), (3) internal and external information sharing and integration (Mostert *et al.* 2017:1, 13), and (4) metrics for product return reasons, types and tracking (De Araújo *et al.* 2018:354; Sajjanit & Rompho, 2019:790). However, this study uniquely identified SC metrics and 3PRL providers with product return data capabilities as information usage and analysis initiatives for RRP examination.

Essentially, using and analysing information for RRP examination can help address the prevention and control (1) pitfalls of FL failures (operational failure), poor RL planning, a lack of resources, poor PM (poor RLM), poor information sharing with consumers and poor SCI (information-related pitfalls), and (2) problems of high and unnecessary returns, increase in fraudulent returns (product return problems), contaminated inventory, a loss of product (inventory problems), consumer dissatisfaction, a loss of sales and poor accountability (online retailer problems).

- *Targeted investigation measures for RRP examination*

While the interview findings mostly focused on information usage and analysis for RPP examination, some participants provided targeted investigation, including the use of product experts and investigation of return abusers (key practice elements), as effective measures for RRP examination.

Specifically, a few participants suggested that online retailers *use product experts* in their RL department to investigate return causes related to problematic products, linking with the pre-sales PRP practice of FL excellence through effective procurement (section 8.4.2.1.1) and post-sales PRP practice of return inspection initiatives (section 8.4.2.1.2). For instance, a technology expert can identify that the voltage of an imported electronic device is incompatible with voltage requirements in South Africa, or a fashion designer can identify a design flaw in an evening gown, which can help online retailers to prevent high and unnecessary returns. The following quotation shows the value of product experts as a targeted investigation measure for RRP examination:

> "[…] if you as an online commodity is running tech items, then get one person in that reverse logistics department that is savvy enough that knows something about tech that can say, right, this is not equipped for South Africa, or the resistors will never work in South Africa. So, there's a reason for that return. Like a junior fashion designer that receives all these clothing and say, hang on, guys, this is wrongly stitched, this is your problem." (P12, Head of logistics, online retailer)

Other participants suggested that online retailers *investigate individual return abusers* to address the fraudulent returns (a product return) problem. One participant further indicated that online retailers must focus on identifying consumers that abuse the system instead of punishing the entire consumer population with strict returns. Subsequently, implementing investigation measures to identify return abusers can reduce the need to create 'overly strict return restrictions' as a key pre-sales PRP practice (section 8.4.2.1.1). The following quotation denotes the targeted investigation measure of investigating individual return abusers:

> "One of the provisos around doing it was that we would instead of trying to penalise 98 percent of our customers […] to avoid them defrauding us, we would focus our efforts on identifying the two percent of customers that would actually try to defraud us. So, it's the serial returner and make individual decisions about those customers instead of penalising your entire customer body to try and protect yourself." (P1, operations manager, 3PRL provider firm)

As support RL practices for targeted investigation measures, online retailers can implement (as supported by literature) the (1) RC strategies of human resources and RL process resources (section 6.9.1), (2) RPA strategies of classifying consumers, developing a consumer database and implementing return avoidance strategies (section 6.9.3), and (3) RL staff strategy of establishing a RL function (section 6.9.5). While several studies in the literature supported the investigation of individual return abusers as reactive prevention measures (Ermes & Niemann, 2023:9; Hjort *et al.* 2019:779; Zhang *et al.* 2023: 11, 17), no studies identified the use of product experts for RRP examination. Therefore, this study adds to the literature and opens new avenues for online retailers to perform targeted investigations for RRP examination.

Additionally, this study shows that targeted investigation measures can help address the prevention and control (1) pitfalls of FL failures, RL process failures (operational failures) and a lack of resources (poor RLM), and (2) problems of high and unnecessary returns, increase in fraudulent returns (product return problems), contaminated inventory (inventory problem), consumer dissatisfaction and a loss of sales (online retailer problems).

8.4.2.2.2 RRP intervention

Based on the outcomes of RRP examination, online retailers can implement RRP intervention practices. Subsequently, both RRP examination and RRP intervention must be implemented as RRP proposition categories to effectively address prevention and control pitfalls and problems. As illustrated in **Figure 8.15**, the key practices of RRP intervention include *product interventions* and *party interventions*, which will be discussed and analysed in subsequent paragraphs.

- *Product interventions for RRP*

The implementation of product interventions for RRP intervention involves the key practice elements of redesigning/reengineering products and/or packaging, motivating product recalls and discontinuing products. The participants indicated that online retailers could use RRP examination practices, including information usage and analysis and targeted investigation measures, to share information and knowledge internally (between departments) and externally (with SC partners) for the implementation of product interventions.

For example, if consumers complain about packaging damages, the logistics department can share information with the procurement department, which in turn can share information with suppliers to redesign product packaging. Similarly, if product return data shows a high defective return rate for a specific product, internal and external feedback loops can be used to redesign products or motivate manufacturer product recalls. Furthermore, if a product expert identified a design flaw in a product, knowledge about the design flaw can be shared with the procurement department to discontinue purchasing the product and the sales and logistics departments to discontinue selling the product. Evidently, the implementation of product interventions can facilitate FL excellence as a key pre-sales PRP practice (section 8.4.2.1.1). The following quotations support these findings:

> "I think knowledge sharing would be good between the distribution team and the procurement team […], where they can feed [information] back further up the supply chain on potential changes to the packaging […] to reduce [product return] claims." (P4, owner/CEO, 3PRL provider firm)
>
> "[…] what we would do is reengineering [the packaging]. Maybe it's just shoddy packaging." (P6, logistics manager, multichannel retailer)
>
> "[…] for instance, Samsung, [if] we get 95 percent product returns on a product of theirs […] [the] question gets raised to Samsung about maybe recalling the product […]." (P3, returns manager, online retailer)
>
> "[…] there needs to be the feedback loops into the business as well. If the same five-inch board-shorts keeps generating returns every summer, it's time to stop selling the five-inch board shorts or change its design." (P1, operations manager, 3PRL provider firm)

As support RL practices for product interventions, online retailers can implement (as supported by literature) the (1) SCI strategies of SC collaboration and knowledge and information sharing (section 6.4.1), (2) CFI strategies of functional collaboration and knowledge and information sharing (section 6.4.3), and (3) RPA strategy of implementing product initiatives for return avoidance (section 6.9.3).

Aligning with the interview findings, Andresen and Istad (2019:7), Bozzi *et al.* (2022:30) and Hjort *et al.* (2019:779) found that product and packaging improvements can be valuable ways to reactively prevent and avoid unnecessary product returns. However, this study uniquely identified discontinuation of products and manufacturer recalls as product interventions for RRP. Subsequently, online retailers can implement various product interventions for RRP, which can help them mitigate the prevention and control (1) pitfalls of FL failures (operational failure) and a lack of SCI (information-related pitfall), and (2) problems of high and unnecessary returns (product return problems), contaminated inventory

(inventory problem), consumer dissatisfaction and uncertainty and a loss of sales (online retailer problems).

- *Party interventions for RRP*

While product interventions can potentially improve external relationships, implementing party interventions as a key RRP intervention practice may hamper external relationships. Subsequently, participants suggested that party interventions, including the key practice elements of issuing penalties, cancelling supplier contracts, and consumer account suspensions, must be implemented with caution or as a last resort to address prevention and control pitfalls and problems.

Like product interventions, party interventions can be implemented based on RRP examination (section 8.4.2.2.1). For example, online retailers can use KPI data, like SC metrics, to (1) *issue penalties* (i.e. charging product costs) based on percentage of damages caused by couriers, and (2) *cancel supplier contracts* based on percentages of defects by suppliers. Additionally, online retailers can use the targeted investigation measure of investigating return abusers as a basis to *suspend the consumer accounts*. The following quotations illustrate party interventions as a key RRP intervention practice:

> "And to ensure that you engage with carriers or couriers that will deliver products to your customers, […] [to] take care of your product, and they are measured against any of their own damages. If our carrier loses a parcel or damages a good, they pay for it, which encourages good behaviour." (P8, logistics manager, multichannel retailer)
>
> "For us to cancel a contract with the supplier is a severe issue […] but eventually you could end up giving the supplier, a red card." (P6, logistics manager, multichannel retailer)
>
> "[…] you would exit the supplier if they've got more comebacks than what is normal. And that's an obvious red flag. You simply exit that supplier and say, you know what, we've got too many comebacks [of your products]. You are tarnishing our brand, so cheers." (P5, general manager, online retailer)
>
> "[…] what we found with Retailer E was that the same consumer would keep trying to commit the fraud and they eventually just block their accounts." (P4, owner/CEO, 3PRL provider firm)

Therefore, issuing penalties and cancelling supplier contracts can facilitate the effective establishment of FL excellence as a key pre-sales PRP practice (section 8.4.2.1.1). Additionally, suspending consumer accounts can complement the return restrictions as a key pre-sales PRP practice, clearly communicating return conditions and policies to consumers on the website. For example, warning consumers that fraudulent return behaviour can lead to account suspensions, which might discourage fraudulent returns (see section 8.4.2.1.2). Furthermore, as supporting RL practices for party interventions, online retailers can implement (as supported by literature) the (1) SCI strategies of developing PM for SCI, SC agreements and arrangements, and cost/risk sharing (section 6.4.1), (2) PM strategies of establishing appropriate KPIs and performance monitoring and review (section 6.7.1), and (3) RPA strategy of account suspensions (see section 6.9.3).

While a few recent studies, like Hjort *et al.* (2019:778), Robertson *et al.* (2020:172) and Zhang *et al.* (2023:11), identified account suspensions of return abusers as a measure of curbing fraudulent returns,

this study added partner penalties and supplier exit as party interventions for RRP. The explanation for this can be the SC power relationships in South Africa. In contrast to many regions around the globe, South African retailers carry the most power in the SCs, which enable them to dictate terms to suppliers. This finding is substantiated by the following quotation:

> "[…] the retail environment here [in South Africa] is a very powerful environment. So, you'll find the retailer really dictates to the supplier, which is extraordinary." (P4, owner/CEO, 3PRL provider firm)

Subsequently, supplier penalties and cancelling of contracts might only be viable party interventions in retailer-dominant markets. Nevertheless, as emphasised by the participants, party interventions must be implemented as a last resort to reactively prevent consumer returns. Essentially, party interventions can help online retailers address the prevention and control (1) pitfalls of FL failures (operational failure), poor PM (poor RLM) and lack of SCI (information-related pitfall), and (2) problems of high and unnecessary returns, increase in fraudulent returns (product return problems), contaminated inventory, loss of products (inventory problems), consumer dissatisfaction and uncertainty, a loss of sales, brand image damage and poor accountability (online retailer problems).

In conclusion, RRP propositions, including RRP examination and RRP intervention, can help online retailers to reactively prevent future product returns as well as address various prevention and control pitfalls and problems. Therefore, online retailers can implement RRP propositions for the effective RLM of consumer returns. In the next section, reverse logistics control (RLC) propositions will be described and analysed.

8.4.2.3 Reverse logistics control (RLC) propositions

RLC as a main prevention and control proposition involve the proposition categories of *operational RLC* and *managerial RLC*, which can be implemented to control and manage return processes, returned products and the RL function. In the subsequent sections, operational RLC and managerial RLC as RLC proposition categories will be described and analysed.

8.4.2.3.1 Operational RLC

Operational RLC as a proposition category entails the control of return processes and returned products to effectively address prevention and control pitfalls. As illustrated in **Figure 8.15**, several key practices can be implemented to achieve operational RLC, including (1) RL process optimisation, (2) product return visibility, (3) product return segregation, (4) product return inventory management, and (5) product disposition management, which will be explored in the subsequent paragraphs.

- *RL process optimisation for operational RLC*

As a key operational RLC practice, online retailers can optimise the RL process to control and manage return processes. Online retailers can optimise the RL process by implementing several key practice elements, including the use of (1) strategic planning, (2) appropriate facilities and resources, (3) appropriate staff practices, and (4) third parties.

Regarding *strategic planning*, the participants mentioned that online retailers must include RL in their strategic plans to optimise the RL process for effective return prevention and control. Additionally, for *appropriate facilities* and *resources*, the participants suggested the use of centralised facilities to establish a dedicated RL department and allocate sufficient human resources, which can enhance RL process speed, efficiency and consistency. Other resources that online retailers can use for RL process optimisation include managerial resources (i.e. dedicated RL manager), IT resources (i.e. integrated IT systems) and financial resources. The following quotations illustrate the importance of using strategic planning and appropriate facilities and resources for RL process optimisation as a key operational RLC practice:

> "[…] you can have [RL] as part of a strategic plan to reduce [returns and] optimise, building efficiencies [in return processes]." (P6, logistics manager, multichannel retailer)

> "I would have a [returns] department within that centralised warehouse […] it relates directly then to the existing or current stock that you may carry or may not carry [such as counterfeit stock], and you've got immediate control. […] you want to immediately go and inspect [product returns] […] That's quick. […] It's in your own warehouse. You can control it quickly." (P12, Head of logistics, online retailer)

> "I would say the best thing is to have a centralised facility. […] from a reverse logistics point of view, having a central unit makes a lot of sense. Specifically, because you've got the ability to employ bigger and better teams that can speed up [return] processes […]." (P5, general manager, online retailer)

> "[…] if you want to run your reverse logistics process accurately, you definitely need someone [a RL manager] to account for it. You need someone to manage the flow of it […]." (P4, owner/CEO, 3PRL provider firm)

> "[…] you would have to definitely invest in some sort of resources, whether it be IT integration, investing money, putting heads, where it counts towards that [return] process and managing it." (P13, supply chain manager, multichannel retailer)

In terms of *using appropriate staff practi*ces for RL process optimisation, participants suggested that online retailers train RL staff, measure staff performance and utilise dedicated RL staff for operational RLC. Particularly, online retailers must *train RL staff* to (1) perform RL processes correctly, (2) handle product returns correctly and efficiently and (3) understand RL systems and procedures. Furthermore, participants indicated that online retailers can *measure RL staff performance*, ensuring that RL processes in facilities (e.g. inspection, sorting, processing and disposition) are performed effectively and efficiently, avoiding prevention and control problems like stockpiling, a loss of product/product control over the product, a loss of sales and potential market liabilities (see sections 8.4.1.1.2 and 8.4.1.2.4). The following quotations denote the use of staff training and staff PM for RL process optimisation:

> "[…] the staff needs to be trained […] on the [return] process […] in order to function efficiently." (P4, owner/CEO, 3PRL provider firm)

> "And then obviously in a warehouse that does reverse logistics is not a square racked palletised environment, which is simple cubic measurement. Everything's a different size. Everything doesn't come back in a box. So, the people that are working in that warehouse need to be very skilled […]." (P7, owner, 3PRL provider firm)

> "[…] people need training because they need to know the process and the systems […] you're going to have to train and educate people on how you do your reverse logistics […] or just maybe get a firmer understanding of how your reverse logistics works." (P13, supply chain manager, multichannel retailer)

> "[The performance measurement of staff is important for] […] ensuring that our fulfilment centres and the returns process is carried out efficiently. It's an internal issue as well, because, if it has to go to the supplier, it must get to the supplier, if it is to be resold, it needs to get resold […] it needs to get onto the shelf ASAP within a specific timeframe and be put up for sale within a specific timeframe. Or else we're going to have a second warehouse full of goods and nothing is happening." (P9, regional & online DC manager, online retailer)

Moreover, linking to the post-sales PRP key practice of return inspection initiatives (section 8.4.2.1.2), online retailers can use *dedicated RL staff* to perform pre-return inspection at consumer locations, which can optimise the RL process. Particularly, participants indicated that dedicated RL staff may facilitate consumers with operating products correctly, which can avoid unnecessary false failure returns as well as unnecessary return collection, transportation, receiving, processing, sorting and disposition processes. Similarly, if the product is defective or incompatible, inspection at consumer locations saves inspection and processing time (i.e. quickly ordering a replacement) and reduce product return traffic at the facilities, enhancing RL process efficiency. The following quotation support this finding:

> "If you were able to put a dedicated returns team, […] our first line evaluators, […] that can go to the customer and say, you know what, before I take this laptop from you, can we quickly do one, two, three and four, maybe solve them right there […]. Or you know what? I can see that you've got the incorrect phone. It's not compatible with this device. No problems, no questions asked. I'll update the return right here now and do a resell […] just to give them a better service [and] save some time and traffic at the DC." (P5, general manager, online retailer)

Alternatively, online retailers can *use third parties* for RL process optimisation. Particularly, online retailers can outsource RL processes to 3PRL providers with the capabilities to optimise RL processes, which can mitigate the prevention and control inventory problems of stockpiling and a loss of product/product control. The following quotation verifies this finding:

> "[RL outsourcing can be important] in the […] turnaround of the [returned] stock that it doesn't get left for six months before somebody, when it's starting to encroach on warehouse space, and somebody says, we've got to get this nonsense out of here and [then] that gets thrown in the back of a skip waste bin […]." (P7, owner, 3PRL provider firm)

As support RL practices for RL process optimisation, online retailers can implement (as supported by literature) the (1) CI strategies of consumer service and support initiatives and consumer interaction (section 6.4.2), (2) RL outsourcing strategies of deciding on the degree and type of 3Ps for RL outsourcing and selecting a 3PRL provider (section 6.5.1), (3) PM strategies of implementing PM for RL and performance monitoring and review (section 6.7.1), (4) centralised facility/location strategy of using a centralised facility for RL (section 6.8.4), (5) RC (resource commitment) strategies of financial, IT and infrastructure, RL process and human RC (section 6.9.1), (6) strategic planning strategy of integrating strategic plans for RL with organisational strategic plans (section 6.9.4), (7) RL manager

strategy of creating a full-time RL manager portfolio, and (8) RL staff strategies of establishing a RL function, implementing RL staff training and education and producing skilled and well-trained staff (section 6.9.5).

Several interview findings related to RL process optimisation for operational control correlate with the reviewed literature. Specifically, using (1) centralised return facilities (CRCs) was supported by Dapiran and Kam (2017:830), (2) dedicated staff, appropriate IT resources, integrated IT systems and staff training was supported by Bozzi *et al.* (2022:19, 21), and (3) third parties for RL process optimisation was supported by Wang, Dang *et al.* (2021:2) as practices to optimise the RL process for operational RLC. Additionally, Prajapati *et al.* (2021:6) confirmed that 3PRL providers can help with the necessary resources, including qualified human resources and appropriate IT resources, which can be important for RL process optimisation.

Essentially, RL process optimisation as a key operational RLC practice can address the prevention and control (1) pitfalls of RL process failures (operational failure), inattention to RL, poor RL planning, lack of resources, poor PM (poor RLM), poor gatekeeping (poor return prevention) and poor systems (information-related pitfall), and (2) problems of high and unnecessary returns, increase in fraudulent/ineligible returns, poor product return visibility, poor product return decision-making (product return problems), stockpiling, disorganised and contaminated inventory, a loss of product/product control (inventory problems), consumer dissatisfaction and uncertainty, a loss of sales, brand/brand image damage, market liabilities, a loss of managerial control and poor accountability (online retailer problems).

- *Product return visibility for operational RLC*

Linking with RL process optimisation, participants suggested that online retailers can effectively control RL operations through product return visibility, which can be achieved through the key practice elements of using IT and third parties.

In terms of *using IT*, the participants indicated that online retailers could enhance product return visibility by using their online web-based systems in the return request process, prompting the consumer to select the correct product for the return and book a return collection timeslot. Moreover, online retailers can integrate their online web-based systems with their WMS to receive information on the specific product (indicated by consumers on the system during the return request process) that will arrive for additional product return visibility and control in the receiving process. Subsequently, online retailers must invest in appropriate IT systems to enhance product return visibility. The following quotations illustrate these findings:

> "[…] you need some kind of inbound visibility. You can imagine if you've got a warehouse that has limited receiving space and you've got fresh product being flown into a distribution centre, you need to know what your volumes are going to be for returns […]." (P1, operations manager, 3PRL provider firm)

> "[…] to build from your WMS […] you can then request that the customer book their own return time slot. They can book their time; you give it a two-hour time slot […]. Then out of that you can build into that same customer portal, you can build your criteria for the return. And that you can also integrate into your WMS. The nice thing is if you build it into your WMS and you ask the customer to either use their email or their cell phone, you can then immediately pull that into the latest delivery that was made. So, you can ask the customer to pinpoint what that specific product is and if the customer selects the correct product, it will then work backwards into your supply chain for the warehouse management solution, so that once you receive it, it's actually waiting for you to tick it off and say, yes, it's now been returned. So, that's much better control." (P12, Head of logistics, online retailer)

> "[Investment in IT is important for RL] […] because it's a stock that's been returned, it's not stock going out of the system, so it's basically stock that is nowhere or it's not been accounted since it left the customer till it's been returned to our depot. So, if there's no control […] systems in place, you run the risk of potential fraud and potential risk that products may end up being [back] in the [forward logistics] system […]." (P11, Demand and sales manager, FMCG distributor)

Alternatively, online retailers can *use third parties* for product return visibility as a key operational RLC practice. Linking with the use of IT, participants indicated that online retailers could utilise the delivery software of SC partners, like couriers and 3PL providers, to enhance product return visibility in collection, transportation and receiving processes for operational RLC. Additionally, online retailers can use 3PRL providers with the necessary IT systems (such as special return software) and integration capabilities, which not only enhances product return visibility but also address the online retailer problem of poor reporting. The following quotations show the value of using third parties for product return visibility:

> "I use the courier's delivery online platform […] for reverse logistics control and management, because they've got all the steps in there that you would need, which is I've received your item, I'm in transit, and I'm back in the hub, I've confirmed it back in the hub, and I've taken ownership of there is the receipt of it." (P12, Head of logistics, online retailer)

> "And I developed an App that actually does all those [RL] processes in the form of physical inspection, photographs of the goods, routing, capturing of the information […] to know what's coming back for stock control and all that is controlled on an App […]." (P7, owner, 3PRL provider firm)

> "So, we've got a reporting system that goes over to the clients [or online retailers] where they can see what product it is, in what state of repair, which consumer it has come back from, how many credits are being granted, etc." (P4, owner/CEO, 3PRL provider firm)

Evidently, several support RL practices can be implemented for product return visibility as a key operational RLC practice. Specifically, online retailers can implement (as supported by literature) the (1) Internet and web-based IT strategies of developing online return capabilities and integrating Internet/web-based IT with other IT (section 6.3.2), (2) TLIT (traditional logistics IT) strategy of customising and using WMS for RL (section 6.3.3), (3) RLIT strategy of using product return IT and software (section 6.3.5), (4) SCI strategies of RSC collaboration, cooperation and coordination, and information and IT integration and sharing (section 6.4.1), (5) CI strategy of consumer input and participation (section 6.4.2), (6) RL outsourcing strategies of deciding on the type of RL processes, services and 3Ps for RL outsourcing, selecting a 3PRL partner and developing outsourcing terms (section 6.5.1), and (7) RC strategy of committing IT resources (section 6.9.1).

The interview findings related to the use of IT for product return visibility correspond to the findings of Jović *et al*. (2020:164), Zhang *et al.* (2017:157) and Zhang *et al.* (2023:7). Additionally, Prajapati *et al.* (2021:6) found that 3PRL providers can provide valuable IT solutions, which can ultimately enhance product return visibility. However, this study extends the literature by adding the use courier systems as an option for online retailers to enhance product return visibility for operational RLC. Essentially, product return visibility as a key operational RLC practice can address the prevention and control (1) pitfalls of RL process failures (operational failure), poor RL planning, lack of resources (poor RLM), a lack of SCI and poor systems (information-related pitfalls), and (2) problems of fraudulent returns, poor product return visibility (product return problems), disorganised and contaminated inventory, a loss of product/product control (inventory problems), market liabilities, loss of managerial control, and poor accountability and reporting (online retailer problems).

- *Product return segregation for operational RLC*

Product return segregation as a key operational RLC practice involves the physical separation of returned products and RL processes from new products and FL operations, which can be attained by allocating space and designing facility layout for RL processes, establishing a RL department and establishing a separate returns facility (key practice elements).

Based on the network design of the online retailers, participants indicated that online retailers could perform product return segregation in a standard facility (e.g. using a warehouse for RL and FL) by allocating *sufficient space* and *designing facility layout* for RL processes. Therefore, a standard FL facility must be designed to keep product returns separate from new products. Additionally, online retailers can enable product return segregation through the establishment of a RL department in their standard facilities, avoiding the use of staff with dual RL and FL responsibilities. Alternatively, online retailers with limited space for product return segregation can establish a *separate returns facility*, which naturally separate RL processes and returned products from FL and new products. The following quotations expand on these findings, showing the importance of product return segregation for operational RLC:

> "You need to have the right space also at your facility. You deal with returns when it does come back so that you can keep the return segregated from, call it, clean stock that hasn't been dispatched so that you don't have cross contamination of items […]." (P2, owner, supply chain consultancy firm)

> "So, warehouses and processes are geared for the perfect delivery. You hardly find any organisations that start new facilities, with reverse logistics in mind […]. And then soon they find out that it's a completely different set of events to what you normally do. You have to segregate the practices completely, otherwise you sit with problems of mixing good and bad stock. So, the industrial engineering layout, the floor layout and the floor plans and all of these SOPs [standard operating procedures] that drive reverse logistics needs to be top of mind when designing facilities. […] a lot more emphasis and a lot more money needs to be spent on initial layout planning [and] for reverse logistics departments, even if it's within a specific DC. They need to put sufficient planning into designing that layout so that it's practical for reverse logistics. I mean, Retailer K put up an entire reclamation centre, which is a standalone […]. They found that you can't do this [RL] in a normal DC. It's just too complicated. So, they had to build a separate facility." (P5, general manager, online retailer)

> "[…] a lot of the major online retailers have their returns handling completely separate from the outbound operation. Because instead of you contaminating your outbound operations to accommodate returns, it makes it a lot easier to handle [and control]." (P1, operations manager, 3PRL provider firm)

Subsequently, as support RL practices for product return segregation, online retailers can implement (as supported by literature) the (1) separate facility/location strategies of establishing and using separate facilities, separating a single facility and separating RL and FL processes (section 6.3.8), (2) RC strategies of financial and infrastructure RC (section 6.9.1), (3) strategic procedures strategy of formally developing SOPs for RL (section 6.9.4), and (4) RL staff strategy of establishing a RL function (section 6.9.5).

While Misni and Lee (2017:92) indicated that integrated facilities for RL and FL operations require sufficient space allocation for returns, no study in the reviewed literature identified the importance of product return segregation in facilities. Therefore, this study adds valuable insight and provides additional initiatives to address the prevention and control (1) pitfalls of RL process failures (operational failure), inattention to RL, poor RL planning and a lack of resources (poor RLM), and (2) problems of high and unnecessary returns (product return problem), stockpiling and disorganised inventory, contaminated inventory, a loss of product/product control (inventory problems), brand/brand image damage, market liabilities and a loss of managerial control (online retailer problems).

- *Product return inventory management for operational RLC*

Product return inventory management for operational RLC involves the use of systems, staff or third parties (key practice elements) to effectively control RL processes and returned products.

Regarding the *use of systems* for product return inventory management, participants suggested that online retailers invest in order management systems (OMS) to transfer returned products to various facilities/locations of the organisation based on the demand for the returned product. Additionally, online retailers can use end-to-end inventory management systems that track product returns in the return process and reinstate returned products back into inventory for resale, linking with the key operational RLC practice of product return visibility. The following quotations demonstrate the use of systems for product return inventory management:

> "I've got inventory floating around in the business […] I've got consumer stock coming back as returns […] we would have to look at some level of distributed order management [system] to take all this [returned] inventory and see how best we can use it. That's probably our biggest investment that we would do to try and manage [returned] inventory in motion […] so that you're not always dependent just on inventory from [the] central [warehouse], but you can use the return that comes back […], you can say, hey but there's a demand for this item there, I can fulfil from here to there […]." (P6, logistics manager, multichannel retailer)

> "[…] you need an end-to-end inventory management system. So, you need to be able to create a reverse order, and systematically track and update the status of that order as it goes back into the DC […] So, you need to […] make sure that you don't lose that product and that you don't miss it somewhere in the system […]." (P5, general manager, online retailer)

In terms of *using staff*, participants suggested that online retailers appoint a dedicated RL manager to effectively manage returned product inventory for improved operational RLC. Similarly, online retailers can create a dedicated RL inventory team to be responsible for managing and controlling returned stock inventory, mitigating inventory problems related to stockpiling, disorganised inventory, contaminated inventory and a loss of product/product control. The following quotations expand on these findings:

> "[…] the reverse logistics manager is actually managing the inventory component. What are we going to do with the stock? How are we going to handle it? How are we going to disposition [or dispose of] it? And maybe on the reporting side […] you can let the inventory go through the internal components […]." (P1, operations manager, 3PRL provider firm)

> "And then you've got your inventory team that works within that returns area. […] So, until it's gone through the entire [RL] process, that inventory team is responsible for ensuring that the bad stock goes either to a reseller, or [resalable returned stock] goes back into the good stock warehouse, so they maintain [returned] stock accuracy and security." (P5, general manager, online retailer)

Finally, online retailers can *use third parties* for product return inventory management as a key operational RLC practice. Specifically, online retailers can outsource product returns to 3PRL providers with the necessary expertise, resources and facilities for effective inventory management, as suggested in the following quotation:

> "[…] a dedicated, outsourced reverse logistics business. And the reason why I believe it is advantageous is because, if you got a warehouse that's running out a billion rands worth of goods every year, a million rands worth of reverse logistics is not warranted for them to take their focus of the ball. It [the returned products] inevitably lands up in a corner of the warehouse. It doesn't receive focus. It doesn't receive attention. It eventually gets swept out and thrown away, it is pilfered, etc. […] Our facilities are adopted for [the] management of reverse logistics. We've got the correct technology. We've got the correct type of vehicles and receptacles to put [the] product in […] [so] that it's stored correctly." (P7, owner, 3PRL provider firm)

As support RL practices for product return inventory management, online retailers can implement (as established by literature) the (1) TLIT strategies of using existing ERPs and ordering systems for RL (section 6.3.3), (2) RL outsourcing strategies of deciding on the types of RL processes, services and 3Ps for RL outsourcing and selecting a 3PRL provider (section 6.5.1), (3) RC strategies of IT and human RC (section 6.9.1), (4) RL manager strategy of creating a full-time RL manager portfolio, and (5) RL staff strategy of establishing a RL function (section 6.9.5). The studies by Bozzi *et al.* (2022:19), Frei *et al.* (2020:1616) and Starostka-Patryk (2021:2591) confirm the value of using of appropriate systems for the inventory management of product returns. Furthermore, Wang, Dang *et al.* (2021:2) supported the use of 3PRL providers to manage returned product inventory. Nevertheless, the study uniquely identified the use of dedicated staff, including a RL manager and a dedicated product return inventory team, as avenues for product return inventory management.

Therefore, online retailers can consider various measures for the inventory management of returned product, which can help them mitigate the prevention and control (1) pitfalls of RL process failures (operational failure), inattention to RL, poor RL planning, a lack of resources (poor RLM) and poor systems (information-related pitfall), and (2) problems of high and unnecessary returns, poor product

return visibility, poor/inconsistent return decision-making (product return problems), stockpiling, disorganised and contaminated inventory, a loss of product/product control (inventory problems), loss of sales, brand/brand image damage, market liabilities, a loss of managerial control and poor accountability and reporting (online retailer problems).

- *Product disposition management for operational RLC*

Closely related to product return inventory management, the key operational RLC practice of product disposition management involves the management and control of returned products in the disposition process to avoid inventory and online retailer problems. Participants suggested that online retailers engage with suppliers, train disposition staff, maintain internal disposition control or use third parties for effective disposition management.

For the disposition option of return to the supplier, participants indicated that online retailers could *engage with suppliers* to avoid stockpiling of returned products in the facility. Furthermore, online retailers can *train disposition staff* to remove serial numbers and personal information from returned products (e.g. removing the consumer's user profile from a laptop) to avoid possible brand damages and market liabilities when reselling returned products in secondary markets. The following quotations illustrate the use of supplier engagement and disposition staff training as key elements in product disposition management:

> "The problem about returns, it's not ever flowing, like you don't get product in, product out. So, it's a big request from our side to the supplier to actually get the [returned] products out […] in this [Covid] lockdown period, the stock on hand that we have for returns and bad stock that we have on returns have piled up greatly due to suppliers not being able to operate in that time." (P3, returns manager, online retailer)

> "[…] things like personal information and things like products that might cause potential harm once they are disposed of […] being able to de-brand that [returned product], does require a level of training." **(**P1, operations manager, 3PRL provider firm)

The participants provided opposing views in terms of maintaining internal disposition control and using third parties for returned product disposition management. On the one hand, some participants indicated that outsourcing disposition to third parties can be risky in terms of brand damage and market liabilities (see section 8.4.1.2.2), suggesting that online retailers *maintain internal disposition control* over returned products. On the other hand, some participants indicated that online retailers could benefit from *third parties* with disposition management capabilities, ensuring that returned products are dispositioned safely and effectively. The following quotations expand on these findings:

> "Well, we have experienced a trial outsourcing company receiving the returns or the reverse logistics material. And you as a business needs to be hands-on. That is the quickest way where irregularly is happening […] it's a risky business to outsource your return food products […]. There are [returned] products that can be, if you outsource it, and the outsource company is selling it off to the man on the street and it end up [back] in the [forward supply] chain […], [you are] liable for that." (P11, Demand and sales manager, FMCG distributor)

> "[RL outsourcing is important for] the recoverability of the product, the control […] of the stock that it doesn't get left for six months before somebody, when it's starting to encroach on warehouse space, and somebody says,

> we've got to get this nonsense out of here and [then] that gets thrown in the back of a skip waste bin […]." (P7, owner, 3PRL provider firm)
>
> "[…] [we are] a dedicated outsourced reverse logistics business […] Our facilities are adopted for [the] management of reverse logistics. […] our disposal mechanisms are all in terms of […] the management of brand equity. We do all those things and commit ourselves and contract ourselves to make sure the [returned] products get disposed of in the correct fashion." (P7, owner, 3PRL provider firm)

Subsequently, as supporting RL practices for product disposition management, online retailers can implement (as supported by literature) the (1) SCI strategies of SC cooperation and sharing responsibilities and risks (section 6.4.1), (2) RL in/outsourcing strategies of RL in/outsourcing decisions, deciding on the type of RL processes, services and 3Ps for RL outsourcing, and selecting a 3PRL provider as a 3P partner (section 6.5.1), (3) disposition strategies of developing a disposition system, establishing disposition rules and policies and developing secondary market strategies (section 6.6.1), and (4) RL staff strategy of implementing RL staff training and education (section 6.9.5).

While the use of staff training for product disposition management correlates with the findings of Zailani *et al.* (2017:35), no studies in the reviewed literature for RLM in online retailing suggested supplier engagement, internal disposition controls or third parties (i.e. 3PRL providers) as product disposition management initiatives for operational RLC. Therefore, this study brings new insight into the value of product disposition management as a key operational RLC practice, which can help online retailers mitigate the prevention and control (1) pitfalls of RL process failures (operational failure), inattention to RL, poor RL planning (poor RLM) and a lack of SCI (information-related pitfall), and (2) problems of stockpiling, disorganised inventory, a loss of product/product control (inventory problems), loss of sales, brand damage, market liabilities, a loss of managerial control and poor accountability (online retailer problems).

8.4.2.3.2 Managerial RLC

Managerial RLC as a proposition category entails the management and control of the RL function, forming the foundation for the effective implementation and maintenance of prevention and control practices. Managerial RLC involves several key practices, including (1) control mechanisms, (2) dedicated resources, (3) standards and guidelines, and (4) maintaining managerial RLC (see **Figure 8.15**), which will be discussed in subsequent paragraphs.

- *Control mechanisms for managerial RLC*

The participants indicated that online retailers can either establish internal control mechanisms or select external control mechanisms (as key practice elements) for managerial RLC. For *internal control mechanisms*, participants suggested that online retailers keep the RL function inhouse and use centralisation (i.e. centralised facilities and PM systems) for managerial RLC. Additionally,

participants indicated that internal control mechanisms can help online retailers mitigate the prevention and control problems of inconsistent return decision-making (product return problem), consumer uncertainty, loss of managerial control, and poor accountability and reporting (online retailer problems), emphasising the value of internal control mechanisms. These findings can be illustrated by the following quotations:

> "But with regards to the entire reverse logistics process […] I do not believe it should be outsourced. I believe that the back office should control the administration side [of RL]." (P10, Head of Sales and Logistics, OEM/multichannel retailer)

> "[…] that's all about how you set up your internal controls […] is it easier in one place when everything comes back, [and] one [RL] team dealing with it […] to keep an eye on that." (P13, supply chain manager, multichannel retailer)

> "[…] we've centralised [RL] because the decision-making criteria is more consistent in one depot in the country […]. So, it's a managerial control decision […]." (P8, logistics manager, multichannel retailer)

> "[…] the company needs to be looked at a centralised bit of information so that all the reporting [for RL] is on the same bit of information. So, the worst thing that can happen is that different departments get measured on different things and they are reporting on different aspects […]. So, I think the most important thing is that the metrics and benchmarks in an organisation need to be centralised and the data visibility must be available to all those parties easily." (P8, logistics manager, multichannel retailer)

Contrastingly, online retailers may select an *external control mechanism* by using appropriate third parties for managerial RLC. Specifically, participants indicated that online retailers must select a full RL outsourcing strategy, ensuring that one 3PRL provider party is accountable for the management and control of the RL function, as emphasised in the following quotation:

> "I would say outsource the whole thing […] Because someone needs to be in control of the whole circle. […] if anybody needs to take accountability, where do you point the accountability finger to? […] if it's fully outsourced there is one call to make. If something goes wrong or something goes right, you just speak to the company who is managing the entire reverse logistics process […] So, the reporting is much easier now […]. (P4, owner/CEO, 3PRL provider firm)

Subsequently, control mechanisms links with the operational RLC practice of product disposition management, involving either internal disposition control or external disposition control for disposition management (section 8.4.2.3.1). Therefore, online retailers must consider operational RLC practices for the effective implementation of managerial RLC practices. As support RL practices for control mechanisms, online retailers can implement (as supported by literature) the (1) RL in/outsourcing strategies of RL in/outsourcing decisions, deciding on the degree of outsourcing and selecting a 3PRL provider (section 6.5.1), (2) PM strategies of standardising PM, implementing PM and creating feedback mechanisms (section 6.7.1), (3) centralised facility/location strategies of a centralised return system and using a centralised facility for RL (section 6.8.4), and (4) RL staff strategy of establishing a RL function (section 6.9.5).

The interview findings related to internal control mechanism for managerial RLC correspond to the findings of several studies from the reviewed literature. Specifically, Prajapati *et al.* (2021:5) identified that keeping RLM inhouse can help with internal managerial control. Additionally, Dapiran and Kam (2017:830) found that centralised facilities can be a valuable internal control mechanism in RL. While

the studies of Prajapati *et al.* (2021), Tombido *et al.* (2018:236) and Wang, Dang *et al.* (2021:2) identified the value of 3PRL providers in RLM, no studies identified the use of a 3PRL provider as an external control mechanism for managerial RLC. In fact, the loss of organisational control was identified as an external outsourcing risk by Panjehfouladgaran and Lim (2020:1462), implying that online retailers must carefully consider the potential risks associated with the use of a 3PRL provider as an external control mechanism for managerial RLC.

Essentially, the interview findings emphasised that control mechanisms for managerial RLC can help online retailers to address the prevention and control (1) pitfalls of RL process failures (operational failure pitfall), inattention to RL, poor RL planning and poor PM (poor RLM pitfalls), and (2) problems of poor/inconsistent return decision-making (product return problems), a loss of product/product control (inventory problem), consumer uncertainty, a loss of managerial control, and poor accountability and reporting (online retailer problems).

- *Dedicated resources for managerial RLC*

Dedicated resources as a key managerial RLC practice follows the selection of control mechanisms for managerial RLC. The participants indicated that both internal and external control mechanisms require the allocation of dedicated resources, including a dedicated manager and staff/department for RL. Evidently, internal control mechanisms for managerial RLC requires allocation of dedicated human resources, while external control mechanisms for managerial RLC requires the selection of a 3PRL provider based on dedicated human resources. Furthermore, the participants suggested that online retailers use a separate RL facility, which facilitate effective dedication of resources for managerial RLC. The following quotations support these findings:

> "[…] because they are completely different processes […] you definitely need a dedicated person or a resource dedicated to [manage and control] the entire reverse logistics process, whether that's managing a 3PL who does the whole thing or whether you are managing it in-house." (P4, owner/CEO, 3PRL provider firm)
>
> "[…] you'd have to have a [dedicated] manager to make sure that things are kept in control." (P8, logistics manager, multichannel retailer)
>
> "[…] appoint additional resources to make reverse logistics a division that manages the returns […]." (P10, Head of Sales and Logistics, OEM/multichannel retailer)
>
> "I would think for just returns […] If you have a separate facility just for that […] you can have great controls and only focus [your resources] on returns and managing that." (P13, supply chain manager, multichannel retailer)

Accordingly, as support RL practices, online retailers can implement (as supported by literature) the (1) separate facility/location strategy of separate facilities for RL (section 6.3.8), (2) RC strategies of sufficient and appropriate resources for RL and human RC (section 6.9.1), (3) RL manager strategies of creating a full-time RL manager portfolio and assigning a RL manager, and (4) RL staff strategy of establishing a RL function (section 6.9.5).

Dedicated resources for managerial RLC links with various operational RLC practices (section 8.4.2.3.1), including (1) RL process optimisation using a dedicated RL manager and staff, (2) product return segregation using a dedicated RL function and separate return facilities, (3) inventory management using a dedicated RL manager and staff, and (4) product disposition management using dedicated RL staff. Therefore, without dedicated resources effective RLC would be impossible, hampering the effective RLM of consumer returns in online retailing. While the reviewed literature stresses the importance of committing resources for RLM in online retailing (see section 2.5.4), no recent study focussing on RLM in online retailing was identified that aligns with the interview findings.

Therefore, this study provides additional insight into the use of a RL manager, dedicated RL function and separate RL facility for managerial RLC and mitigation of the prevention and control (1) pitfalls of RL process failures (operational failure), inattention to RL, poor RL planning and lack of resources (poor RLM), and (2) problems of high/unnecessary returns (product return problem), disorganised and contaminated inventory, loss of product/product control (inventory problems), loss of managerial control and poor accountability and reporting (online retailer problems).

- *Standards and guidelines for managerial RLC*

In conjunction with control mechanisms and dedicated resources, participants indicated that managerial RLC requires standards and guidelines, which involves the key practice elements of standardising return processes, using return policies as guidelines and centralising the RL function.

Specifically, *standardising return processes* and *using return policies as guidelines* ensure that RL staff follow the same standards, rules and procedures, which can improve managerial RLC and enable measurement of RL staff performance. Similarly, participants indicated that online retailers could *centralise the RL function* by using centralised return facilities, ensuring that the same standards and guidelines are followed by staff in a single facility. Subsequently, implementing standards and guidelines not only improves managerial RLC, but also improves staff performance and product return decision-making. The following quotations convey the importance of standards and guidelines as a key managerial RLC practice:

> "[…] if you do not have standard processes and regulations in place [for RL] […] you do get the people selling off or taking stock or hand it out to staff, and then just say, but we weren't aware that it's not allowed […] your [return] policy and guidelines give you clear indication what needs to be done with return stock." (P11, Demand and sales manager, FMCG distributor)

> "We have a reverse logistics policy here and we call it a returns policy […] that is absolutely important to us. […] all employees [must] follow the same guidelines, it's standardised. […] it also affects our KPIs our measures, because if you don't have a standardised formula of the process, you will never be able to measure it." (P9, regional & online DC manager, online retailer)

> "[…] [for the] return processes […] the centralised functions are definitely standardised and that's to improve productivity." (P8, logistics manager, multichannel retailer)

> "I would say the best thing is to have a centralised facility. […] from a reverse logistics point of view, having a central unit makes a lot of sense […] you have got the same method of thinking in one facility […]. So, I would go towards having a centralised reclaimed centre so that you've got that uniform approach in your [RL] activity." (P5, general manager, online retailer)

Evidently, standards and guidelines for managerial RLC links with the key (1) pre-sales PRP practice of return restrictions (section 8.4.2.1.1), (2) post-sales PRP practice of inspection initiatives (i.e. using return policies to train inspectors) (section 8.4.2.1.2), (3) operational RLC practice of RL process optimisation (section 8.4.2.3.1) and (3) managerial RLC practice of internal control mechanisms.

As support RL practices for the establishment of standards and guidelines, online retailers can implement (as support by literature) the (1) PM strategy of establishing standardised PM (section 6.7.1), (2) centralised facility/location strategy of a centralised facility for RL (section 6.8.4), (3) centralised return centre (CRC) strategy of establishing and utilising CRCs (section 6.8.5), and (4) strategic procedure strategies of defining formal rules and controls for RL, formally developing standard operating procedures (SOPs) and manuals, standardising RL processes, publishing RL standards and formally implementing strategic procedures (section 6.9.4). Additionally, the interview findings on the use of formalisation and standards for managerial RLC resonate with the findings of Davidavičienė and Al Majzoub (2021:6) and Dapiran and Kam (2017:830, 831), emphasising the importance of standardisation and formalisation in RL.

Essentially, standards and guidelines for managerial RLC can address the prevention and control (1) pitfalls of RL process failures (operational failure), poor RL planning and poor PM (poor RLM), and (2) problems of poor/inconsistent return decision-making (product return), loss of product/product control (inventory), consumer uncertainty, brand/brand image damage, market liabilities, loss of managerial control and poor accountability (online retailer problems).

- *Maintain managerial RLC*

Maintaining managerial RLC enables effective monitoring of the return function, which can help online retailers control return volume and trends, processes and products. Subsequently, maintaining managerial RLC can be important for maintaining various key prevention and control practices. The participants indicated that online retailers must measure RL performance and use appropriate facilities and functions (as key practice elements).

Specifically, online retailers can *measure RL performance* to maintain managerial RLC and manage and control return volume, processes and products. The participants suggested that online retailers develop and use appropriate KPIs to measure return percentages, ensuring that the RL function and return volumes are monitored and controlled. Additionally, online retailers can measure RL performance to minimise the impact of a potential influx of product returns, ensuring adequate control

of the return function, processes and products. The following quotations emphasise the importance of measuring RL performance to maintain managerial RLC:

> "And if you don't measure it [RL], you can't manage it [the RL function]. So, whether it's reverse or not reverse, if you don't have a measurement process in place, you will not be able to manage something. It's impossible." (P6, logistics manager, multichannel retailer)

> "I still have to measure that ultimate [return] percentage level […] to make sure that it doesn't creep up on me […]. I still need to make sure that returns as a department doesn't grow." (P6, logistics manager, multichannel retailer)

> "[Performance measurement in RL is important] because […] what if […] you [are] hit with high volumes of returns, perhaps […] your initial disposal channels won't be sufficient to take it anymore, then you would be able to make those decisions, things like being able to plan your inbound receiving to accommodate your returns […]." (P1, operations manager, 3PRL provider firm)

> "So, if there's no control measurements […] in place, you run the risk of potential fraud and potential risk that products may end up being [back] in the [forward logistics] system […]." (P11, Demand and sales manager, FMCG distributor)

Regarding the *use* of *appropriate facilities* and *functions* to maintain managerial RLC, participants indicated that online retailers could use a standard centralised facility and a dedicated RL function to monitor return trends. For instance, online retailers can quickly identify fraudulent return trends using a dedicated RL department to identify potential counterfeit stock in the centralised warehouse that carries new and original stock, enabling improved control over fraudulent product returns, RL processes and the RL function, as suggested in the following quotation:

> "I would have a [returns] department within that centralised warehouse. I would definitely have it all together. Because it relates directly then to the existing or current stock that you may carry or may not carry [such as counterfeit stock], and you've got immediate control […] [to] see if it's a [fraudulent return] trend and when it comes through, you want to immediately go and inspect, review and measure." (P12, Head of logistics, online retailer)

Subsequently, maintaining managerial RLC complements RRP propositions (section 8.4.2.2.1), and facilitates operational RLC and managerial RLC propositions. As support RL practices to maintain managerial RLC, online retailers can implement (as supported by literature) the (1) PM strategies of appropriate KPIs and metrics for RL, implementing PM and performance monitoring and review (section 6.7.1), (2) integrated facility/location strategy of using a standard facility for RL (section 6.8.3), (3) centralised facility/location strategy of using a centralised facility for RL (section 6.8.4), and (4) management and staff strategies of maintaining management and staff initiatives and establishing a RL function (section 6.9.5).

The findings of Lamba *et al.* (2020:384) and Karlsson *et al.* (2023:9) support the use of PM to effectively maintain and control RL practices and product returns. However, using a standard centralised warehouse with a dedicated returns department to identify return trends and maintain managerial RLC extends the literature. Therefore, managerial RLC can be maintained through various initiatives, which can help online retailer address the prevention and control (1) pitfalls of RL process failures (operational failure), poor RL planning, lack of resources and poor PM (poor RLM), and (2) problems of high and unnecessary returns, an increase in fraudulent returns, poor return decision-

making (product return problems), stockpiling, disorganised and contaminated inventory, loss of product/product control (inventory problems), market liabilities, a loss of managerial control and poor accountability and reporting (online retailer problems).

Essentially, the RLC propositions of operational RLC and managerial RLC can help online retailers effectively control return processes, returned products and the RL function as well as address various prevention and control pitfalls and problems. Accordingly, online retailers can implement RLC propositions for the effective RLM of consumer returns. In the next section, the final proposition category, namely prevention and control parameters, will be analysed and discussed.

8.4.2.4 Prevention and control parameters

Prevention and control parameters as the final main prevention and control proposition, involve various proposition (parameter) categories, including volume, product, organisational, cost versus benefit, SC and market, and legal and environmental parameters (see **Figure 8.15**). No studies in the reviewed literature focused on the factors (parameters) that can impact the implementation of prevention and control propositions, meaning that this study adds new insights into important considerations for the effective implementation of proactive return prevention (PRP), reactive return prevention (RRP) and reverse logistics control (RLC) propositions. Nevertheless, a few studies (unintentionally) identified parameters that align with the interview findings, which will be referenced in the discussion. The various prevention and control parameters will be discussed in the subsequent sections.

8.4.2.4.1 Volume prevention and control parameters

As illustrated in **Figure 8.15**, volume prevention and control parameters involve the key parameters of return volume and sales volume that can be important for implementing various prevention and control propositions.

Participants indicated that *return volume* can be an important parameter for implementing PRP, RRP and RLC propositions. Specifically, a higher return volume must be considered for the post-sales PRP practice of implementing inspection initiatives and operational RLC practice of RL process optimisation, relating to pre-return inspection at consumer locations, as illustrated in the following quotation:

> "[…] a practical way of putting a team of people into the street and saying, you know, what returns is such a big thing in our world […] So, let's put a dedicated team in there that are our first line evaluators […] that can go to the customer and say, you know what, before I take this laptop from you, can we quickly do one, two, three and four, maybe solve them right there […]. So, I think that's possibly another avenue that one can explore just to […] save some time and traffic at the DC." (P5, general manager, online retailer)

Additionally, return volume can be important for the key RRP examination practice of information usage and analysis, using KPI data to measure return percentage volume. Similarly, online retailers can use return volume to implement party interventions for RRP. For example, cancelling supplier contracts based on a high return rate of the supplier. The following quotations conveys the impact of return volume on RRP practices:

> "I think one of the most important things that we use is the percentage of returns versus sales. So, we measure like two per cent of every unit or every order that goes out, but two percent or four percent or six percent of it comes back. And obviously, if you have an influx on that, if it goes above a certain percentage, you need to start looking internally and find out why it is happening and what you can do to mitigate it." (P3, returns manager, online retailer)

> "[…] you would exit the supplier if they've got more comebacks than what is normal. And that's an obvious red flag. You simply exit that supplier and say, you know what, we've got too many comebacks. You are tarnishing our brand, so cheers." (P5, general manager, online retailer)

In terms of operational RLC propositions, online retailers that experience erratic return volumes can prioritise the implementation of product return visibility for improved operational control. Furthermore, higher return volumes can be important for the product return segregation practice of using separate return facilities for operational RLC. Additionally, online retailers must consider return volume to identify the role and functionality of the RL manager for the key operational RLC practice of product return inventory management. The association between return volume and operational RLC can be demonstrated by the following quotations:

> "[…] you need some kind of inbound visibility. You can imagine if you've got a warehouse that has limited receiving space and you've got fresh product being flown into a distribution centre, you need to know what your volumes are going to be for returns […]." (P1, operations manager, 3PRL provider firm)

> "[…] if the volumes are justified […] a lot of the major online retailers have their returns handling completely separate from the outbound [forward logistics] operation. Because instead of you contaminating your outbound operations to accommodate returns, it makes it a lot easier to handle [and control]." (P1, operations manager, 3PRL provider firm)

> "[…] depending on scale […] all the reverse logistics manager is actually [responsible for is] managing the [return] inventory component […]. And maybe on the reporting side […] you can let the inventory go through the internal components […]." (P1, operations manager, 3PRL provider firm)

Lastly, return volume can be important for the key managerial RLC practices of dedicated resources and maintaining managerial RLC. For dedicated resources, return volume can impact the choice between a dedicated RL manager or a dedicated manager with dual RL and FL responsibilities (e.g. e-commerce manager). Consequently, the participants indicated that online retailers with (1) high return volumes must appoint a dedicated RL manager for managerial RLC, and (2) low return volumes can allocate a dedicated manager with dual functions for managerial RLC. Additionally, return volume can be an important consideration for measuring RL performance (as a key practice element) to maintain managerial RLC. The subsequent quotations illustrate the importance of considering return volume for managerial RLC:

> "So, if you're volume is of such magnitude that your returns are a massive thing, having somebody [like a dedicated RL manager] that looks after that [RL function] for sure. If it's not of such magnitude, then I think having somebody looking at online logistics [like an ecommerce manager] is a good idea." (P13, supply chain manager, multichannel retailer)

> "[Performance measurement in RL is important] because […] what if […] you [are] hit with high volumes of returns, perhaps […] your initial disposal channels won't be sufficient to take it anymore, then you would be able to make those decisions, things like being able to plan your inbound receiving to accommodate your returns […]." (P1, operations manager, 3PRL provider firm)

Sales volume as a key volume parameter can be important for the key pre-sales PRP practice of return restrictions by implementing a robust return policy. As one participant explained that small businesses can also be consumers in online retailing, ordering large quantities of office and computer equipment. Subsequently, a weak return policy can be detrimental to the online retailer if a small business returns all the equipment, as demonstrated by the following quotation:

> "[…] your policy needs to be sound […] You're talking to somebody [like a small business] that bought two million rands worth of electronics with you, and they don't want to pay you. Or they are saying that your product is substandard, and they want to send it back. So, if you don't have a robust returns policy, you're going to get a hiding [with high returns]." (P5, general manager, online retailer)

As support RL practices to consider volume parameters for prevention and control, online retailers can implement (as supported by literature) the (1) PM strategy of strategic considerations for PM (section 6.7.1), (2) general facility/location strategy of considering operational factors in facility/location decisions (section 6.8.1), (3) RC strategy of strategic considerations for RC (section 6.9.1), (4) RPA strategy of strategic considerations for return avoidance (section 6.9.3), and (5) RL manager strategy of establishing appropriate and sufficient leadership for RL (section 6.9.5). No studies in the reviewed literature identified the significance of considering return volume and sale volume for the effective implementation of prevention and control propositions. Subsequently, this study identifies new factors that online retailers can consider for the effective implementation of PRP, RRP and RLC propositions.

Essentially, considering volume as a prevention and control parameter can help online retailers effectively address the prevention and control (1) pitfalls of RL process failures (operational failure), inattention to RL, poor RL planning, a lack of resources, poor PM (poor RLM), return leniency, poor gatekeeping (poor return prevention) and poor systems (information-related pitfall), and (2) problems of high and unnecessary returns, increase in fraudulent/ineligible returns, poor product return visibility, poor/inconsistent return decision-making (product return problems), stockpiling, disorganised and contaminated inventory, loss of product/product control (inventory problems), consumer dissatisfaction and uncertainty, a loss of sales, brand/brand image damage, a loss of managerial control and poor accountability and reporting (online retailer problems).

8.4.2.4.2 Product prevention and control parameters

Figure 8.15 shows the product prevention and control parameters involve the key parameters of product condition, product type, product/inventory value and product characteristics, which associate with several prevention and control propositions.

Product condition can be important for the implementation of PRP, RRP and operational RLC propositions. Particularly, online retailers must consider the condition of a returned product for the key post-sales PRP practice of gatekeeping, for example, rejecting products in a damaged or used condition. Additionally, online retailers must consider product condition for information usage and analysis (key RRP examination practice) and party interventions (key RRP intervention practice), using KPIs, like courier damage percentages, to reactively prevent unnecessary damaged product returns. Moreover, product condition can be important for the implementation of the key operational RLC practices of product return segregation (i.e. segregating new products from damaged products) and inventory management (i.e. inventory staff to manage inventory based on product condition). The following quotations demonstrate these findings:

> "So, when a customer logs a return, they obviously need to take a photo of an item, a picture of something so that the person [staff member] can see that item has been used […]. I think that's a great way to try to avoid unnecessary returns." (P3, returns manager, online retailer)

> "So, it's important to measure why things are coming back, you need to understand if, for instance, 20 percent of your returns has a reason of damaged, then you know you've got an investigation to do within your picking and your delivery teams. Why are the things being damaged in-transit or is it a bad supplier? Is it a supplier problem?" (P5, general manager, online retailer)

> "And to ensure that you engage with carriers or couriers that will deliver products to your customers, […] [to] take care of your product, and they are measured against any of their own damages. If our carrier loses a parcel or damages a good, they pay for it, which encourages good behaviour." (P8, logistics manager, multichannel retailer)

> "You need to have the right space also at your facility. You deal with returns when it does come back so that you can keep the return segregated from, call it, clean stock that hasn't been dispatched so that you don't have cross contamination […] having defective merchandise entering your supply chain again." (P2, owner, supply chain consultancy firm)

> "And then you've got your inventory team that works within that returns area. […] So, until it's gone through the entire [RL] process, that inventory team is responsible for ensuring that the bad stock goes either to a reseller, or [resalable returned stock] goes back into the good stock warehouse […]." (P5, general manager, online retailer)

Additionally, both *product condition* and *product type* can play a role in the key post-sales PRP practice of inspection initiatives. For example, using qualified disposition staff for the inspection of returned clothing to identify signs of usage, as illustrated by the following quotation:

> "But the value-add team, they would have to take that garment out of the bag […] to see whether there are any makeup marks or any dirt marks […] to see whether it's actually been worn. If so, they'll return it to the customer, and say, you know what, you wore it, we've got lipstick, mascara or deodorant or perfume on the jacket, we can't resell it. Sorry you take it [back], you keep it." (P5, general manager, online retailer)

Product type as a key product prevention and control parameter associates with PRP, RRP and RLC propositions. Specifically, online retailers must consider the product type for the key pre-sales PRP practice of information sharing initiatives, for example, specifying device compatibility for electronic devices and providing accurate size charts for clothing. Additionally, product type can impact gatekeeping as a key post-sales PRP practice, for example, online retailers that sell computers and electronic products may benefit from online authorisation. Similarly, online retailer can consider product type for the key post-sales PRP practice of inspection initiatives and the key operational RLC practice of RL process optimisation. For example, the online retailer can use dedicated staff to perform pre-return inspection at consumer locations for electronics, appliances and computers to identify

potential compatibility or user-error problems, linking with the return volume parameter (section 8.4.2.4.1). The links between product type and PRP propositions can be illustrated by the subsequent quotations:

> "[…] making sure that the customer can see that this is compatible to an iPhone and not an Android and that this is not supported by Windows […]." (P5, general manager, online retailer)

> "In clothing […] it's like a size chart. I think the people of Retailer J, they do it well. They give you a lot of information." (P12, Head of logistics, online retailer)

> "So, often what happens is [the consumer says] 'I would like to return this laptop'. So, I [as the consumer] phone the contact centre and I spin them a whole story […], and [as the contact centre agent] my heart goes out to this person. And so, I authorise the return. The fact of the matter [is], this person [the consumer] bought the item two years ago and it's out of warranty and it is not returnable […]. So, avoiding that on the front end by digitising your returns policy […]. Your computer system understands what the product is and when they [the consumer] bought it, what the return parameters are for that item, what the policy is for that item and allows that customer to return it or rejects the return with treatable messaging. That avoids those sorts of fraudulent returns right at the outset." (P1, operations manager, 3PRL provider firm)

> "But if you had if you had a team of people that could evaluate at the point of taking it from the customer, you would salvage tons of money and time […] So, let's put a dedicated team in there that are our first line evaluators […] that can go to the customer and say, you know what, before I take this laptop from you, can we quickly do one, two, three and four, maybe solve them right there […] Or you know what? I can see that you've got the incorrect phone. It's not compatible with this device. No problems, no questions asked. I'll update the return right here now and do a resell. So, they can sell them the correct device." (P5, general manager, online retailer)

For the RRP propositions, online retailers can consider product type for the key (1) RRP examination practices of information usage and analysis and targeted investigations, and (2) RRP intervention practice of product interventions. Additionally, product types can be an important consideration for the key operational RLC practice of product disposition management, for example, training disposition staff to remove serial numbers and personal information from a returned laptop or using internal disposition control measures for food products. The following quotations expand on these observations:

> "If you have that manager […] I think it would be good for someone to watch over it and to see if it can be used through AI and predictive analytics. You could start collecting information to see now three bags of cat food [was] returned. There seems to be a problem with a specific product line […]." (P2, owner, supply chain consultancy firm)

> "[…] if you as an online commodity is running tech items, then get one person in that reverse logistics department that is savvy enough that knows something about tech that can say, right, this is not equipped for South Africa, or the resistors will never work in South Africa. So, there's a reason for that return." (P12, Head of logistics, online retailer)

> "[…] there needs to be the feedback loops into the business as well. If the same five-inch board-shorts keeps generating returns every summer, it's time to stop selling the five-inch board shorts or change its design." (P1, operations manager, 3PRL provider firm)

> "[…] things like personal information and things like products that might cause potential harm once they are disposed of […] being able to de-brand that does require a level of training." (P1, operations manager, 3PRL provider firm)

> "Well, we have experienced a trial outsourcing company receiving the returns or the reverse logistics material. And you as a business needs to be hands-on. That is the quickest way where irregularly is happening […] it's a risky business to outsource your return food products […]. There are [returned] products that can be, if you outsource it, and the outsource company is selling it off to the man on the street and it end up [back] in the [forward supply] chain […], [you are] liable for that." (P11, Demand and sales manager, FMCG distributor)

Product/inventory value and *product characteristics* can be important considerations for the implementation of the key post-sales PRP practice of inspection initiatives and key operational RLC practices of inventory management and disposition management. Particularly, online retailers must

consider product value and returned product characteristics, like luxury consumer goods, for using manufacturer inspection staff as an inspection initiative. Additionally, online retailers must consider inventory value and returned product characteristics for selecting third parties to effectively manage returned product inventory and disposition. The following quotations demonstrate these findings:

> "And they might be external parties for luxury consumer goods. They might be physical inspectors from the manufacturer at the online retailer's premises to verify that the return goods are in fact the original goods and not counterfeit goods." (P2, owner, supply chain consultancy firm)

> "[…] a dedicated, outsourced reverse logistics business. And the reason why I believe it is advantageous is because, if you got a warehouse that's running out a billion rands worth of goods every year, a million rands worth of reverse logistics is not warranted for them to take their focus of the ball. It [the returned products] inevitably lands up in a corner of the warehouse. It doesn't receive attention. It eventually gets swept out and thrown away, it is pilfered, etc […]. Our facilities are adopted for [the] management of reverse logistics. We've got the correct […] receptacles to put [the] product in, whether it be leaking, whether it be messy, whether it have a stench or something like that, it's stored correctly. And obviously our disposal mechanisms are all in terms of [environmental] policy, in terms of the management of brand equity. We do all those things and commit ourselves and contract ourselves to make sure the products get disposed of in the correct fashion." (P7, owner, 3PRL provider firm)

Finally, *product characteristics* must also be considered for the key operational RLC practice of RL process optimisation by training staff to effectively handle returned products in various sizes and quality. The following quotation proves this finding:

> "And then obviously in a warehouse that does reverse logistics is not a square racked palletised environment, which is simple cubic measurement. Everything's a different size. Everything doesn't come back in a box. So, the people that are working in that warehouse need to be very skilled as to the quality of the product." (P7, owner, 3PRL provider firm)

As support RL practices to consider product parameters for prevention and control, online retailers can implement (as supported by literature) the (1) general IT strategy of using IT with information management capabilities (section 6.3.1), (2) SCI strategies of developing PM for SCI, cooperating with SC partners and sharing responsibilities, risks and costs (section 6.4.1), (3) CI strategies of considerations for CI and consumer support initiatives (section 6.4.2), (4) CFI strategies of knowledge and information sharing between functions, (5) RL in/outsourcing strategies of considerations and analysis of RL in/outsourcing decisions (section 6.4.1), (6) disposition practices of disposition decision factors (section 6.6.2), (7) PM strategies performance monitoring and review (section 6.7.1), (8) RC strategy of considerations for RC (section 6.9.1), (9) RPA strategy of considerations for gatekeeping and return avoidance (section 6.9.3), (10) RL manager strategy of assigning a RL expert manager, and (11) RL staff strategies of establishing a RL function and producing skilled and well-trained staff (section 6.9.5).

Like the volume parameters, this study uniquely identified the value of considering product prevention and control parameters for the effective implementation of prevention and control practices. Subsequently, this study identifies new factors that online retailers can consider for the effective implementation of PRP, RRP and RLC propositions, which can help them to address the prevention and control (1) pitfalls of FL failures, RL process failures (operational failures), inattention to RL, poor

RL planning, a lack of resources, poor PM (poor RLM), poor return prevention, poor information sharing with consumers, a lack of SCI and poor systems (information-related pitfall), and (2) problems of high and unnecessary returns, increase in fraudulent/ineligible returns, poor return visibility, poor/inconsistent return decision-making (product return problems), stockpiling, disorganised and contaminated inventory, loss of product/product control (inventory problems), consumer dissatisfaction and uncertainty, a loss of sales, brand/brand image damage, market liabilities, a loss of managerial control and poor accountability (online retailer problems).

8.4.2.4.3 Organisational prevention and control parameters

The organisational prevention and control parameters involve the key parameters of organisation type and size, organisational capabilities and facility and network design (see **Figure 8.15**), which can be important for the implementation of various prevention and control propositions.

Organisation type and *size* as key parameters associate RLC propositions, including the key operational RLC practice of product return segregation and managerial RLC practice of dedicated resources. Particularly, organisation type and size can influence product return segregation since larger online retailers might benefit more from separate return facilities due to larger return volumes. Subsequently, smaller online retailers or multichannel retailers can consider other strategies for return segregation, like allocating sufficient space in the facility (see section **Error! Reference source not found.**). Furthermore, organisation size can influence the allocation of dedicated managers for managerial RLC, for example, larger online retailers can allocate senior RL managers and smaller online retailers can allocate operational RL managers. Evidently, organisation size and type as key parameters links with the return volume parameter (section 8.4.2.4.1). The following quotations show the importance of considering organisation type and size for RLC:

> "[…] a lot of the major online retailers have their returns handling completely separate from the outbound operation. Because instead of you contaminating your outbound operations to accommodate returns, it makes it a lot easier to handle [and control]." (P1, operations manager, 3PRL provider firm)

> "[…] if you look at some of those bigger businesses in the US, guys that speak on those webinars are reverse logistics managers [...] that sort of gives an indication […], you have to you have a dedicated person. And some of those [RL managers] are dedicated directors. But even for smaller size [businesses], you need […] a dedicated manager to manage the [RL] process." (P7, owner, 3PRL provider firm)

Organisational capabilities involve RL process capabilities and information management and IT capabilities (key parameter elements), which associate with the implementation of PRP, RRP and RLC propositions. *RL process capabilities* involve return inspection and disposition processes. Online retailers must consider inspection capabilities for the key post-sales PRP practice of implementing inspection initiatives. For example, online retailers must consider their capabilities in acquiring sufficient testing and inspection equipment before implementing preventative inspection initiatives in their facilities. Additionally, online retailers must consider their disposition capabilities for the key

operational RLC practice of product disposition management, ensuring that returned products are dispositioned safely, efficiently and effectively. Subsequently, lacking product disposition capability means that the online retailer must select and use third parties for disposition management, which links with product type and returned product characteristics as product parameters (section 8.4.2.4.2). The following quotations illustrate the importance of considering RL process capabilities/resources in the implementation of post-sales PRP and operational RLC practices:

> "So, you need sort of sufficient testing capacity if you're really going to validate and assess these [returned products […] if you're going to approach it from a 'we want to protect ourselves from fraud', then you need to build these [inspection] mechanisms, [so] that you can validate every single [product return] […]." (P1, operations manager, 3PRL provider firm)

> "[…] [we are] a dedicated outsourced reverse logistics business […] Our facilities are adopted for [the] management of reverse logistics. […] our disposal mechanisms are all in terms of [environmental] policy, in terms of the management of brand equity. We do all those things and commit ourselves and contract ourselves to make sure the [returned] products get disposed of in the correct fashion." (P7, owner, 3PRL provider firm)

Moreover, online retailers must consider their *information management* and *IT capabilities* to implement RRP and operational RLC propositions. Particularly, online retailers must consider their information management and IT capabilities for the key (1) RRP examination practice of information usage and analysis, (2) operational RLC practice of for product return visibility, and (3) operational RLC practice of inventory management. Subsequently, if online retailers lack (1) information management capabilities for effective information usage and analysis of product return data, (2) IT capabilities to enhance product return visibility, and (3) IT capabilities for inventory management, they must consider using 3PRL providers with the necessary information management and IT capabilities. The following quotations support these findings:

> "I would definitely outsource reverse logistics and I would use a company that is specialised with it, because your [product return] data then becomes more relevant […]. So, [for] example, you can then pick out [and identify] if you've sold 30 items and 20 has been returned, then there's a problem with that product. […] It might be a default […]." (P12, Head of logistics, online retailer)

> "And I developed an App that actually does all those [RL] processes in the form of physical inspection, photographs of the goods, routing, capturing of the information […] to know what's coming back for stock control and all that is controlled on an App and that's what we do." (P7, owner, 3PRL provider firm)

> "[…] you need an end-to-end inventory management system. So, you need to be able to create a reverse order, and systematically track and update the status of that order as it goes back into the DC […] So, you need to […] make sure that you don't lose that product and that you don't miss it somewhere in the system […]." (P5, general manager, online retailer)

Finally, *facility and network design* can be an important key organisational parameter for RLC propositions. Particularly, online retailers must consider facility capacity and design for effective product return segregation. Subsequently, if online retailers lack facility capacity to segregate returned products from new products, they must consider establishing a separate returns facility, linking to return volume (section 8.4.2.4.1), product condition (section 8.4.2.4.2) and organisational type and size as key parameters. Similarly, online retailers must consider their network design for the implementation of the key managerial RLC practice of control mechanisms. For instance, online retailers that select internal control mechanisms (key practice element) must consider a centralised network design, using a

centralised facility for effective managerial RLC. The following quotations demonstrate the association between facility and network design parameters and RLC propositions:

> "You need to have the right space also at your facility. You deal with returns when it does come back so that you can keep the return segregated from, call it, clean stock that hasn't been dispatched so that you don't have cross contamination of items […]." (P2, owner, supply chain consultancy firm)

> "They'll put it in a little corner in the south wing and say, if something comes back, let's just bring it to that door. And then soon they find out that it's a completely different set of events to what you normally do. You have to segregate the practices completely, otherwise you sit with problems of mixing good and bad stock. So, the industrial engineering layout, the floor layout and the floor plans and all of these SOPs [standard operating procedures] that drive reverse logistics needs to be top of mind when designing facilities […]. They need to put sufficient planning into designing that layout so that it's practical for reverse logistics. I mean, Retailer K put up an entire reclamation centre, which is a standalone […]. They found that you can't do this [RL] in a normal DC. It's just too complicated. So, they had to build a separate [returns] facility." (P5, general manager, online retailer)

> "It all depends on your network design. And what we've done is we've centralised it because the decision-making criteria is more consistent in one depot in the country […]. So, it's a managerial control decision […]." **(**P8, logistics manager, multichannel retailer)

As support RL practices to consider organisational parameters for prevention and control, online retailers can implement (as supported by literature) the (1) general IT strategy of using IT with information management capabilities (section 6.3.1), (2) TLIT (traditional logistics IT) strategy of using existing ERPs for RL (section 6.3.3), (3) RLIT (RL information technology) strategy of considerations for RLIT (section 6.3.5), (4) RL in/outsourcing strategy of considerations and analysis of RL in/outsourcing decisions (section 6.4.1), (5) disposition strategy of developing a disposition system (section 6.6.1), (6) general facility/location strategy of facility/location decision factors (section 6.8.1), (7) RC strategy of considerations for RC (section 6.9.1), and (8) RL manager strategies of appropriate and sufficient leadership for RL and a full-time RL manager portfolio (section 6.9.5).

While no studies in the reviewed literature directly focused on considering organisational parameters for the implementation of PRP, RRP and RLC propositions, a few studies implied that online retailers could consider factors for outsourcing and facility and network design in RL. For example, Wang, Dang *et al.* (2021:2) indicated that outsourcing can help online retailers that lack the capabilities and resources to manage consumer returns effectively. Furthermore, Misni and Lee (2017:92) indicated that online retailers using facilities for both RL and FL must note the complexity and space requirements for successful RL operations. Evidently, online retailers must carefully consider both their capabilities and facility/network design for effective return prevention and control.

Essentially, considering organisational prevention and control parameters can help online retailer to effectively implement PRP, RRP and RLC propositions, and address the prevention and control (1) pitfalls of RL process failures (operational failures), inattention to RL, poor RL planning, a lack of resources (poor RLM), poor gatekeeping (poor return prevention) and poor systems (information-related pitfall), and (2) problems of high and unnecessary returns, increase in fraudulent returns, poor return visibility, poor/inconsistent return decision-making (product return problems), stockpiling,

disorganised and contaminated inventory, a loss of product/product control (inventory problems), consumer uncertainty, brand/brand image damage, market liabilities, a loss of managerial control and poor accountability and reporting (online retailer problems).

8.4.2.4.4 Cost versus benefit parameters

Cost versus benefit parameters (see **Figure 8.15**) involve important considerations for the implementation of pre-sales PRP propositions and RLC propositions, ensuring that the benefits of implementing PRP and RLC propositions outweigh the potential costs.

In terms of *pre-sales PRP propositions*, online retailers must consider the costs versus the benefits of FL excellence, information sharing initiatives and return restrictions (key practices). Specifically, participants suggested that online retailers consider the costs of implementing effective procurement and inbound inspection (FL excellence practice element) against the benefits of preventing consumer returns. Similarly, participants indicated that uploading photographs and providing detailed description of products as information sharing initiatives involve costs, which online retailers must consider, ensuring that the benefits outweigh the costs. Therefore, the cost versus benefit parameter for information sharing initiatives associate with product type parameters (e.g. clothing requires accurate size charts).

For return restrictions online retailers must consider the costs of implementing a robust return policy since adjusting a return policy can be costly. Therefore, the prevention benefits must outweigh the costs of using a robust return policy, linking with sales volume as a key volume parameter (section 8.4.2.4.1). For example, if small businesses are consumers for online retailers the cost of implementing a robust return policy might be justified to prevent the possibility of large financial losses for large order returns. Similarly, online retailers must consider the costs of return conditions in stricter return policies versus the benefits of preventing high and unnecessary returns. For example, considering the benefits of charging return fees (as a preventative measure) and the potential costs of losing consumers due to strict return conditions. The following quotations demonstrate the importance of considering the costs versus the benefits for pre-sales PRP propositions:

> "[To avoid or reduce consumer returns] improve the quality of your merchandise, […] make sure that the inbound inspection of all your products is high. Although to do one hundred percent [inbound] inspection there is a lot more cost [involved] […]." (P8, logistics manager, multichannel retailer)

> "There's a cost involved in uploading photographs, […] because all of those photographs have to be hosted and stored and someone needs to take it and upload it." (P2, owner, supply chain consultancy firm)

> "In clothing, […] it's like a size chart. I think the people of Retailer J they do it well. They give you a lot of information. I think that it stems down to, they need to spend money on it." (P12, Head of logistics, online retailer)

> "So, that's now a good policy. That's great. But how do we go and implement that now without all the wiring at the back or incur huge amounts of expense […]? And I think that's why they take a long time to change [the return policy], because the investment is huge […]." **(**P1, operations manager, 3PRL provider firm)

> "[…] they will reduce the number of returns if they do attach a cost to the return. Having said that, they might also lose a customer if they attach a cost to the return." (P2, owner, supply chain consultancy firm)

Regarding RLC propositions, online retailers must consider the costs versus the benefits for implementing operational RLC and managerial RLC practices. Specifically, online retailers must consider the costs of redesigning facilities or establishing new separate facilities for the implementation of return segregation for operational RLC. Similarly, online retailers must consider the costs versus benefits of control mechanisms for managerial RLC. For instance, online retailers must compare the benefits of using a centralised facilities for managerial control versus the costs of losing cost efficiency. Consequently, the cost versus benefit parameter for implementing RLC propositions link with the organisational parameters of facility and network design (section 8.4.2.4.3). The following quotations support these findings:

> "You have to segregate the practices completely, otherwise you sit with problems of mixing good and bad stock […] a lot more money needs to be spent on initial layout planning for reverse logistics departments, even if it's within a specific DC. They need to put sufficient planning into designing that layout so that it's practical for reverse logistics. I mean, Retailer K put up an entire reclamation centre, which is a standalone […]. They found that you can't do this [RL] in a normal DC. It's just too complicated. So, they had to build a [returns] separate facility." (P5, general manager, online retailer)

> "It all depends on your network design. And what we've done is we've centralised it because the decision-making criteria is more consistent in one depot in the country, but then you lose the efficiency of transport. […]. So, it's a managerial control decision versus a cost optimised decision." (P8, logistics manager, multichannel retailer)

As support RL practices to consider cost versus benefit parameters for prevention and control, online retailers can implement (as supported by literature) the (1) general facility/location strategy of cost/benefit or trade-off analysis for facilities/locations (section 6.8.1), (2) RC strategies of considerations for RC and financial RC (section 6.9.1), (3) Financial management (FM) strategy of performing a costs/benefit analysis (section 6.9.2), and (4) RPA (return prevention and avoidance) strategy of performing a cost/benefit analysis for RPA (section 6.9.3).

Some of the reviewed literature identified the costs and benefits of strict and lenient return policies. For example, lenient return policies can increase returns and RL costs (Andresen & Istad, 2019:57), while strict return policies can result in a loss of sales (Biswas & Abdul-Kader, 2018:1016; Zhang *et al.* 2023:10). Nevertheless, no studies in the reviewed literature discussed the costs versus benefits related to the key pre-sale PRP practices of FL excellence and information sharing initiatives and operational and managerial RLC propositions. Evidently, this study contributes to the literature by emphasising the importance of consider the costs versus benefits for effective return prevention and control.

Essentially, considering cost versus benefit parameters can help online retailers to effectively implement pre-sales PRP practices and RLC propositions, and mitigate the prevention and control (1) pitfalls of RL process failures (operational failures), inattention to RL, poor RL planning (poor RLM), return leniency (poor return prevention) and poor information sharing with consumers (information-related pitfall), and (2) problems of high and unnecessary returns, poor/inconsistent return decision-

making (product return problems), contaminated inventory (inventory problems), consumer dissatisfaction and uncertainty, a loss of managerial control and poor accountability (online retailer problems).

8.4.2.4.5 Supply chain (SC) and market prevention and control parameters

As emphasised in **Figure 8.15**, SC and market prevention and control parameters involve key parameters related to SC relationships and integration, market conditions and consumer behaviour and types, which can influence the implementation of PRP, RRP and RLC propositions.

For *SC relationship* and *integration parameters*, online retailers must consider manufacturer relationships (key parameter element) and 3PL/3PRL provider integration (key parameter element) for the implementation of PRP, RRP and RLC propositions. Particularly, online retailers that seek to implement inspection initiatives (key post-sales PRP practice), involving manufacturer staff inspections on the online retailer's premises, must consider their relationships with these manufacturers. However, online retailers must still consider the product type and value (i.e. luxury consumer goods) for manufacturer inspections, linking with product parameters, as indicated in the following quotation:

> "And they might be external parties for luxury consumer goods. They might be physical inspectors from the manufacturer at the online retailer's premises to verify that the return goods are in fact the original goods and not counterfeit goods." (P2, owner, supply chain consultancy firm)

Moreover, online retailers must consider the willingness of 3P(R)L providers to integrate and share information before implementing the key (1) RRP examination practice information usage and analysis (section 8.4.2.2.1), (2) operational RLC practices of RL process optimisation, product return visibility and product return inventory and disposition management (section 8.4.2.3.1), and (3) managerial RLC practice of control mechanisms (section 8.4.2.3.2). Evidently, in absence of effective SCI, online retailers must utilise internal (i.e. RL insourcing) practices for the effective implementation of RRP and RLC propositions. The following quotations show the importance of considering SCI before using third parties for RRP and RLC propositions:

> "[…] integration with a stock management system […], which can be both internal and external, so internal your own, warehouse and external with a third party, that's if they would like to integrate, that is first prize, it's easier to control […] on the reverse logistic side […]." (P12, Head of logistics, online retailer)

> "[…] you can outsource all of that and somebody else does all that for you, but you still going to need the reporting on that or the visibility from their system." (P13, supply chain manager, multichannel retailer)

> "So, we've got a reporting system that goes over to the clients [or online retailers] where they can see what product is, in what state of repair, which consumer it has come back from, how many credits are being granted, etc." (P4, owner/CEO, 3PRL provider firm)

Regarding *market conditions*, online retailers must consider market share and market demand as key parameter elements for PRP and RLC propositions. Specifically, participants indicated that online retailers must consider their *market share* before implementing the key pre-sales PRP practice of return restrictions. For instance, online retailers with low market penetration must limit the degree of return

restrictions to avoid losing market share, but as their market share increases, online retailers can increase the degree of return restrictions to proactively prevent returns. Furthermore, online retailers must consider *market demand* for the implementation of the key operational RLC practice of inventory management. For example, online retailers must consider market demand for directing returned inventory to locations/markets, demanding the returned inventory. The following quotations expand on these finding:

> "I remember distinctly back in the day that with Retailer C, you couldn't really dictate to the customer because you've got such a small penetration into the market, you literally have everything to lose. So, they were a lot more accommodating than what they were supposed to be. Honestly, they would take back things and smile and say, oh, it's OK, we'll just do it because we were going for market share […] So, as that improves, as Retailer C becomes a more established business with a credible market share and good online penetration, then they'll start tightening all of these belts and saying, you know what, sorry, Mr. Customer, we're not just going to take back whatever you give us […] So, I think that's the next level of innovation in South Africa is where the [market] penetration increases, the online retailers will become a lot more sticky and saying, you know what? Sorry, pal, I'm not going to take that back, you broke it, or you didn't use it properly." (P5, general manager, online retailer)

> "I've got inventory floating around in the business […] I've got consumer stock coming back as returns […] we would have to look at some level of distributed order management [system] to take all this inventory and see how best we can use it. That's probably our biggest investment that we would do to try and manage inventory in motion […], you can say, hey but there's a demand for this item there, I can fulfil from here to there […]." (P6, logistics manager, multichannel retailer)

Finally, online retailers must consider *consumer behaviour* and *types* for the implementation of RRP and operational RLC propositions. For instance, online retailers must consider consumer behaviour and type for the implementation of the key (1) RRP examination practice of targeted investigations to identify return abusers and (2) RRP intervention practices of party intervention to suspend consumer accounts. Subsequently, before suspending consumer accounts, online retailers must determine if high returners are engaging in fraudulent behaviour or if they are uncertain about their purchases, experiencing buyer's remorse. Additionally, online retailers must consider consumer behaviour and types for the key operational RLC practice of product return visibility, which requires accurate input from consumers during the return request process. If online retailers determine that consumers are less likely to select the correct products and return options, they must consider other initiatives to enhance product return visibility. These findings can be illustrated by the following quotations:

> "And you can start looking at the trends or the behaviour or the activities of these customers transactions […], unfortunately, certain customers become the heat maps or become classified as a category C or B customers, because based on the [number of] returns that they have […]. But [ensure that] you are fully made aware of, this is the type of customer we're dealing with here, he's not really sure what he wants when he purchased the product the first time, and hence the reason why [his] returns are so high." (P10, Head of Sales and Logistics, OEM/multichannel retailer)

> "As long as the customers got [and willing to give] all the information, it can actually go quite well […]. So, you can ask the customer to pinpoint what that specific product is and if the customer selects the correct product, it will then work backwards into your supply chain for the warehouse management solution, so that once you receive it, it's actually waiting for you to tick it off and say, yes, it's now been returned. So, that's a much better control." (P12, Head of logistics, online retailer)

> "[…] it's more difficult to track and trace on what's being returned […] the moment you have tick box [for return reasons], the consumer will choose the top line. Does not matter what it is." (P2, owner, supply chain consultancy firm)

As support RL practices to consider SC and market parameters for prevention and control, online retailers can implement (as supported by literature) the (1) general IT strategy of strategic considerations for IT (section 6.3.1), (2) TLIT strategies of integrating TLIT with other IT and using WMS and ordering systems (section 6.3.3), (4) SCI strategy of considerations for SCI (section 6.4.1), (5) CI strategy of considerations for CI (section 6.4.2), (6) RL in/outsourcing strategies of considerations and analysis for RL in/outsourcing decisions and selecting 3P partners (section 6.4.1), and (7) RPA strategy of considerations for gatekeeping and return avoidance (section 6.9.3).

While no studies from the reviewed literature identified the impact of SC relationships and integration on return prevention and control, Frei *et al.* (2020:1618) indicated that integrated IT can be important for successful SCI and Meyer *et al*. (2017:13) emphasised that information system accessibility by SC partners can be important for effective SC information sharing. In terms of the market conditions and demand, no studies from the reviewed literature aligned with the interview findings, which means this study provides additional factors that online retailers can consider for the effective implementation of pre-sales PRP and operational RLC practices. Although the studies of Hjort *et al.* (2019:778) and Zhang *et al.* (2023:11) suggested the use of product return trends to identify serial returners for account suspensions, no studies indicated that online retailers must consider the type of consumer before suspending consumer accounts. Therefore, this study adds new insight to mistakenly prevent account suspensions of honest but uncertain consumers. Lastly, Frei *et al.* (2020:1615) found that 70% of return reasons are inaccurately attributed to a "change of mind" because many consumers conveniently select the first return option (i.e. a change of mind) from the drop-down menu on the website during return request. This confirms the importance of considering consumer behaviour for the successful implementation of product return visibility for operational RLC.

Essentially, considering SC and market parameters can help online retailers to effectively implement PRP, RRP and RLC propositions, and address the prevention and control (1) pitfalls of RL process failures (operational failures), poor RL planning, a lack of resources, return leniency, poor gatekeeping (poor return prevention), lack of SCI and poor systems (information-related pitfalls), and (2) problems of high and unnecessary returns, increase in fraudulent/ineligible returns, poor return visibility (product return problems), stockpiling, disorganised and contaminated inventory, loss of product/product control (inventory problems), consumer dissatisfaction and uncertainty, a loss of sales, brand/brand image damage, market liabilities, a loss of managerial control, and poor accountability and reporting (online retailer problems).

8.4.2.4.6 Legal and environmental prevention and control parameters

Legal and environmental prevention and control parameters involve key parameters related to consumer protection laws and rights and environmental policy and disruptions (see **Figure 8.15**), which can influence the implementation of various prevention and control propositions.

Consumer protection laws and *rights* as key parameters associate with PRP and RRP propositions. For the PRP propositions, participants indicated that laws, like the Consumer Protection Act (CPA), must be considered for return restrictions (key pre-sales PRP practice), gatekeeping and inspection initiatives (key post-sales PRP practices). Subsequently, online retailers must use the CPA to determine if they can establish certain return restrictions (e.g. charging return costs) and implement gatekeeping practices before return collection (e.g. using online authorisation to reject returns). If the CPA protects consumers and stipulate that returns must be accepted, online retailers can implement preventative inspection at their facilities (section 8.4.2.3.1). The impact of consumer protection laws on the implementation of PRP propositions can be demonstrated by the following quotations:

> "So, have some sort of a policy in place […] But unfortunately, with the Consumer Protection Act, I mean, there's certain things that you can do, [and] certain things you can't. So, the essence is that you follow the Consumer Protection Act and you've got to make sure that you're in line with that, but somehow use it to help you navigate the process and help you to reduce certain returns." (P10, Head of Sales and Logistics, OEM/multichannel retailer)

> "[…] the product is going to come back to you anyway […] because […] the Consumer Protection Act works against you. So, you could implement a verification process [in the facility], which is the gatekeeper." (P4, owner/CEO, 3PRL provider firm)

Furthermore, participants indicated that *consumer rights* must be considered for the implementation of the key (1) RRP examination practice of targeted investigations to identify return abusers and (2) RRP intervention practice of party intervention to suspend consumer accounts. Subsequently, consumer protection and rights as legal parameters link with consumer behaviour and types as market parameters (section 8.4.2.4.5), emphasising that online retailers can benefit from implementing RRP practices related to return abusers as a last resort (see section 8.4.2.2.2). The following quotation supports this finding:

> "[…] this is the type of customer we're dealing with here, he's not really sure what he wants when he purchased the product the first time, and hence the reason why [his] returns are so high. But can you discriminate? No, you can't. Because he's a customer, and […] he has the right to return something that he does not want, whether he does it hundred times, as long as it meets the [return condition] criteria, he's able to do so." (P10, Head of Sales and Logistics, OEM/multichannel retailer)

Environmental policy and *disruptions* as key parameters can be important for the implementation of RLC propositions. Particularly, participants indicated that online retailers should consider *environmental policies* for the implementation of product return inventory and disposition management as key operational RLC practices. For instance, if online retailers are unable to comply with environmental policies for effective disposal (i.e. recycling or waste management) of unsalable returned products, they must consider using 3PRL providers with capabilities to comply with

environmental policies. Subsequently, environmental policy links with the organisational parameter related to disposition capabilities (see section 8.4.2.4.3). The following quotation shows the link between environmental policy and operational RLC practices:

> "[…] a dedicated, outsourced reverse logistics business. […] [returned products] inevitably lands up in a corner of the warehouse. It doesn't receive focus. It doesn't receive attention. It eventually gets swept out and thrown away, it is pilfered, etc. […]. Our facilities are adopted for [the] management of reverse logistics. […] And obviously our disposal mechanisms are all in terms of [environmental] policy, in terms of the management of brand equity. We do all those things and commit ourselves and contract ourselves to make sure the products get disposed of in the correct fashion." (P7, owner, 3PRL provider firm)

Similarly, online retailers must consider *environmental disruptions* for the implementation of the key operational RLC practice of product disposition management. Particularly, for environmental disruptions, like the Covid pandemic, online retailers should prioritise supplier engagement for the disposition option of "returning to the supplier", to avoid stockpiling of returned products in the facility. Therefore, the environmental disruptions can associate with the key SC parameter of SC relationships and integration (section 8.4.2.4.5). The following quotation support this finding:

> "The problem about returns, it's not ever flowing, like you don't get product in, product out. So, it's a big request from our side to the supplier to actually get the [returned] products out […] in this [Covid] lockdown period, the stock on hand that we have for returns […] piled up greatly […]." (P3, returns manager, online retailer)

As support RL practices to consider legal and environmental parameters for prevention and control, online retailers can implement (as supported by literature) the (1) SCI strategy of considerations for SCI (section 6.4.1), (2) RL in/outsourcing strategy of considerations and analysis for RL in/outsourcing decisions (section 6.4.1), (3) disposition strategy of considerations for disposition decisions (section 6.6.1), and (4) RPA strategy of considerations for gatekeeping and RA (section 6.9.3). In terms of the consumer protection laws, Hjort *et al.* (2019:774) found that early gatekeeping in Europe is mostly practiced for information purposes because EU laws mandate that returns must be accepted for online product returns. Furthermore, Prajapati *et al*. (2021:14) indicated that the legal benefits of compliance with government policies and environmental protection can be factors to consider for effective RL insourcing and outsourcing decisions. Nevertheless, this study extends the literature by suggesting the consideration of consumer rights for reactive return prevention and environmental disruptions for the key operational RLC of product disposition management.

Essentially, considering legal and environmental prevention and control parameters can help online retailers effectively implement PRP, RRP and RLC propositions, and mitigate the prevention and control (1) pitfalls of RL process failures (operational failures), inattention to RL, poor RL planning (poor RLM), return leniency, poor gatekeeping (poor return prevention) and a lack of SCI (information-related pitfall), and (2) problems of high and unnecessary returns, increase in fraudulent/ineligible returns (product return problems), stockpiling, disorganised inventory, loss of product/product control (inventory problems), consumer dissatisfaction and uncertainty, brand/brand

image damage, market liabilities, a loss of managerial control and poor accountability (online retailer problems).

In conclusion, the prevention and control parameters can impact the implementation of PRP, RRP and RLC propositions and help online retailers to address various prevention and control pitfalls and problems. Therefore, online retailers should consider prevention and control parameters for the effective RLM of consumer returns. The next section contains a framework and summary of the findings for prevention and control propositions in RLM.

8.4.2.5 Framework and summary of findings for prevention and control propositions in RLM

Clearly the discussion in section 8.4.2 showed that prevention and control propositions, including proactive return prevention (PRP), reactive return prevention (RRP), RL control (RLC) and prevention and control parameters, can be important for the effective RLM of consumer returns in online retailing. Figure 8.**9** provides a broad overview of the prevention and control propositions for RLM, demonstrating the links between the RL support practices (see bottom of **Figure 8.15**), main propositions and proposition categories (listed below the main propositions in the middle and right columns).

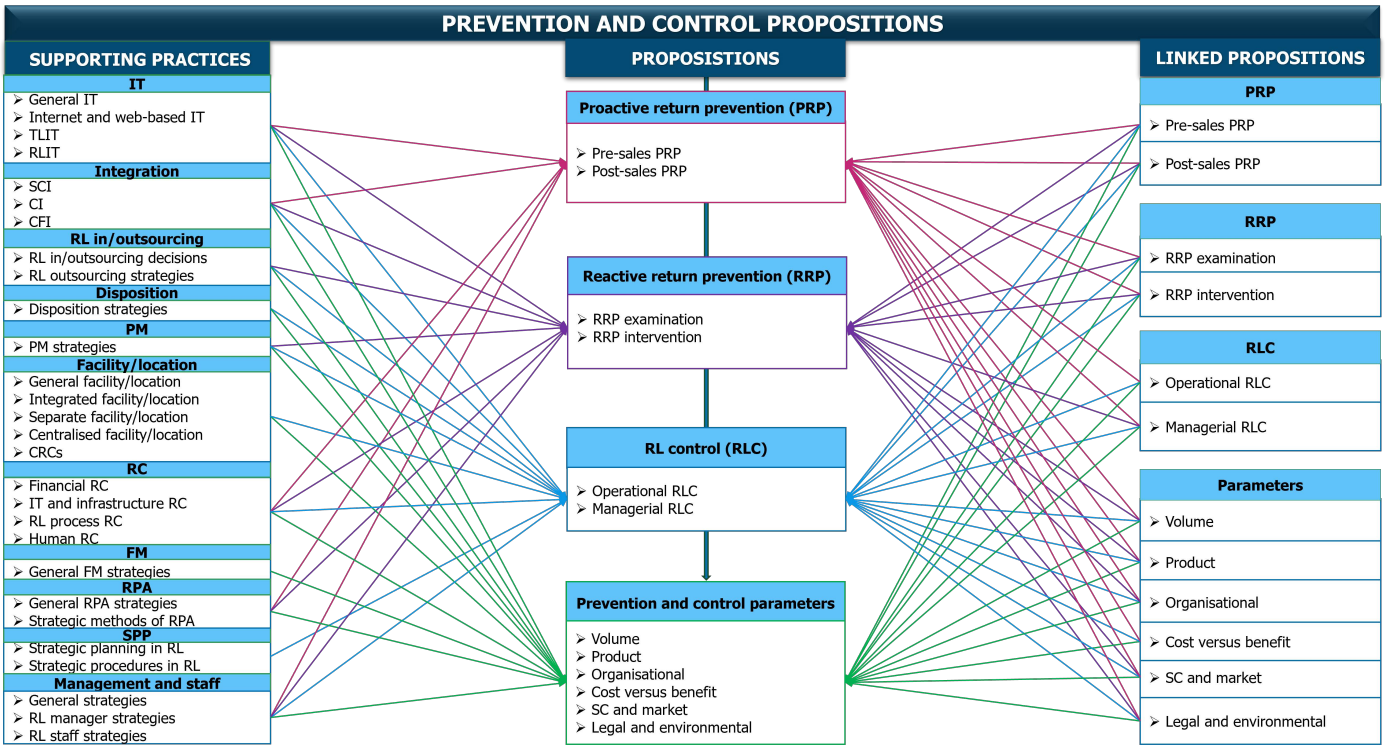


Figure 8.9 Framework for prevention and control propositions
Source: Compiled by the researcher

In terms of the *support RL practices*, the framework shows that prevention and control propositions can be supported by implementing strategies from all RL support practices from the QCA of RL literature findings. The most significant RL support practice categories include IT, integration, RC and

management and staff practices, which means that online retailers can prioritise implementing these RL support practices for the successful implementation of prevention and control propositions. In contrast, the least significant support RL practice categories include FM and SPP, which means online retailers can implement FM and SPP practices as a last priority for the successful implementation of prevention and control propositions.

For the *propositions*, prevention and control parameters, followed by RLC propositions associate with the highest variety of RL support practices. Consequently, online retailers can benefit the most from implementing various RL support practices for the effective consideration of prevention and control parameters and implementation of RLC propositions. However, prevention and control parameters and RLC propositions might be more complicated to consider or implement for effective prevention and control in RL.

Regarding the *links between* the *prevention* and *control propositions*, the framework shows that PRP propositions and prevention and control parameters associate with the most proposition categories, indicating that online retailers must pay attention to prevention and control parameters and PRP propositions for the implementation of various prevention and control proposition categories. Contrastingly, RRP propositions associate with the least proposition categories, indicating that online retailers can pay less attention to RRP propositions for the implementation of prevention and control proposition categories. Finally, the framework shows that the prevention and control proposition categories of pre-sales PRP, post-sales PRP, RRP examination, RRP intervention, managerial RLC and volume, product, organisational, SC, market, legal and environmental parameters equally link with the main prevention and control propositions. Subsequently, online retailers must pay attention to these prevention and control proposition categories in the implementation of various prevention and control propositions.

Table 8.16 provides a detailed proposition framework and summary of the findings, demonstrating the prevention and control proposition categories, key practices/parameters (with elements if applicable), support RL practices, linked proposition categories, and the number of requirements per key practice/parameter and per proposition category. The links between the prevention and control propositions and the pitfalls and problems will be summarised in the final framework and summary of findings for the prevention and control theme (section 8.4.4).

Table 8.16 Summary of findings for prevention and control propositions

Proposition categories	Key practices/parameters	Support RL practices	Linked proposition categories	Requirements per key practice/parameter	Requirements per proposition category
Pre-sales PRP practices	**FL excellence** • 6 Rs of logistics • Effective procurement and inbound inspection • Educate FL staff	• RPA • RL staff strategy	• RRP examination and intervention • Cost versus benefit parameter	• Key practices – 3 • Support practices – 2 • Total requirements – 5	• ***Key practices – 8*** • ***Support practices – 6*** • ***Total requirements –***

Proposition categories	Key practices/parameters	Support RL practices	Linked proposition categories	Requirements per key practice/parameter	Requirements per proposition category
	Information sharing initiatives • Product descriptions • Photography • Consumer education	• CI • RPA	• Post-sales PRP • Product and cost versus benefit parameters	• Key practices – 3 • Support practices – 2 • Total requirements – 5	***14***
	Return restrictions • Robust return policy • Communicate return conditions and policies to consumers	• CI • RPA	• Post-sales PRP • RRP examination • Managerial RLC • Volume, cost/benefit, SC, market, legal and environmental parameters	• Key practices – 2 • Support practices – 2 • Total requirements – 4	
Post-sales PRP	**Gatekeeping** • Online authorisation • Establish an appropriate gatekeeping function	• Internet/web-based • CI • RPA • RL manager	• Pre-sales PRP • Product, legal and environmental parameters	• Key practices – 2 • Support practices – 4 • Total requirements – 6	• ***Key practices – 4*** • ***Support practices – 9*** • ***Total requirements – 13***
	Return inspection initiatives • Preventative inspection at consumer locations • Preventative inspection at online retailer locations	• SCI • CI • RC • RPA • RL staff strategy	• Pre-sales PRP • RRP and RLC propositions • Volume, product, organisational, SC, market, legal and environmental parameters	• Key practices – 2 • Support practices – 5 • Total requirements – 7	
RRP examination	**Information usage and analysis** • Consumer feedback and complaints data • Product return data • KPIs	• General IT • SCI, CI and CFI • RL outsourcing • PM • RPA • RL manager	• Pre-sales PRP • RRP intervention • Managerial RLC • Volume, product, organisational, SC and market parameters	• Key practices – 3 • Support practices – 8 • Total requirements – 11	• ***Key practices – 5*** • ***Support practices – 11*** • ***Total requirements – 16***
	Targeted investigation • Use product experts • Investigate individual return abusers	• RC • RPA • RL staff strategy	• Pre- and post-sales PRP • RRP intervention • Product, SC, market, legal and environmental parameters	• Key practices – 2 • Support practices – 3 • Total requirements – 5	
RRP intervention	**Product interventions** • Redesign/reengineer products or packaging • Discontinue products • Manufacturer recalls	• SCI • CFI • RPA	• Pre-sales PRP • RRP examination • Product parameter	• Key practices – 3 • Support practices – 3 • Total requirements – 6	• ***Key practices – 6*** • ***Support practices – 6*** • ***Total requirements – 12***
	Party interventions • Partner penalties • Exit suppliers • Account suspensions	• SCI • PM • RPA	• Pre-sales PRP • RRP examination • Managerial RLC • Volume, product, market, legal and environmental parameters	• Key practices – 3 • Support practices – 3 • Total requirements – 6	
Operational RLC	**RL process optimisation** • Use strategic planning • Use appropriate facilities and resources • Use appropriate staff practices • Use third parties	• CI • RL outsourcing • PM and RC • Centralised facility/location • Strategic planning • RL manager/staff	• Post-sales PRP • Operational RLC • Volume, product, SC and market, parameters	• Key practices – 4 • Support practices – 8 • Total requirements – 12	• ***Key practices – 16*** • ***Support practices – 28*** • ***Total requirements – 44***
	Product return visibility • Use IT • Use third parties	• Internet/web-based • TLIT and RLIT • SCI and CI • RL outsourcing & RC	• Operational and managerial RLC • Volume, organisational, SC and market parameters	• Key practices – 2 • Support practices – 7 • Total requirements – 9	
	Product return segregation • Space and facility layout • Establish a RL department • Establish a separate facility for RL	• Separate facility/location • RC • Strategic procedures • RL staff strategy	• Managerial RLC • Volume, organisational and cost versus benefit parameters	• Key practices – 3 • Support practices – 4 • Total requirements – 7	
	Product return inventory management • Use systems • Use staff • Use third parties	• TLIT • RL outsourcing • RC • RL manager and staff strategies	• Operational and managerial RLC • Volume, product, organisational, SC, market, legal and environmental parameters	• Key practices – 3 • Support practices – 5 • Total requirements – 8	
	Product disposition management • Engage with suppliers • Train disposition staff • Internal disposition control • Use third parties	• SCI • RL in/outsourcing • Disposition • RL staff strategy	• Operational and managerial RLC • Volume, product, organisational, SC, market, legal and environmental parameters	• Key practices – 4 • Support practices – 4 • Total requirements – 8	
Managerial RLC	**Control mechanisms** • Internal control mechanisms • External control mechanisms	• RL in/outsourcing • PM and RL staff • Centralised facility/location	• Operational and managerial RLC • Organisational, cost/benefit, SC and market parameters	• Key practices – 2 • Support practices – 4 • Total requirements – 6	• ***Key practices – 8*** • ***Support practices – 17*** • ***Total requirements – 25***
	Dedicated resources	• RC • Separate facility • RL manager and staff	• Operational and managerial RLC • Volume and organisational parameters	• Key practice – 1 • Support practices – 4 • Total requirements – 5	
	Standards and guidelines • Standardise return processes • Use return policies for guidelines	• PM • Centralised & CRC facilities/locations • Strategic procedures in	• Pre-sales PRP • Operational and managerial RLC	• Key practices – 3 • Support practices – 4 • Total requirements – 7	

Proposition categories	Key practices/parameters	Support RL practices	Linked proposition categories	Requirements per key practice/parameter	Requirements per proposition category
	• Centralise the RL function	RL			
	Maintain managerial RLC • Measure RL performance • Use appropriate facilities and functions	• PM • Integrated/centralised facility/location • Management & staff general and RL staff strategies	• RRP examination and intervention • Operational and managerial RLC • Volume parameter	• Key practices – 2 • Support practices – 5 • Total requirements – 7	
Volume parameters	**Return volume**	• PM • General facility/location • RC and RPA • RL manager strategy	• Post-sales PRP • RRP examination and intervention • Operational and managerial RLC • Product and organisational parameters	• Key parameter – 1 • Support practices – 5 • Total requirements – 6	• ***Key parameters – 2*** • ***Support practices – 6*** • ***Total requirements – 8***
	Sales volume	• RPA	• Pre-sales PRP • Cost versus benefit	• Key parameters – 1 • Support practices – 1 • Total requirements – 2	
Product parameters	**Product condition**	• SCI • PM • RC • RPA • RL staff strategy	• Post-sales PRP • RRP examination and intervention • Operational RLC • Product, organisational and SC parameters	• Key parameters – 1 • Support practices – 5 • Total requirements – 6	• ***Key parameters – 4*** • ***Support practices – 19*** • ***Total requirements – 23***
	Product type	• General IT • CI and CFI • RL insourcing • Disposition • RC and RPA • RL manager & staff	***Practices*** • Pre- and post-sales PRP • RRP examination and intervention • Operational RLC • Volume, product, cost versus benefit and SC parameters	• Key parameters – 1 • Support practices – 9 • Total requirements – 10	
	Product/inventory value	• SCI • RL outsourcing	• Post-sales PRP • Operational RLC • Product & organisation parameters	• Key parameters – 1 • Support practices – 2 • Total requirements – 3	
	Product characteristics	• SCI • RL outsourcing • RL staff strategy	• Post-sales PRP • Operational RLC • Product parameters	• Key parameters – 1 • Support practices – 3 • Total requirements – 4	
Organisation parameters	**Organisation type and size**	• General facility/location • RC and RL manager	• Operational and managerial RLC • Volume and organisational parameters	• Key parameters – 2 • Support practices – 3 • Total requirements – 5	• ***Key parameters – 5*** • ***Support practices – 9*** • ***Total requirements – 14***
	Organisational capabilities • RL process capabilities • Information management and IT capabilities	• TLIT • RLIT • RC • RL in/outsourcing • Disposition	• Post-sales PRP • RRP examination • Operational RLC • Product, SC and environmental parameters	• Key parameters – 2 • Support practices – 5 • Total requirements – 7	
	Facility and network design	• General facilities/ locations	• Operational and managerial RLC • Volume, organisational and cost versus benefit parameters	• Key parameters – 1 • Support practices – 1 • Total requirements – 2	
Cost versus benefits	**Cost versus benefits for implementing pre-sales PRP practices**	• FM • RPA	• Pre-sales PRP • Volume and product parameters	• Key parameters – 1 • Support practices – 2 • Total requirements – 3	• ***Key parameters – 2*** • ***Support practices – 4*** • ***Total requirements – 6***
	Cost versus benefits for implementing RLC propositions	• RC • FM	• Operational and managerial RLC • Organisational parameter	• Key parameters – 1 • Support practices – 2 • Total requirements – 3	
SC and market parameters	**SC relationships and integration** • Manufacturer relationships • 3PL/3PRL provider integration	• General IT • SCI • RL outsourcing	• Post-sales PRP • RRP examination • Operational and managerial RLC • Product, organisational, legal and environmental	• Key parameters – 2 • Support practices – 3 • Total requirements – 5	• ***Key parameters – 5*** • ***Support practices – 9*** • ***Total requirements – 14***
	Market conditions • Market share • Market demand	• TLIT • CI • RPA	• Pre-sales PRP • Operational RLC	• Key parameters – 2 • Support practices – 3 • Total requirements – 5	
	Consumer behaviour and types	• TLIT • CI • RPA	• RRP examination and intervention • Operational RLC • Legal and environmental	• Key parameters – 1 • Support practices – 3 • Total requirements – 4	
Legal and environment parameters	**Consumer protection laws and rights**	• RPA	• Pre- and post-sales PRP • RRP examination and intervention • Operational RLC • SC and market parameters	• Key parameters – 2 • Support practices – 1 • Total requirements – 3	• ***Key parameters – 4*** • ***Support practices – 4*** • ***Total requirements – 8***
	Environmental policies and disruptions	• SCI • RL outsourcing • Disposition	• Operational RLC • Organisational, SC and market parameters	• Key parameters – 2 • Support practices – 3 • Total requirements – 5	

Source: Compiled by the researcher

Table 8.16 provides a detailed summary of the interview findings for prevention and control propositions, which can help online retailers to identify the (1) requirements for specific prevention and control proposition categories, (2) support practices that links with the highest number of prevention

and control propositions, (3) key practices and key parameters that link with the highest number of prevention and control proposition categories, (4) proposition categories that require the most key practices/parameters and key elements, (5) key practice or parameter that requires the most key elements, (6) proposition category that associates with the most support practices, (7) key practice or parameter that associates with the most support practices, and (8) proposition category and key practice/parameter that involves the most requirements for successful implementation/consideration. Some examples of using the framework will be given in the subsequent paragraphs.

In terms of the *requirements for specific prevention and control proposition categories*, an online retailer interested in implementing, for example, pre-sales PRP propositions, can identify (1) FL excellence, information sharing initiatives and return restrictions as the required key practices, (2) CI, RPA and RL staff strategies as required support RL practices, and (3) post-sales PRP, RRP examination and intervention, managerial RLC and volume, product, cost versus benefit, SC, market, legal and environmental parameters as associated proposition categories. Similarly, online retailers that experience, for example, fluctuations in return volume (as a key volume parameter) can focus on return volume for implementing/considering (1) PM, general facility/location, RC, RPA and RL manager strategies as support RL practices, (2) post-sales PRP, RRP examination, RRP intervention, operational RLC and managerial RLC as associated proposition categories, and (3) product and organisational parameters as associated parameter proposition categories.

The most *significant support RL practices* for the implementation of prevention and control propositions include RC and RPA practices. Subsequently, to effectively implement/consider various prevention and control propositions, online retailers must prioritise the implementation of RC and RPA as support RL practices. Furthermore, the *key practice* of return inspection initiatives (post-sales PRP practice) and the *key parameter* of product type (product parameter) *associates with the highest number of proposition categories*, which means that online retailers must pay attention to return inspection initiatives and product type for the successful implementation/consideration of various prevention and control proposition categories.

Regarding the *proposition categories*, operational RLC *require the most key practices/elements*, which means that online retailers must implement several key practices/elements for the effective implementation of operational RLC practices. Subsequently, the *key practices* of RL process optimisation and product disposition management *requires the most key elements*, which means that online retailers must implement several practice elements for successful RL process optimisation and product disposition management. Furthermore, the *proposition category* of operational RLC *associate with the most support RL practices*, which means that support RL practices can be the most beneficial for the implementation of various operational RLC practices. Similarly, the *key parameter* of product

type *associates with the most support RL practices*, which means that support RL practices can be the most beneficial for considering product type as a parameter. However, operational RLC as a proposition category and product type as a key parameter might be more complicated to implement/consider for effective return prevention and control.

Finally, operational RLC as a *proposition category* and RL optimisation as a *key practice* involve the *highest number of requirements*, which means that operational RLC and RL optimisation might be a too challenging to implement successfully for effective prevention and control. Nevertheless, before online retailers choose to implement proposition categories and key practices/parameters based on the number of requirements, they must first identify the linked benefits. The benefits represent the number of prevention and control pitfall and problems addressed and profits realised, which will be identified in the final framework and summary of finding for prevention and control theme (section 8.4.4). In the next section, the prevention and control profits (subtheme 3) that can be realised through the effective implementation of prevention and control propositions, will be analysed and discussed.

8.4.3 Prevention and control profits – Subtheme 3

As illustrated in Figure 8.5, and discussed in section 8.2.2., the prevention and control profits consist of profit categories, including product return and operational, organisational, SC and market and other themes, profit subcategories and related profits, which can be realised through the implementation/consideration of proactive return prevention (PRP), reactive return prevention (RRP) and RL control (RLC) propositions and prevention and control parameters. Figure 8.**10** provides an overview of the prevention and control profit categories, subcategories and related profits that can be realised through the implementation/consideration of prevention and control propositions.

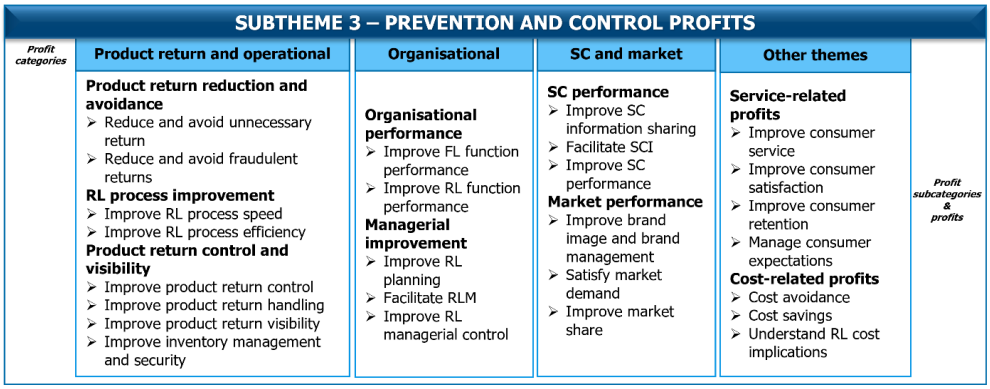


Figure 8.10 Overview of subtheme 3 – Prevention and control profits
Source: Compiled by the researcher

In the subsequent sections the main prevention and control profit categories, including *product return* and *operational, organisational, SC* and *market,* and *other theme profits,* with related profit subcategories and profits will be discussed.

8.4.3.1 Product return and operational prevention and control profits

As illustrated in Figure 8.**10**, product return and operational prevention and control profits can be categorised as (1) product return reduction and avoidance, (2) RL process improvements, and (3) product return control, which will be discussed in the subsequent sections.

8.4.3.1.1 Product return reduction and avoidance profits

Product return reduction and avoidance profits involve reduction and avoidance of unnecessary and fraudulent product returns, which can be realised through PRP, RRP and operational RLC propositions and prevention and control parameters.

Specifically, participants indicated that online retailers could *reduce and avoid unnecessary product returns* through the key (1) pre-sales PRP practices of FL excellence, information sharing initiatives and return restrictions, (2) post-sales PRP practices of gatekeeping and return inspection initiatives, (3) RRP intervention practice of product interventions (i.e. product/package design changes), (4) operational RLC practice of RL process optimisation, (5) cost versus benefit parameter related to pre-sales PRP, and (6) legal parameter of consumer protection laws. The following quotations support these findings:

> "[…] if you can provide an exceptional forward logistics, your reverse logistics will definitely reduce." (P10, Head of Sales and Logistics, OEM/multichannel retailer)
>
> "[…] the best way to minimise it […] [is to] educate the consumer as to what they're getting […]." (P4, owner/CEO, 3PRL provider firm)
>
> "So, have some sort of a policy in place […] But unfortunately, with the Consumer Protection Act there's certain things that you can do, [and] certain things you can't […] but [you can] somehow use it to help you navigate the process and help you to reduce certain returns." (P10, Head of Sales and Logistics, OEM/multichannel retailer)
>
> "[…] they will reduce the number of returns if they do attach a cost to the return." (P2, owner, supply chain consultancy firm)
>
> "[…] on our website, if you want to log a return for something that you've changed your mind, but you've ordered it outside the [return] period […], it automatically rejects it. I think that's a great way to avoid unnecessary returns." (P3, returns manager, online retailer)
>
> "So, train the inspectors on how to manage your actual product. And that would reduce the number of comebacks you get […]." (P5, general manager, online retailer)
>
> "I think they good for knowledge sharing would be good between the distribution team and the procurement team […] where they can feed back further up the supply chain on potential changes to the packaging or products […] to reduce claims." (P4, owner/CEO, 3PRL provider firm)
>
> "[…] you can have [RL] as part of a strategic plan to reduce [returns and] optimise, building efficiencies [in return processes]." (P6, logistics manager, multichannel retailer)

Moreover, participants indicated that online retailers could reduce, minimise or avoid fraudulent product returns through PRP propositions and product parameters. Specifically, online retailers can *reduce fraudulent product returns* through the key (1) pre-sales PRP practice of return restrictions (e.g. communicating return restrictions to consumers), (2) post-sales PRP practice of inspection initiatives, (3) RRP intervention practice of party interventions, and (4) product parameters of product type and

value. Similarly, online retailers can *avoid fraudulent product returns* by implementing gatekeeping as a key post-sales PRP practice, which involves utilising online authorisation for gatekeeping, and considering the key product parameter of product type. The following quotations expand on these findings:

> "You need to be very clear. Your website needs to be clear from the get-go. You need to say to your consumer in the fine print that if you buy this jacket and you wear it, no matter what […] we're not going to take it back […] to minimise that risk [of fraudulent returns]." (P5, general manager, online retailer)

> "And the only way you're going to really minimise [a fraudulent return] is that when it arrives, make sure the verification is correct […]. But I don't think you can stop the fraudulent intent, but you can stop fraud from happening through a proper verification process." (P4, owner/CEO, 3PRL provider firm)

> "And they might be external parties for luxury consumer goods. They might be physical inspectors from the manufacturer at the online retailer's premises to verify that the return goods are in fact the original goods and not counterfeit goods." (P2, owner, supply chain consultancy firm)

> "So, often what happens is [the consumer says] 'I would like to return this laptop'. So, I [as the consumer] phone the contact centre and I spin them a whole story […], and [as the contact centre agent] my heart goes out to this person. And so, I authorise the return. The fact of the matter [is], this person [the consumer] bought the item two years ago and it's out of warranty and it is not returnable […]. So, avoiding that on the front end by digitising your returns policy […]. Your computer system understands what the product is and when they [the consumer] bought it, what the return parameters are for that item, what the policy is for that item and allows that customer to return it or rejects the return with treatable messaging. That avoids those sorts of fraudulent returns right at the outset." (P1, operations manager, 3PRL provider firm)

> "[…] what we found with Retailer E was that the same consumer would keep trying to commit the fraud and they eventually just block their accounts." (P4, owner/CEO, 3PRL provider firm)

Several studies from the reviewed literature aligns with the interview findings on the expected product return reduction and avoidance profits from the implementation of various prevention and control propositions. Particularly, unnecessary returns can be reduced and avoided through (1) logistics efficiency (Davidavičienė & Al Majzoub, 2021:19; Euchi *et al.* 2019:49; Hjort *et al.* 2019:779), (2) information sharing initiatives (Ahlén & Johansson, 2023:31; Ahsan & Rahman, 2022:157; Bozzi *et al.* 2022:15; Hjort *et al.* 2019:777; Nel & Badenhorst, 2020:127), (3) return restrictions (Andresen & Istad, 2019:8, 57), (4) gatekeeping (Andresen & Istad, 2019:8; Hjort *et al.* 2019:774), (5) inspection initiatives (Hjort *et al.* 2019:775), (6) product interventions (Andresen & Istad, 2019:7; Bozzi *et al.* 2022:30; Hjort *et al.* 2019:774), and (7) RL process optimisation (Solati *et al.* 2023:2). Similarly, fraudulent returns can be reduced and avoided through clearly communicated return policies (Zhang *et al.* 2023:10) and account suspensions (Hjort *et al.* 2019:778; Zhang *et al.* 2023:11). Nevertheless, this study uniquely identifies that using online authorisation for gatekeeping can avoid fraudulent returns, emphasising the importance of non-human gatekeeping.

Subsequently, reducing and avoiding product returns as prevention and control profits, reemphasise that online retailers can address return leniency, poor gatekeeping (poor RPA) and poor information sharing with consumers (information-related) pitfalls, and high and unnecessary returns and an increase in fraudulent/ineligible returns (product return) problems through the implementation of prevention and control propositions for the effective RLM of consumer returns.

8.4.3.1.2 RL process improvement profits

RL process improvement profits associate with the improvement of the speed and efficiency of the RL process through PRP and RLC propositions and prevention and control parameters.

Participants suggested that online retailers could *improve RL process speed* and *efficiency* through various key practices and parameters. Particularly, online retailers can improve the speed and efficiency of their RL processes through the key (1) post-sales PRP practice of inspection initiatives, (2) operational RLC practices of RL process optimisation (i.e. using strategic plans, facilities and staff practices) and product disposition management (i.e. using 3PRL providers), (3) managerial RLC practices of standards and guidelines, (3) volume parameter of return volume, (4) product parameter of product type, and (4) SC and market parameter of SCI (see section 8.4.2.4.5). These findings can be supported by the subsequent quotations:

> "[…] a practical way of putting a team of people into the street and saying, you know, what returns is such a big thing in our world […] So, let's put a dedicated team in there that are our first line evaluators […] that can go to the customer and say, you know what, before I take this laptop from you, can we quickly do one, two, three and four, maybe solve them right there […]. So, I think that's possibly another avenue that one can explore just to […] save some time and traffic at the DC." (P5, general manager, online retailer)

> "[…] you can have [RL] as part of a strategic plan to reduce [returns and] optimise, building efficiencies [in return processes]." (P6, logistics manager, multichannel retailer)

> "[…] the staff needs to be trained […] on the [return] process […] in order to function efficiently." (P4, owner/CEO, 3PRL provider firm)

> "[…] the saving [of RL outsourcing] may not come in direct costs, but it will become in the recoverability of the product, the control […] of the stock […] where your customers are getting that kind of service that you buy it [a clothing item] today, it doesn't fit. I [the 3PRL provider] pick it up tomorrow and that kind of thing is done very quickly, very efficiently." (P7, owner, 3PRL provider firm)

> "I would say the best thing is to have a centralised facility. […] from a reverse logistics point of view, having a central unit makes a lot of sense. Specifically, because you've got the ability to employ bigger and better teams that can speed up processes […] [and] you have got the same method of thinking in one facility […]." (P5, general manager, online retailer)

> "[Performance measurement is important for] […] ensuring that our fulfilment centres and the returns process is carried out efficiently. […] if it is to be resold, it needs to get resold […] it needs to get onto the shelf ASAP within a specific timeframe and be put up for sale within a specific timeframe." (P9, regional & online DC manager, online retailer)

The interview findings related to the improvement of RL process speed and efficiency as product return and operational profits correspond with a few studies from the reviewed literature. For example, RL process speed and efficiency can be achieved through RL staff training (Ahsan & Rahman, 2022:157), outsourcing to 3PRL providers (Wang, Dang *et al.* 2021:2) and performance measuring (Karlsson *et al.* 2023:9). Nevertheless, this study contradicts the findings of Hjort *et al.* (2019:781), who identified that using centralised facilities (i.e. CRCs) can reduce RL process speed because of longer transportation distances. However, this study demonstrates that centralised RL facilities can increase the efficiency and speed of return processes due to improved decision-making, consistency and resources. Therefore, additional benefits can be attributed to the use of CRCs to manage consumer returns effectively.

Essentially, improving RL process speed and efficiency as prevention and control profits, reemphasise that online retailers can address RL process failure (operational failure) pitfalls through the implementation of prevention and control propositions for the effective RLM of consumer returns.

8.4.3.1.3 Product return control and visibility profits

The product return control and visibility profits involve the improvement of product return control, handling and visibility, and inventory management and security through RLC propositions and various prevention and control parameters.

Particularly, online retailers can *improve product return control* through the (1) key operational RLC practices of RL process optimisation (e.g. using centralised facilities and third parties), product return visibility and product disposition management (e.g. using 3PRL providers), (2) key managerial RLC practice of maintaining managerial RLC (e.g. using centralised facilities for monitoring return trends), and (3) SC and market parameters of SC integration and consumer behaviour and type. The following quotations demonstrate the role of RLC propositions and related parameters in improving product return control:

> "I would have a [returns] department within that centralised warehouse. I would definitely have it all together. Because it relates directly then to the existing or current stock that you may carry or may not carry [such as counterfeit stock], and you've got immediate control. It's all about time when you see if it's a [fraudulent return] trend and when it comes through, you want to immediately go and inspect, review and measure. That's quick. That's quick access. It's in your own warehouse. You can control it quickly." (P12, Head of logistics, online retailer)

> "[RL outsourcing is important because of] the recoverability of the product, the control […] of the stock that it doesn't get left for six months before somebody, when it's starting to encroach on warehouse space, and somebody says, we've got to get this nonsense out of here and [then] that gets thrown in the back of a skip waste bin […]." (P7, owner, 3PRL provider firm)

> "As long as the customers got [and willing to give] all the information, it can actually go quite well […]. So, you can ask the customer to pinpoint what that specific product is and if the customer selects the correct product, it will then work backwards into your supply chain for the warehouse management solution, so that once you receive it, it's actually waiting for you to tick it off and say, yes, it's now been returned. So, that's a much better control." (P12, Head of logistics, online retailer)

Moreover, online retailers can *improve product return handling* by (1) implementing product return segregation as a key operational RLC practice, (2) considering return volume as a key volume parameter and (3) considering organisation type and capabilities as organisational parameters. Additionally, participants suggested that online retailer could *improve product return visibility* through the key (1) operational RLC practices of product return visibility and inventory management, (2) organisational parameter of organisational (IT) capabilities, and (3) SC and market parameter of SC integration. These findings can be illustrated by the following quotations:

> "[…] if the volumes are justified […] a lot of the major online retailers have their returns handling completely separate from the outbound [forward logistics] operation. Because instead of you contaminating your outbound operations to accommodate returns, it makes it a lot easier to handle." (P1, operations manager, 3PRL provider firm)

> "And I developed an App that actually does all those [RL] processes in the form of physical inspection, photographs of the goods, routing, capturing of the information […] to know what's coming back for stock control […]." (P7, owner, 3PRL provider firm)

> "[…] you need an end-to-end inventory management system. So, what I mean by that, you need to be able to create a reverse order. And systematically track and update the status of that order as it goes back into the DC […] So, you need to keep accurate track of where that product is in the system […]." (P5, general manager, online retailer)

Finally, improvements in *inventory management and security* can be attained through the implementation of inventory management (i.e. using systems and dedicated staff) as a key operational RLC practice and considerations of return volume and product condition as volume and product parameters. The subsequent quotations convey these findings:

> "[…] you need an end-to-end inventory management system. So, you need to be able to create a reverse order, and systematically track and update the status of that order as it goes back into the DC […] So, you need to […] make sure that you don't lose that product and that you don't miss it somewhere in the system […]." (P5, general manager, online retailer)

> "[…] depending on scale […] all the reverse logistics manager is actually [responsible for is] managing the [return] inventory component […]. And maybe on the reporting side […] you can let the inventory go through the internal components […]." (P1, operations manager, 3PRL provider firm)

> "And then you've got your inventory team that works within that returns area. […] So, until it's gone through the entire [RL] process, that inventory team is responsible for ensuring that the bad stock goes either to a reseller, or [resalable returned stock] goes back into the good stock warehouse, so they maintain [returned] stock accuracy and security." (P5, general manager, online retailer)

No studies in the reviewed literature identified improved product return control and handling as profits that can be realised through RLC propositions and prevention and control parameters. Therefore, this study identified new profits that online retailers can realised through the implementation of prevention and control propositions. Nevertheless, several studies identified improved product return visibility using IT in the RL process (Biswas & Abdul-Kader, 2018:1021; Frei *et al.* 2020:1619; Jović *et al*. 2020:164). Furthermore, only the use of systems was identified as a practice that can improve inventory management and security (Frei *et al.* 2020:1616; Jović *et al*. 2020:164). Consequently, various product return visibility and inventory management practices can help online retailers realise product return control and visibility profits.

Essentially, product return control and visibility profits, reemphasise that online retailers can address the prevention and control problems of poor product return visibility (product return), stockpiling, disorganised and contaminated inventory and a loss of product/product control (inventory) through the implementation of prevention and control propositions for the effective RLM of consumer returns. In the next section, organisational prevention and control profits will be analysed and discussed.

8.4.3.2 Organisational prevention and control profits

Organisational prevention and control profits can be categorised as *organisational performance* and *managerial improvement profits* (see Figure 8.**10**), which will be discussed and analysed in subsequent sections.

8.4.3.2.1 Organisational performance profits

Organisational performance profits involve improvements of FL function performance and RL function performance through various prevention and control propositions.

Particularly, participants indicated that online retailers could *improve* their *FL function performance* through the implementation of the key RRP examination practice of information usage and analysis. For instance, using consumer complaints data, online retailers can identify FL problems and accordingly improve FL performance. Similarly, online retailers can use IT and 3PRL providers to identify problems with specific products and brands and consider SC integration as a key SC and market parameter, which can improve their negotiation power with suppliers and their procurement practices. The subsequent quotations demonstrate the role of RRP examination practices and SC and market parameters in improving FL function performance:

> "So, the customer wasn't happy and complained, you know, the customer always complained due to something that was an error in their order or there was a missed delivery or delay and 90 percent [are] related to returns. So, it just becomes so important for us because this is where we improve our business. You know, we pull from that complaint's we pull from that to iron out the creases […]." (P9, regional & online DC manager, online retailer)

> "I think [using IT to manage RL] helps you understand product behaviour, too. So, we are able to identify which brands have more issues, which brands need more robust packaging, which brands are more reliable versus unreliable brands […] one of our online customers have […] used our information in buying decisions going forward. So, they would take the information we supplied them through the reverse logistics process and they would negotiate better buying rates with their suppliers." (P4, owner/CEO, 3PRL provider firm)

RL function performance improvement associates with improved RL decision-making, standardisation and productivity, which can be realised through RLC propositions and prevention and control parameters. Specifically, online retailers can improve RL decision-making, standardisation and productivity through RL process optimisation (key operational RLC practice) and standards and guidelines (key managerial RLC practice). Similarly, online retailers can improve RL decision-making through the key (1) managerial RLC practice of control mechanisms, (2) organisational parameter of facility and network design, and (3) cost versus benefit parameter for implementing RLC propositions. These findings can be supported by following quotations:

> "I would say the best thing is to have a centralised facility. […] from a reverse logistics point of view, having a central unit makes a lot of sense. Specifically, because you've got the ability to employ bigger and better teams that can speed up processes, make better decisions, and very importantly, you have got the same method of thinking in one facility […] so that you've got that uniform approach in your activity." (P5, general manager, online retailer)

> "[…] [for the] return processes […] the centralised functions are definitely standardised and that's to improve productivity." (P8, logistics manager, multichannel retailer)

> "It all depends on your network design […] we've centralised [RL] because the decision-making criteria is more consistent in one depot in the country […]. So, it's a managerial control decision versus a cost optimised decision."." (P8, logistics manager, multichannel retailer)

In terms of FL performance, using product return data to negotiate better buying rates matches the findings of Dapiran and Kam (2017:830), which emphasises the value of information usage and analysis as a key RRP examination practice. Similarly, Bozzi *et al.* (2022:15) found that online retailers

analyse product return data to improve FL processes for overall performance improvements. However, no studies from the reviewed literature resonated with the interview findings related to the RL function performance profits. Therefore, this study identified additional benefits related to the implementation of operational and managerial RLC practices and consideration of prevention and control parameters.

Subsequently, improving FL and RL functional performance as prevention and control profits, reemphasise that online retailers can address the prevention and control pitfalls of FL failures (operational failure) and poor RL planning (poor RLM), and product return problem of poor/inconsistent return decision-making through the implementation of prevention and control propositions for the effective RLM of consumer returns.

8.4.3.2.2 Managerial improvement profits

Managerial improvement profits involve RL planning improvements, facilitation of RLM and improvement of RL managerial control, which can be realised through RLC propositions and prevention and control parameters.

Participants indicated that online retailers could *improve RL planning* through the key managerial RLC practice of maintaining managerial RLC and volume parameter of return volume. Moreover, online retailers can *facilitate RLM* through the implementation of the key (1) operational RLC practices of RL process optimisation, product return visibility, inventory management and product disposition management, and (2) managerial RLC practices of control mechanisms (i.e. external control) and dedicated resources. Likewise, online retailers can facilitate RLM through the consideration of the key (1) product parameters of product value and characteristics, (2) organisational parameters of organisation size and organisational capabilities, (3) SC and market parameter of SC relationships and integration, and (4) legal and environmental parameter of environmental policy. The following quotations expand on these findings:

> "[Performance measurement in RL is important] because […] what if […] you [are] hit with high volumes of returns, perhaps […] your initial disposal channels won't be sufficient to take it anymore, then you would be able to make those decisions, things like being able to plan your inbound receiving to accommodate your returns […]." (P1, operations manager, 3PRL provider firm)

> "[…] if you want to run your reverse logistics process accurately, you definitely need someone to […] manage the flow of it […]." (P4, owner/CEO, 3PRL provider firm)

> "I use the courier's delivery online platform, whatever they've got, I use that […] for reverse logistics control and management, because they've got already all the steps in there that you would need, which is I've received your item, I'm in transit, and I'm back in the hub, I've confirmed it back in the hub, and I've taken ownership of it, there is the receipt of it." (P12, Head of logistics, online retailer)

> "[…] a dedicated, outsourced reverse logistics business. And the reason why I believe it is advantageous is because, if you got a warehouse that's running out a billion rands worth of goods every year […] Our facilities are adopted for [the] management of reverse logistics. We've got the correct technology. We've got the correct type of vehicles and receptacles to put [the] product in, whether it be leaking, whether it be messy, whether it have a stench or something like that, it's stored correctly. And obviously our disposal mechanisms are all in terms of [environmental] policy, in terms of the management of brand equity." (P7, owner, 3PRL provider firm)

> "I would say outsource the whole thing […]. If something goes wrong or something goes right, you just speak to the company who is managing the entire reverse logistics process […]. (P4, owner/CEO, 3PRL provider firm)
>
> "[…] appoint additional resources to make reverse logistics a division that manages the returns […]." (P10, Head of Sales and Logistics, OEM/multichannel retailer)
>
> "But even for smaller size [businesses], you need […] a dedicated manager to manage the [RL] process." (P7, owner, 3PRL provider firm)

Finally, the participants indicated that online retailers could *improve RL managerial control* through the key (1) managerial RLC practices of control mechanisms, either internally through centralised facilities or externally through 3PRL providers, and dedicated resources, (2) organisational parameter of facility and network design, (3) cost versus benefit parameter for implementing RLC propositions, and (4) SC and market parameter of SC relationships and integration. These findings can be validated by the subsequent quotations:

> "It all depends on your network design […] we've centralised [RL] because the decision-making criteria is more consistent in one depot in the country […]. So, it's a managerial control decision versus a cost optimised decision." (P8, logistics manager, multichannel retailer)
>
> "I would say outsource the whole thing […] Because someone needs to be in control of the whole circle. […] if anybody needs to take accountability, where do you point the accountability finger to? […] if it's fully outsourced there is one call to make […] So, the reporting is much easier now […]." (P4, owner/CEO, 3PRL provider firm)
>
> "[…] you'd have to have a manager to make sure that things are kept in control." (P8, logistics manager, multichannel retailer)

While no studies identified improvements in RL planning as a profit related to maintaining managerial RLC, a few studies mentioned practices related to the RLC propositions that can facilitate RLM. Specifically, RLM can be facilitated through (1) performance measurement (Lamba *et al.* 2020:384), (2) SC collaboration and integration (Badenhorst, 2022:330), (3) outsourcing to 3PRL providers (Wang, Dang *et al.* 2021:2), and (4) commitment of sufficient resources (Govindan & Bouzon, 2018:320). In terms of improving RL managerial control, no studies from the reviewed literature aligned with the interview findings. Therefore, this study uniquely identified that managerial control can be realised through various key managerial RLC practices and related return prevention and control parameters.

Essentially, managerial improvement profits, reemphasise that online retailers can address inattention to RL, poor RL planning, lack of resources and poor PM (poor RLM) pitfalls, and a loss of managerial control and poor accountability and reporting (online retailer) problems through the implementation of prevention and control propositions for the effective RLM of consumer returns. In the next section, the SC and market prevention and control profits will be discussed.

8.4.3.3 SC and market prevention and control profits

SC and market profits can be categorised as *SC performance* and *market performance profits* (see Figure 8.**10**), which will be analysed and discussed in the subsequent sections.

8.4.3.3.1 SC performance profits

SC performance profits involve improvement of SC information sharing, facilitation of SCI and improvement in SC performance, which can be realised through the implementation of RRP and operational RLC propositions and prevention and control parameters.

Specifically, participants suggested that online retailers could *improve SC information sharing* by implementing the key RRP examination practice of information usage and analysis and RPP intervention practice of product interventions. Additionally, online retailers can *facilitate SCI* by enhancing product return visibility as a key operational RLC practice and considering SC relationships and integration as a key SC and market parameter. These findings can be substantiated through the subsequent quotations:

> "I see benefit in the data for any supplier. You can quite easily pick up certain trends on returns that can be valuable for any supplier, whether it's sizes, whether it's malfunctioning of a product, whether it is any reason for the return […] then that highlights certain data issues that you can take on with that […] supplier or manufacturer." (P12, Head of logistics, online retailer)

> "[…] they can feed [information] back further up the supply chain on potential changes to the packaging […] to reduce claims." (P4, owner/CEO, 3PRL provider firm)

> "[…] integration with a stock management system, […] which can be both internal and external, so internal your own, warehouse and external with a third party, that's if they would like to integrate, that is first prize, it's easier to control […] on the reverse logistic side, it's a must […] to externally integrate […]." (P12, Head of logistics, online retailer)

Moreover, online retailers can *improve SC performance* by implementing the key operational RLC practice of product return segregation and considering the product parameter of product condition and organisational parameter of facility and network design. For example, effective return segregation at the online retailer's facility prevents counterfeit or defective products from entering the SC, strengthening SC performance. The following quotations emphasise these findings:

> "You need to have the right space also at your facility. You deal with returns when it does come back so that you can keep the return segregated from, call it, clean stock that hasn't been dispatched so that you don't have cross contamination of items and of possibilities of counterfeit goods, for example, entering your supply chain through a back door or having defective merchandise entering your supply chain again. […] physical segregation is important to ensure that products can be returned safely into your supply chain without compromising your products." (P2, owner, supply chain consultancy firm)

Several studies from the reviewed literature aligned with the interview findings in terms of the SC performance profits. Specifically, Dapiran and Kam (2017:830) identified that sharing product return data with suppliers can improve SC information sharing (Dapiran & Kam, 2017:830). Additionally, Ahlén and Johansson (2023:32) indicated that SCI can be realised through SC information sharing. Similarly, Frei *et al.* (2020:1618) found that integration of IT systems between SC partners enhances SC information sharing. Lastly, Wang *et al.* (2020:67) identified that RL information sharing across the SC and sharing of return delivery information can improve visibility and enhance SC performance. However, as indicated in section 8.4.2.3.1, product return segregation as a key operational RLC

practice is a unique finding, which means this study adds to the practices that can improve SC performance.

Essentially, SC performance as a prevention and control profit, reemphasises that online retailers can address a lack of SCI and poor systems (information-related) pitfalls through the implementation of prevention and control propositions for the effective RLM of consumer returns.

8.4.3.3.2 Market performance profits

Market performance profits involve improved brand image and management, market demand satisfaction and increased market share, which can be attained through RRP propositions, operational RLC propositions and prevention and control parameters.

Specifically, online retailers can *improve* their *brand image* by implementing the key RRP intervention practice of party interventions and considering return volume as a key volume parameter, exiting suppliers that supply problematic products associated with high return volumes. Additionally, online retailers can *improve brand management* by implementing the key operational RLC practice of product disposition management and considering the key parameters of organisational capabilities, SC relationships and integration and environmental policies. Subsequently, online retailers that lack the capabilities for effective disposition management can outsource RL to 3PRL providers, which can improve brand management. Brand image and brand management as market profits can be supported by the following quotations:

> "[…] you would exit the supplier if they've got more comebacks than what is normal. And that's an obvious red flag. You simply exit that supplier and say, you know what, we've got too many comebacks. You are tarnishing our brand, so cheers." (P5, general manager, online retailer)

> "[…] [we are] a dedicated outsourced reverse logistics business […] Our facilities are adopted for [the] management of reverse logistics. […] our disposal mechanisms are all in terms of [environmental] policy, in terms of the management of brand equity. We do all those things and commit ourselves and contract ourselves to make sure the products get disposed of in the correct fashion." (P7, owner, 3PRL provider firm)

Moreover, online retailers can *satisfy market demand* by implementing the key operational RLC practice of inventory management and considering the key SC and market parameter of market conditions. Additionally, considering market conditions can help online retailers to *improve* their *market share* by implementing fewer return restrictions as a key pre-sales PRP practice. Subsequently, online retailers that seek improved market share may implement other prevention measures, including post-sales PRP and RRP practices. The following quotations expand on these findings:

> "I've got inventory floating around in the business […] I've got consumer stock coming back as returns […] we would have to look at some level of distributed order management to take all this inventory and see how best we can use it. That's probably our biggest investment that we would do to try and manage inventory in motion […] you can say, hey but there's a demand for this item there, I can fulfil from here to there […]." (P6, logistics manager, multichannel retailer)

> "I remember distinctly back in the day that with Retailer C, you couldn't really dictate to the customer because you've got such a small penetration into the market, you literally have everything to lose. So, they were a lot more

accommodating than what they were supposed to be. Honestly, they would take back things and smile and say, oh, it's OK, we'll just do it because we were going for market share […]." (P5, general manager, online retailer)

While no study in the reviewed literature identified supplier exit as a RRP practice, Eriksson and Käck (2023:24-25) found that improvements in product design can enhance the reputation of the online retailer. Consequently, selling better quality products either through exiting the supplier or improving the quality of a product can enhance the brand image of the online retailer. Additionally, no study was found that identified brand management as an outcome of disposition management through 3PRL providers. Nevertheless, Phuong (2019:14) suggested that adhering to government policies and legislation in RL can improve the brand image of organisations. Furthermore, this study uniquely identified demand satisfaction as a profit that can be realised through inventory management, which can further motivate online retailers to implement product return inventory management for operational RLC. Lastly, the interview finding related to the improvement of market share through return leniency echoes the finding of Hjort *et al.* (2019:778), who found that online retailers generally accept all returns regardless of their return policies to attract more consumers.

Essentially, market performance as a prevention and control profit, reemphasises that online retailers can address a loss of sales, brand/brand image damage and market liability (online retailer) problems through the implementation of prevention and control propositions for the effective RLM of consumer returns. In the next section, the prevention and control profits for the other themes will be analysed and discussed.

8.4.3.4 Other themes prevention and control profits

As illustrated in Figure 8.**10**, the other themes prevention and control profits include profits related to service (theme 2) and costs (theme 3). In the subsequent sections, *service-related* and *cost-related* prevention and control profits will be discussed.

8.4.3.4.1 Service-related prevention and control profits

The service-related prevention and control profits involve consumer service, satisfaction, retention and expectations, which online retailers can realise through various prevention and control propositions.

Particularly, the participants indicated that online retailers could *improve consumer service* through the key (1) pre-sales PRP practice of FL excellence, (2) post-sales PRP practice of inspection initiatives, (3) RRP examination practice of information usage and analysis, (4) operational RLC practice of RL process optimisation, (5) volume parameter of return volume, and (6) product parameters of product type and condition. The following quotations expand on these findings:

"[…] we try to reduce the amount of times […] the customer goes to social media badmouthing your company […] And the way you do it again is by providing the best customer service […] because if you provide this

customer with the most exceptional service from the get-go and he receives his product, I can tell you now already he'll embrace it." (P10, Head of Sales and Logistics, OEM/multichannel retailer)

"So, a lot of those factors, the customer wasn't happy and complained, you know, the customer always complained due to something that was an error in their order or there was a missed delivery or delay and 90 percent [are] related to returns. So, […] we pull from that complaint's we pull from that to iron out the creases […] and to improve our business, our offering to the customer." (P9, regional & online DC manager, online retailer)

"[…] a practical way of putting a team of people into the street and saying, you know what, returns is such a big thing in our world […]. So, let's put a dedicated team in there that are our first line evaluators […] that can go to the customer and say, you know what, before I take this laptop from you, can we quickly do one, two, three and four, maybe solve them right there? […] So, I think that's possibly another avenue that one can explore just to give them a better service […]." (P5, general manager, online retailer)

Moreover, online retailers can *improve consumer service, satisfaction* and *retention* by (1) implementing the key operational RLC practices of RL process optimisation and product disposition management (i.e. using 3PRL providers), and (2) considering the key SC and market parameter of SC integration. Finally, online retailers can *manage consumer expectations* by implementing the key operational RLC practice of inventory management and considering the key organisational parameter of organisational (IT) capabilities and resources. The following quotations support these findings:

"[RL outsourcing is important because of] the recoverability of the product, the control […] of the stock […] […] and some non-attributable costs in the form of customer service […], where your customers are getting that kind of service that you buy it [the dress] today, it doesn't fit. I [the 3PRL provider] pick it up tomorrow and that kind of thing is done very quickly, very efficiently. And you have a very happy customer who buys again." (P7, owner, 3PRL provider firm)

"[…] you need an end-to-end inventory management system. […] that gives you the ability to change status, update status and communicate the new status to the customer […] So, you need to keep accurate track of where that product is in the system to […] manage the customer's expectation in terms of progress, you also need to make sure that you don't lose that product […]." (P5, general manager, online retailer)

Apart from Le (2023:16), who identified that consumer satisfaction can be improved through outsourcing to 3PRL providers, no studies from the reviewed literature identified consumer service and expectations as outcomes of FL excellence (key pre-sales PRP practice), inspection initiatives (key post-sales PRP practice), information usages and analysis (key RRP examination practice), product return inventory management (operational RLC practice). Consequently, this study identified additional service-related profits that can be realised, which can further motivate online retailers to implement and consider various prevention and control propositions.

Essentially, realising service-related prevention and control profits, reemphasise that online retailers can address consumer dissatisfaction and uncertainty and a loss of sales (online retailer) problems through the implementation of prevention and control propositions for the effective RLM of consumer returns.

8.4.3.4.2 Cost-related prevention and control profits

The cost-related prevention and control profits involve cost avoidance, cost savings and understanding of RL cost implications. Specifically, online retailers can *avoid costs* by implementing/considering the

key (1) pre-sales PRP practice of return restrictions (i.e. charging consumers a return fee), (2) post-sales PRP practice of gatekeeping (i.e. online authorisation and establishing a gatekeeping function), and (3) product parameters of product condition and type. The following quotations illustrate the cost-related prevention and control profit of cost avoidance:

> "[…] they will reduce the number of returns if they do attach a cost to the return" (P2, owner, supply chain consultancy firm)

> "So, often what happens is [the consumer says] 'I would like to return this laptop'. So, I [as the consumer] phone the contact centre and I spin them a whole story […], and [as the contact centre agent] my heart goes out to this person. And so, I authorise the return. […] But there is also, what are you going to do with this two-year old computer […] it's only a cost driver. So, avoiding that on the front end by digitising your returns policy […]." (P1, operations manager, 3PRL provider firm)

> "So, when a customer logs a return, they obviously need to take a photo of an item […] that person can see that item has been used. It obviously it gets declined right away. So, you don't have that cost incurred […] to send it back […] I think that's a great way to try to avoid unnecessary returns." (P3, returns manager, online retailer)

Furthermore, online retailers can realise *cost savings* in RL by implementing the key (1) post-sales PRP practice of inspection initiatives (i.e. pre-return inspection and consumer locations), (2) RRP intervention practice of party interventions (i.e. charging couriers for damages), and (3) operational RLC practices of RL process optimisation and product disposition management (using 3PRL providers). Additionally, online retailers can consider return volume (key volume), product condition, product type (key product) and SC relationships and integration (key SC and market) parameters for cost savings in RL. The following quotations demonstrate these findings:

> "And to ensure that you engage with carriers or couriers that will deliver products to your customers, […] [to] take care of your product, and they are measured against any of their own damages. If our carrier loses a parcel or damages a good, they pay for it, which encourages good behaviour." (P8, logistics manager, multichannel retailer)

> "But if you had a team of people that could evaluate at the point of taking it from the customer, you would salvage tons of money and time. […] a practical way of putting a team of people into the street and saying, you know, what returns is such a big thing in our world […]. So, let's put a dedicated team in there that are our first line evaluators […] that can go to the customer and say, you know what, before I take this laptop from you, can we quickly do one, two, three and four, maybe solve them right there? And if not, fine, then let's just take your profile of the pc before I leave. Or you know what? I can see that you've got the incorrect phone. It's not compatible with this device. No problems, no questions asked. I'll update the return right here now and do a resell." (P5, general manager, online retailer)

> "[…] the saving [of RL outsourcing] may not come in direct costs, but it will become in the recoverability of the product, the control […] of the stock that it doesn't get left for six months before somebody, when it's starting to encroach on warehouse space, and somebody says, we've got to get this nonsense out of here and [then] that gets thrown in the back of a skip waste bin […] So, yes, I do believe there are significant costs, maybe not directly as a comparison line for line in the income statement, but there are costs that can be saved elsewhere […]." (P7, owner, 3PRL provider firm)

Finally, online retailers can improve their *understanding of RL cost implications* by using IT and 3PRL providers to enhance product return visibility (key operational RLC practice) and consider organisational capabilities (key organisational parameter) and SC relationships and integration (key SC and market parameter), as demonstrated in the following quotation:

> "And I developed an App that actually does all those [RL] processes in the form of physical inspection, photographs of the goods, routing, capturing of the information […] to know what's coming back for stock control and […] the [cost] implications thereof." (P7, owner, 3PRL provider firm)

Although the interview findings related to cost avoidance through PRP propositions and prevention and control parameters are unique, Andresen and Istad (2019:7) indicated that return restrictions can lower RL costs due to fewer returns. Furthermore, no studies in the reviewed literature identified that cost savings can be realised through supplier penalties, home inspections and outsourcing to 3PRL providers. Likewise, no studies identified that enhancing product return visibility through information systems and 3PRL providers can help online retailers understand the cost implications of RL. Subsequently, this study extends the literature by identifying additional cost advantages that can be realised through product return prevention and control initiatives.

Evidently, cost-related profits as prevention and control profits, reemphasise that online retailers can address return leniency, poor gatekeeping (poor RPA) and poor systems (information-related) pitfalls, and high and unnecessary returns, increase in fraudulent/ineligible returns, poor return visibility (product return) and a loss of sales (online retailer) problems through the implementation of prevention and control propositions for the effective RLM of consumer returns.

Essentially, online retailers can realise various product return, operational, organisational, SC, market, service-related and cost-related profits through the implementation of various prevention and control propositions, reemphasising that prevention and control propositions can be important for the effective RLM of consumer returns. In the next section, the prevention and control theme will be concluded with a framework and summary of findings.

8.4.4 Framework, summary and analysis of findings for Theme 1 - Prevention and control for the effective RLM of consumer returns in online retailing

In section 8.2.2, the application of the overall framework, summary and analysis of findings for each theme were described. Accordingly, based on the interview findings presented in section 8.4, Figure 8.**11** shows a broad framework and overview of the links between prevention and control pitfalls/problems, propositions and profits. The most significant prevention and control pitfalls, problems and profits, illustrated in Figure 8.**11**, were emphasised in several ways. Particularly, per prevention and control pitfall, problem and profit category the <u>most significant</u> pitfall, problem and profit (associated with the most prevention and control proposition categories) was emphasised through *italics*, the <u>top three</u> prevention and control pitfalls and problems (associated with ten or more proposition categories) and profits (associated with five or more proposition categories) were emphasised in **bold**, and the <u>highest and most significant</u> prevention and control pitfall/problem and profit was emphasised through an asterisk*.

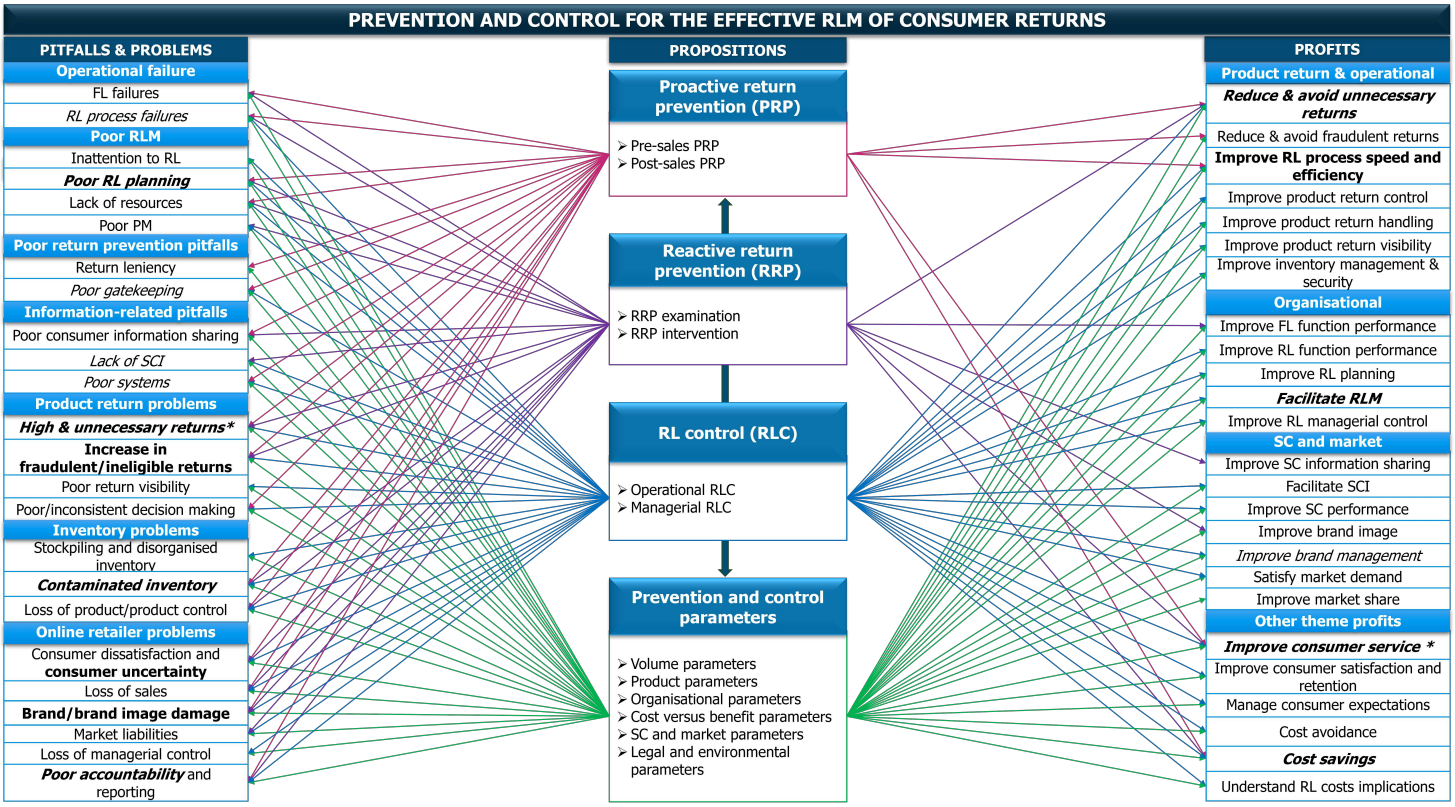


Figure 8.11 Framework for Theme 1 – Prevention and control for the effective RLM of consumer returns
Source: Compiled by the researcher

In terms of the *prevention and control pitfalls/problems*, Figure 8.**11** shows that all main *prevention* and *control pitfall/problem* categories, except poor return prevention pitfalls, associate with all main prevention and control propositions. Subsequently, online retailers can address various pitfalls and problems through various prevention and control propositions. Furthermore, the prevention and control pitfalls/problems that associate with all (four) main prevention and control propositions include (1) RL process failures (operational failure pitfall), (2) poor RL planning and a lack of resources (poor RLM pitfalls), (3) high and unnecessary returns and an increase in fraudulent/ineligible returns (product return problems), (4) contaminated inventory and loss of product/product control (inventory problems), and (5) consumer uncertainty, loss of sales, brand/brand image damage and poor accountability (online retailer problems). Subsequently, online retailers can implement any prevention and control propositions to address these prevention and control pitfalls and problems.

Per prevention and *control pitfall/problem category*, the framework shows that the *most significant* prevention and control *pitfalls/problems* (presented in *italics*) that can be addressed by the prevention and control proposition categories include (1) RL process failures (operational failure pitfall), (2) poor RL planning (poor RLM pitfall), (3) poor gatekeeping (poor RPA pitfall), (4) a lack of SCI and poor systems (information-related pitfalls), (5) high and unnecessary returns (product return problem), (6) contaminated inventory (inventory problem), and (7) poor accountability (online retailer problem).

Additionally, the *top three most significant prevention* and *control pitfalls/problems* (presented in **bold**) that can be addressed through (ten or more out of 12) prevention and control proposition categories include high and unnecessary returns (12), increase in fraudulent/ineligible returns, contaminated inventory and poor accountability (11 each), and poor RL planning, loss of product/product control, consumer uncertainty and brand/brand image damage (ten each). Subsequently, the *highest* and *most significant prevention* and *control problem* (presented with an asterisk*) that can be addressed by prevention and control proposition categories includes the product return problem of high and unnecessary returns. Evidently, online retailers can implement any prevention and control proposition category to address high and unnecessary product returns, followed by various proposition categories for addressing fraudulent/ineligible returns, contaminated inventory, poor accountability, poor RL planning, loss of product/product control, consumer uncertainty and brand/brand image damage.

In terms of the *prevention* and *control propositions*, the framework shows that prevention and control parameters (23 pitfalls/problems and 24 profits), followed by RLC propositions (20 pitfalls/problems and 20 profits), can be the most significant propositions in terms of addressing various prevention and control pitfalls/problems and realising various prevention and control profits. Therefore, online retailers must prioritise the consideration of prevention and control parameters and implementation of RLC propositions to effectively address various prevention and control pitfalls and problems and realise various prevention and control profits.

For the *prevention* and *control profits*, the framework shows that the most significant profit categories (associated with the most propositions) include product return and operational profits and other theme profits, indicating that prevention and control propositions can be the most beneficial for realising product return and operational profits and other theme profits. Furthermore, reduction and avoidance of unnecessary returns, improved consumer service and cost saving profits associate with all main prevention and control propositions, indicating that online retailers can implement any prevention and control propositions to reduce and avoid unnecessary returns, improve consumer service and save costs. Subsequently, prevention and control propositions can be important for profits related to other themes, which emphasises the importance of prevention and control for the effective RLM of consumer returns in online retailing.

Per prevention and *control profit category* the framework shows that the *most significant* prevention and control *profits* (presented in *italics*) that can be realised through the implementation of various prevention and control proposition categories, include (1) reducing and avoiding unnecessary returns (product return and operational profit), (2) facilitating RLM (organisational profit), (3) improving brand management (SC and market profit), and (4) improving consumer service and cost savings (other theme profits). Similarly, the *top three most significant prevention* and *control profits* (presented in

bold) that can be realised through the implementation of (five or more out of 12) prevention and control proposition categories include (1) improving consumer service (seven), (2) reducing and avoiding unnecessary returns, RL process speed and efficiency and facilitating RLM (six each), and (3) cost savings (five). Subsequently, the *highest* and *most significant prevention* and *control profit* (presented with an asterisk*) that can be realised through various prevention and control proposition categories include consumer service improvement. Evidently, online retailers can expect improvements in consumer service through the implementation of various prevention and control proposition categories, reemphasising the significance of prevention and control for the effective RLM of consumer returns in online retailing.

Table 8.**17** provides a summary of the main findings for the prevention and control theme, focussing on the prevention and control proposition categories, key practices/parameters and related prevention and control pitfalls, problems and profits. Additionally, the table provides columns giving an overview of the costs (total requirements as identified in Table 8.16) versus the benefits (total benefits in terms of the number of addressed pitfalls and problems and realised profits) per key practice/parameter and proposition category.

Table 8.17: Summary of findings for theme 1 - Prevention and control for the effective RLM of consumer returns

Proposition categories	Key practices /parameters	Addressed pitfalls	Addressed problems	Realised profits	Cost/benefit key practices/ parameters	Cost/benefit proposition categories
Pre-sales PRP	**FL excellence**	***Operational failure*** • FL failures	***Product return*** • High and unnecessary returns • Increase in fraudulent returns ***Inventory*** • Contaminated inventory ***Online retailer*** • Consumer dissatisfaction and uncertainty • Loss of sales • Brand image damage	***Product return/operational*** • Reduce/avoid unnecessary returns ***Other themes*** • Improve consumer service	• Costs – 5 • Benefits – 12 • +7	• ***Costs – 14*** • ***Benefits – 30*** • ***+16***
	Information sharing initiatives	***Information-related*** • Poor consumer information sharing	***Product return*** • High and unnecessary returns ***Online retailer*** • Consumer dissatisfaction and uncertainty	***Product return/operational*** • Reduce/avoid unnecessary returns	• Costs – 5 • Benefits – 7 • +2	
	Create return restrictions	***Poor RLM*** • Poor RL planning ***Poor prevention*** • Return leniency ***Information-related*** • Poor consumer information sharing	***Product return*** • High and unnecessary returns • Increase in fraudulent returns ***Online retailer*** • Consumer uncertainty	***Product return/operational*** • Reduce/avoid unnecessary returns • Reduce fraudulent returns ***Other themes*** • Cost avoidance	• Costs – 4 • Benefits – 11 • + 7	
Post-sales PRP	**Gatekeeping**	***Poor RLM*** • Lack of resources ***Poor prevention*** • Return leniency • Poor gatekeeping ***Information-related*** • Poor systems	***Product return*** • High and unnecessary returns • Increase in fraudulent/ineligible returns • Poor return decision making	***Product return/operational*** • Reduce/avoid unnecessary returns • Avoid fraudulent returns ***Other themes*** • Cost avoidance	• Costs – 6 • Benefits – 12 • +6	• ***Costs – 13*** • ***Benefits – 37*** • ***+24***
	Inspection initiatives	***Operational failure*** • RL process failures ***Poor RLM*** • Lack of resources ***Poor prevention*** • Return leniency • Poor gatekeeping ***Information-related***	***Product return*** • High and unnecessary returns • Increase in fraudulent/ineligible returns • Poor return decision making ***Inventory*** • Contaminated inventory • Loss of product	***Product return/operational*** • Reduce/avoid unnecessary • Reduce fraudulent returns • Improve RL process speed and efficiency ***Other themes*** • Improve consumer service • Cost savings	• Costs – 7 • Benefits – 25 • +18	

Proposition categories	Key practices /parameters	Addressed pitfalls	Addressed problems	Realised profits	Cost/benefit key practices/ parameters	Cost/benefit proposition categories
		• Poor consumer information sharing • Lack of SCI	***Online retailer*** • Consumer dissatisfaction and uncertainty • Loss of sales • Brand image damage • Market liabilities • Poor accountability			
RRP examination	**Information usage and analysis**	***Operational failure*** • FL failures ***Poor RLM*** • Poor RL planning • Lack of resources • Poor PM ***Information-related*** • Poor consumer information sharing • Lack of SCI	***Product return*** • High and unnecessary returns • Increase in fraudulent returns ***Inventory problem*** • Contaminated inventory • Loss of product ***Online retailer*** • Consumer dissatisfaction • Loss of sales • Poor accountability	***Organisational*** • Improve FL function performance ***SC and market*** • Improve SC information sharing ***Other themes*** • Improve consumer service	• Costs – 11 • Benefits – 17 • + 6	• ***Costs – 16*** • ***Benefits – 26*** • ***+10***
	Targeted investigation measures	***Operational failure*** • FL failures • RL process failures ***Poor RLM*** • Lack of resources	***Product return*** • High and unnecessary returns • Increase in fraudulent returns ***Inventory problem*** • Contaminated inventory ***Online retailer*** • Consumer dissatisfaction • Loss of sales	-	• Costs – 5 • Benefits – 9 • +4	
RRP intervention	**Product interventions**	***Operational failure*** • FL failures ***Information-related*** • Lack of SCI	***Product return*** • High and unnecessary returns ***Inventory problem*** • Contaminated inventory ***Online retailer*** • Consumer dissatisfaction and uncertainty • Loss of sales	***Product return/operational*** • Reduce/avoid unnecessary returns ***SC and market*** • Improve SC information sharing	• Costs – 6 • Benefits – 11 • +5	• ***Costs – 12*** • ***Benefits – 27*** • ***+15***
	Party interventions	***Operational failure*** • FL failures ***Poor RLM*** • Poor PM ***Information-related*** • Lack of SCI	***Product return*** • High and unnecessary returns • Increase in fraudulent returns ***Inventory problem*** • Contaminated inventory • Loss of products ***Online retailer*** • Consumer dissatisfaction and uncertainty • Loss of sales • Brand image damage • Poor accountability	***Product return/operational*** • Reduce fraudulent returns ***SC and market*** • Improve brand image ***Other themes*** • Cost savings	• Costs – 6 • Benefits – 16 • +10	
Operational RLC	**RL process optimisation**	***Operational failure*** • RL process failures ***Poor RLM*** • Inattention to RL • Poor RL planning • Lack of resources • Poor PM ***Poor prevention*** • Poor gatekeeping ***Information-related*** • Poor systems	***Product return*** • High and unnecessary returns • Increase in fraudulent returns • Poor product return visibility • Poor return decision making ***Inventory*** • Stockpiling and disorganised inventory • Contaminated inventory • Loss of product/product control ***Online retailer*** • Consumer dissatisfaction and uncertainty • Loss of sales • Brand image damage • Market liabilities • Loss of managerial control • Poor accountability	***Product return/operational*** • Reduce/avoid unnecessary returns • Improve product return control • Improve RL process speed and efficiency ***Organisational*** • Improve RL function performance • Facilitate RLM ***Other themes*** • Improve consumer service • Improve consumer satisfaction and retention • Cost savings	• Costs – 12 • Benefits – 34 • +22	• ***Costs – 44*** • ***Benefits – 112*** • ***+68***
	Product return visibility	***Operational failure*** • RL process failures ***Poor RLM*** • Poor RL planning • Lack of resources ***Information-related*** • Lack of SCI • Poor systems	***Product return*** • Increase in fraudulent returns • Poor product return visibility ***Inventory*** • Disorganised inventory • Contaminated inventory • Loss of product/product control ***Online retailer*** • Market liabilities • Loss of managerial control • Poor accountability & reporting	***Product return/operational*** • Improve product return control and visibility ***Organisational*** • Facilitate RLM ***SC and market*** • Facilitate SCI ***Other themes*** • Understand RL cost implications	• Costs – 9 • Benefits – 19 • +10	
	Product return segregation	***Operational failure*** • RL process failures ***Poor RLM***	***Product return*** • High and unnecessary returns ***Inventory***	***Product return/operational*** • Improve product return handling	• Costs – 7 • Benefits – 15	

Proposition categories	Key practices /parameters	Addressed pitfalls	Addressed problems	Realised profits	Cost/benefit key practices/ parameters	Cost/benefit proposition categories
		• Inattention to RL • Poor RL planning • Lack of resources	• Stockpiling and disorganised inventory • Contaminated inventory • Loss of product/product control ***Online retailer*** • Brand/brand image damage • Market liabilities • Loss of managerial control	***SC and market*** • Improve SC performance	• +8	
	Product return inventory management	***Operational failure*** • RL process failures ***Poor RLM*** • Inattention to RL • Poor RL planning • Lack of resources ***Information-related*** • Poor systems	***Product return*** • High and unnecessary returns • Poor return visibility • Poor return decision making ***Inventory*** • Stockpiling and disorganised inventory • Contaminated inventory • Loss of product/product control ***Online retailer*** • Brand/brand image damage • Market liabilities • Loss of managerial control • Poor accountability and reporting	***Product return/operational*** • Improve product return visibility • Improve inventory management and security ***Organisational*** • Facilitate RLM ***SC and market*** • Satisfy market demand ***Other themes*** • Manage consumer expectations	• Costs – 8 • Benefits – 24 • +16	
	Product disposition management	***Operational failure*** • RL process failures ***Poor RLM*** • Inattention to RL • Poor RL planning ***Information-related*** • Lack of SCI	***Inventory*** • Stockpiling and disorganised inventory • Loss of product/product control ***Online retailer*** • Brand/brand image damage • Market liabilities • Loss of managerial control • Poor accountability	***Product return/operational*** • Improve product return control • Improve RL process speed and efficiency ***Organisational*** • Facilitate RLM ***SC and market*** • Improve brand management ***Other themes*** • Improve consumer service, satisfaction and retention • Cost savings	• Costs – 8 • Benefits – 20 • +12	
Managerial RLC	**Control mechanisms**	***Operational failure*** • RL process failures ***Poor RLM*** • Inattention to RL • Poor RL planning • Poor PM	***Product return*** • Poor return decision making ***Inventory*** • Loss of product/product control ***Online retailer*** • Consumer uncertainty • Loss of managerial control • Poor accountability and reporting	***Organisational*** • Improve RL function performance • Facilitate RLM • Improve managerial control	• Costs – 6 • Benefits – 13 • +7	• ***Costs – 25*** • ***Benefits – 59*** • ***+34***
	Dedicated resources	***Operational failure*** • RL process failures ***Poor RLM*** • Inattention to RL • Poor RL planning • Lack of resources	***Product return*** • High and unnecessary returns ***Inventory*** • Disorganised inventory • Contaminated inventory • Loss of product/product control ***Online retailer*** • Loss of managerial control • Poor accountability and reporting	***Organisational*** • Facilitate RLM • Improve managerial control	• Costs – 5 • Benefits – 14 • +9	
	Standards and guidelines	***Operational failure*** • RL process failures ***Poor RLM*** • Poor RL planning • Poor PM	***Product return*** • Poor return decision making ***Inventory*** • Loss of product/product control ***Online retailer*** • Consumer uncertainty • Brand/brand image damage • Marker liabilities • Loss of managerial control • Poor accountability	***Product return/operational*** • Improve RL process speed and efficiency ***Organisational*** • Improve RL function performance	• Costs – 7 • Benefits – 13 • +6	
	Maintain managerial RLC	***Operational failure*** • RL process failures ***Poor RLM*** • Poor RL planning • Lack of resources • Poor PM	***Product return*** • High and unnecessary returns • Increase in fraudulent returns • Poor return decision making ***Inventory*** • Stockpiling and disorganised inventory • Contaminated inventory • Loss of product/product control ***Online retailer*** • Marker liabilities • Loss of managerial control • Poor accountability and reporting	***Product return/operational*** • Improve product return control ***Organisational*** • Improve RL function performance • Improve RL planning	• Costs – 7 • Benefits – 19 • +12	
Volume parameters	**Return volume**	***Operational failure*** • RL process failures ***Poor RLM***	***Product return*** • High and unnecessary returns • Increase in fraudulent/ineligible	***Product return/operational*** • Improve product return handling	• Costs – 6 • Benefits – 32	• ***Costs – 8*** • ***Benefits – 38***

Proposition categories	Key practices /parameters	Addressed pitfalls	Addressed problems	Realised profits	Cost/benefit key practices/ parameters	Cost/benefit proposition categories
		• Inattention to RL • Poor RL planning • Lack of resources • Poor PM ***Poor prevention*** • Poor gatekeeping ***Information-related*** • Poor systems	returns • Poor return visibility • Poor return decision making ***Inventory*** • Stockpiling and disorganised inventory • Contaminated inventory • Loss of product/product control ***Online retailer*** • Consumer dissatisfaction and uncertainty • Loss of sales • Brand image damage • Loss of managerial control • Poor accountability and reporting	• Improve RL process speed and efficiency • Improve inventory management and security ***Organisational*** • Improve RL planning ***SC and market*** • Improve brand image ***Other themes*** • Improve consumer service • Cost savings	• +26	• ***+30***
	Sales volume	***Poor RLM*** • Poor RL planning ***Poor prevention*** • Return leniency	***Product return*** • High and unnecessary returns • Increase in fraudulent/ineligible returns ***Online retailer*** • Loss of sales	-	• Costs – 2 • Benefits – 6 • +4	
Product parameters	**Product condition**	***Operational failure*** • FL failures • RL process failures ***Poor RLM*** • Lack of resources • Poor PM ***Poor prevention*** • Poor gatekeeping ***Information-related*** • Lack of SCI	***Product return*** • High and unnecessary returns • Increase in fraudulent/ineligible returns • Poor return decision making ***Inventory*** • Contaminated inventory • Loss of product/product control ***Online retailer*** • Consumer dissatisfaction • Loss of sales • Poor accountability	***Product return/operational*** • Improve inventory management and security ***SC and market*** • Improve SC performance ***Other themes*** • Cost avoidance • Cost savings	• Costs – 6 • Benefits – 20 • +14	• ***Costs – 23*** • ***Benefits – 77*** • ***+54***
	Product type	***Operational failure*** • RL process failures ***Poor RLM*** • Inattention to RL • Poor RL planning • Lack of resources ***Poor prevention*** • Poor gatekeeping ***Information-related*** • Poor consumer information sharing	***Product return*** • High and unnecessary returns • Increase in fraudulent/ineligible returns • Poor return visibility • Poor return decision making ***Inventory*** • Stockpiling and disorganised inventory • Loss of product/product control ***Online retailer*** • Consumer dissatisfaction and uncertainty • Loss of sales • Brand image damage • Market liabilities • Loss of managerial control • Poor accountability	***Product return/operational*** • Reduce and avoid fraudulent returns • Improve RL process speed and efficiency ***Other themes*** • Improve consumer service • Cost avoidance • Cost savings	• Costs – 10 • Benefits – 28 • +18	
	Product/ inventory value	***Operational failure*** • RL process failures ***Poor RLM*** • Inattention to RL • Poor RL planning • Lack of resources ***Poor prevention*** • Poor gatekeeping ***Information-related*** • Poor systems	***Inventory*** • Stockpiling and disorganised inventory • Contaminated inventory • Loss of product/product control ***Online retailer*** • Brand/brand image damage • Loss of managerial control • Poor accountability	***Product return/operational*** • Reduce fraudulent product returns ***Organisational*** • Facilitate RLM	• Costs – 3 • Benefits – 15 • +12	
	Product characteristics	***Operational failure*** • RL process failures ***Poor RLM*** • Inattention to RL • Poor RL planning • Lack of resources ***Poor prevention*** • Poor gatekeeping ***Information-related*** • Poor systems	***Product return*** • Poor return decision making ***Inventory*** • Stockpiling and disorganised inventory • Contaminated inventory • Loss of product/product control ***Online retailer*** • Brand/brand image damage • Poor accountability	***Organisational*** • Facilitate RLM	• Costs – 4 • Benefits – 14 • +10	
Organisation parameters	**Organisation type and size**	***Operational failure*** RL process failures ***Poor RLM*** • Inattention to RL • Lack of resources	***Inventory*** • Stockpiling and disorganised inventory • Contaminated inventory • Loss of product/product control ***Online retailer***	***Product return/operational*** • Improve product return handling ***Organisational*** • Facilitate RLM	• Costs – 5 • Benefits – 14 • +9	• ***Costs – 14*** • ***Benefits – 54*** • ***+40***

Proposition categories	Key practices /parameters	Addressed pitfalls	Addressed problems	Realised profits	Cost/benefit key practices/ parameters	Cost/benefit proposition categories
			• Brand image damage • Market liabilities • Loss of managerial control • Poor accountability and reporting			
	Organisational capabilities	***Operational failure*** • RL process failures ***Poor RLM*** • Inattention to RL • Poor RL planning • Lack of resources ***Poor prevention*** • Poor gatekeeping ***Information-related*** • Poor systems	***Product return*** • High and unnecessary returns • Increase in fraudulent • Poor return visibility ***Inventory*** • Stockpiling • Loss of product/product control ***Online retailer*** • Brand image damage • Market liabilities • Loss of managerial control • Poor accountability	***Product return/operational*** • Improve product return handling and visibility ***Organisational*** • Facilitate RLM ***SC and market*** • Improve brand management ***Other themes*** • Manage consumer expectations • Understand RL cost implications	• Costs – 7 • Benefits – 22 • +15	
	Facility and network design	***Operational failure*** • RL process failures ***Poor RLM*** • Inattention to RL • Poor RL planning • Lack of resources	***Product return*** • Unnecessary returns • Poor return decision making ***Inventory*** • Stockpiling and disorganised inventory • Contaminated inventory • Loss of product/product control ***Online retailer*** • Consumer uncertainty • Brand image damage • Market liabilities • Loss of managerial control • Poor accountability	***Organisational*** • Improve RL function performance • Improve managerial control ***SC and market*** • Improve SC performance	• Costs – 2 • Benefits – 18 • +16	
Cost versus benefit parameters	**Costs versus benefits for implementing pre-sales PRP**	***Poor RLM*** • Poor RL planning ***Poor prevention*** • Return leniency ***Information-related*** • Poor consumer information sharing	***Product return*** • High and unnecessary returns ***Online retailer*** • Consumer dissatisfaction and uncertainty	***Product return/operational*** • Reduce/avoid unnecessary returns	• Costs – 3 • Benefits – 9 • +6	• ***Costs – 6*** • ***Benefits – 19*** • ***+13***
	Costs versus benefits for implementing RLC propositions	***Operational failure*** • RL process failures ***Poor RLM*** • Inattention to RL • Poor RL planning	***Product return*** • Poor return decision making ***Inventory*** • Contaminated inventory ***Online retailer*** • Consumer uncertainty • Loss of managerial control • Poor accountability	***Organisational*** • Improve RL function performance • Improve managerial control	• Costs – 3 • Benefits – 10 • +7	
SC and market parameters	**SC relationships and integration**	***Operational failure*** • RL process failures ***Poor RLM*** • Poor RL planning • Lack of resources ***Poor prevention*** • Poor gatekeeping ***Information-related*** • Lack of SCI • Poor systems	***Product return*** • Increase in fraudulent/ineligible returns • Poor return visibility ***Inventory*** • Contaminated inventory • Loss of product/product control ***Online retailer*** • Brand image damage • Loss of managerial control • Poor accountability and reporting	***Product return/operational*** • Improve product return handling and visibility • Improve RL process speed and efficiency ***Organisational*** • Improve FL function performance • Facilitate RLM • Improve managerial control ***SC and market*** • Facilitate SCI • Improve brand management ***Other themes*** • Improve consumer service, satisfaction and retention • Cost savings • Understand RL costs	• Costs – 5 • Benefits – 28 • +23	• ***Costs – 14*** • ***Benefits – 55*** • ***+41***
	Market conditions	***Poor RLM*** • Poor RL planning • Lack of resources ***Poor prevention*** • Return leniency • Poor gatekeeping ***Information-related*** • Poor systems	***Product return*** • High and unnecessary returns • Increase in fraudulent/ineligible returns • Poor return visibility ***Inventory*** • Stockpiling and disorganised inventory ***Online retailer*** • Loss of sales	***SC and market*** • Satisfy market demand • Increase market share	• Costs – 5 • Benefits – 14 • +9	
	Consumer behaviour and types	***Poor RLM*** • Lack of resources ***Information-related*** • Poor system	***Product return*** • High and unnecessary returns • Increase in fraudulent • Poor return visibility	***Product return/operational*** • Improve product return control	• Costs – 4 • Benefits – 13 • +9	

Proposition categories	Key practices /parameters	Addressed pitfalls	Addressed problems	Realised profits	Cost/benefit key practices/ parameters	Cost/benefit proposition categories
			Inventory • Stockpiling and disorganised inventory • Loss of product/product control ***Online retailer*** • Consumer dissatisfaction and uncertainty • Poor accountability			
Legal and environment parameters	**Consumer protection legislation and rights**	***Operational failure*** • RL process failures ***Poor prevention*** • Return leniency • Poor gatekeeping	***Product return*** • High and unnecessary returns • Increase in fraudulent/ineligible returns ***Online retailer*** • Consumer dissatisfaction and uncertainty	***Product return/operational*** • Reduce/avoid unnecessary returns	• Costs – 3 • Benefits – 10 • +7	• ***Costs – 8*** • ***Benefits – 23*** • ***+15***
	Environmental policies and disruptions	***Operational failure*** • RL process failures ***Poor RLM*** • Inattention to RL • Poor RL planning ***Information-related*** • Lack of SCI	***Inventory*** • Stockpiling and disorganised inventory • Loss of product/product control ***Online retailer*** • Brand/brand image damage • Market liabilities • Loss of managerial control • Poor accountability	***Organisational*** • Facilitate RLM ***SC and market*** • Improve brand management	• Costs – 5 • Benefits – 13 • +8	

Source: Compiled by the researcher

Table 8.**17** provides a detailed summary of the various prevention and control proposition categories and related key practices/parameters, addressed pitfalls and problems, and realised profits as well as the costs versus benefits per key practice/parameter and proposition categories. Online retailers can use this framework in several ways for the effective RLM of consumer returns. Specifically, online retailers can identify the (1) benefits for specific prevention and control proposition categories and key practices/parameters (hereafter propositions), (2) propositions for specific prevention and control pitfalls, (3) propositions for specific prevention and control problems, (4) propositions for specific prevention and control profits, (5) most significant propositions for addressing prevention and control pitfalls, (6) most significant propositions for addressing prevention and control problems, (7) most significant propositions for realising prevention and control profits, and (8) most and least beneficial propositions in terms of costs versus benefits. Examples of applying Table 8.**17** for the effective RLM of consumer returns will be given in the subsequent paragraphs.

For the *benefits associated with specific propositions*, an online retailer interested in implementing, for example, pre-sales PRP propositions, can identify that (1) FL failures, poor RL planning, return leniency and poor consumer information sharing pitfalls can be addressed, (2) high and unnecessary returns, increase in fraudulent returns, contaminated inventory, consumer dissatisfaction and uncertainty, a loss of sales and brand image damage problems can be addressed, and (3) reduction/avoidance of unnecessary returns, reduction in fraudulent returns, improvements in consumer service and cost avoidance can be realised. Additionally, an online retailer interested in implementing, for example, the key pre-sales PRP practice of information sharing initiatives can identify that (1) poor consumer information sharing as an information-related pitfall can be addressed, (2) high and

unnecessary returns and consumer dissatisfaction and uncertainty problems can be addressed, and (3) reduction/avoidance of unnecessary returns can be realised.

In terms of the *propositions for specific prevention and control pitfalls*, an online retailer that identified, for example, poor PM, as a significant prevention and control pitfall can implement/consider the key (1) RRP examination practice of information usage and analysis, (2) RRP intervention practice of party interventions, (3) operational RLC practice of RL process optimisation, (4) managerial RLC practices of control mechanisms, standards and guidelines, and maintaining managerial RLC, (5) volume parameter of return volume, (4) product parameter of product condition, and (5) SC and market parameter of SC relationships and integration as mitigating propositions for the effective RLM of consumer returns.

Regarding the *propositions for specific prevention and control problems*, an online retailer that identified, for example, poor reporting, as a prevention and control problem can implement/consider the key (1) operational RLC practices of product return visibility and inventory management, (2) managerial RLC practices of control mechanisms, dedicated resources and maintaining managerial RLC, (3) volume parameter of return volume, (4) organisational parameters of organisation type and size, and (5) SC and market parameters of SC relationships and integration as mitigating propositions for the effective RLM of consumer returns. In terms of the *propositions for specific prevention and control profits*, an online retailer seeking, for example, to improve product return control can implement/consider the key (1) operational RLC practices of RL process optimisation, product return visibility and product disposition management, (2) managerial RLC practice of maintaining managerial RLC, and (3) SC and market parameter of consumer behaviour and types.

Concerning the *most significant propositions for addressing prevention and control pitfalls*, online retailers that experience various prevention and control pitfalls in RL can prioritise the implementation of operational RLC propositions and consideration of product parameters as the most beneficial prevention and control proposition categories. Likewise, online retailers that experience various prevention and control pitfalls in RL can prioritise the implementation of the key operational RLC practice of RL process optimisation and consideration of the key volume parameter of return volume as the most beneficial key practice and parameter. Pertaining to the *most significant propositions for addressing prevention and control problems*, online retailers that experience various prevention and control problems in RL can prioritise the implementation of operational RLC propositions and consideration of product parameters as the most beneficial prevention and control proposition categories. Additionally, online retailers that experience various prevention and control problems can prioritise the implementation of the key operational RLC practice of RL process optimisation and

considerations of the key volume parameter of return volume and key product parameter of product type as the most beneficial key practice and parameters.

Relating to the *most significant propositions for realising prevention and control profits*, online retailers that seek various prevention and control profits in RL can prioritise the implementation of operational RLC propositions and consideration of SC and market parameters as the most beneficial prevention and control proposition categories. Consequently, online retailers that seek various preventions and control profits can prioritise the implementation of the key operational RLC practice of RL process optimisation and consideration of the key SC and market parameter of SC relationships and integration as the most beneficial key practice and parameter.

Finally, online retailers can use the framework to perform a cost-benefit analysis, identifying the costs (sum of the key practices/parameters and the support practices) versus the benefits (sum of addressed prevention and control pitfalls and problems, and realised profits) to implement/consider the most beneficial prevention and control propositions for RLM. Specifically, Table 8.**17** shows that the *most beneficial proposition categories* include operational RLC in terms of the costs (44) versus benefits (112), and product parameters in terms of costs (23) versus benefits (77). Consequently, despite being the most complicated proposition categories in terms of the requirements/costs (also see section 8.4.2.5), operational RLC and product parameters associate with the highest number of benefits, meaning that online retailers can prioritise the implementation of operational RLC and consideration of product parameters for the effective RLM of consumer returns. Additionally, the *most beneficial key practice* and *parameter* include RL process optimisation (operational RLC) in terms of the costs (12) versus benefits (34) and return volume (volume parameter) in terms of the costs (6) versus benefits (32). Subsequently, online retailers can prioritise the implementation of RL process optimisation as a key practice and consideration of return volume as a key parameter for the effective RLM of consumer returns.

In contrast, the *least beneficial proposition categories* include RRP examination in terms of the costs (16) versus benefits (26), and cost versus benefit parameters in terms of the costs (6) versus benefits (19), which means that online retailers can implement RRP examination and consider cost versus benefit parameters as last priorities. Additionally, the *least beneficial key practice* and *parameter* include information sharing initiatives (pre-sales PRP) in terms of the costs (5) versus benefits (7) and sale volume (volume parameter) in terms of the costs (2) and benefits (6), indicating that online retailers may implement/consider information sharing initiatives and sales volumes as last priorities.

Nevertheless, all prevention and control propositions can be beneficial, and online retailers that experience specific prevention and control pitfalls/problems or seek specific prevention and control

profits can identify the most suitable propositions to implement and consider for the effective RLM of consumer returns. Essentially, "prevention and control for the effective RLM of consumer returns" can be regarded as critical factors for the effective RLM of consumer returns in online retailing. Therefore, online retailers should focus on identifying prevention and control pitfalls and problems in RL for the effective implementation/consideration of mitigating prevention and control propositions (practices/parameters) and realisation of prevention and control profits to manage consumer returns effectively.

8.5 THEME 2: SERVICE FOR THE EFFECTIVE RLM OF CONSUMER RETURNS

Theme 2 involves *consumer service initiatives* for the effective RLM of consumer returns in online retailing. Consumer-centricity should be the heart of an online retailer's business since it can be profitable to place the needs and expectations of consumers first (Bozzi *et al.* 2022:16). In fact, Karlsson *et al.* (2023:8) indicated that online retailers must shift their focus from return prevention and cost savings and adopt a consumer-centric approach, ensuring that they offer a differentiated service.

Likewise, all participants mentioned throughout their discussions the importance of consumer service to manage consumer returns effectively and efficiently. Therefore, "service" was identified as an important factor in RLM, which means that online retailers must pay attention to service for the effective RLM of consumer returns. The following quotations emphasise these sentiments:

> "[…] it's not just about the forward logistics, it's about reverse logistics as well, because your customer's journey does not end at the time that he receives the product […] reverse logistics is an extension of the customer journey and experience." (P10, Head of Sales and Logistics, OEM/multichannel retailer)
>
> "The starting point is that the customer is always right, but not malicious. And that changes your whole customers' experience of the reverse logistics process." (P1, operations manager, 3PRL provider firm)
>
> "It's very difficult to view the returns logistics as […] a separate piece of your business, it's often viewed as the dirty cousin, you know. But it has a disproportionate impact on how online customers perceive your business." (P1, operations manager, 3PRL provider firm)

Figure 8.3, in section 8.2.2, provides an overview of theme 2, including the subthemes and related categories. Figure 8.12, provides a snapshot derived from Figure 8.3, showing an overview of Theme 2 – *Service for the effective RLM of consumer returns*.

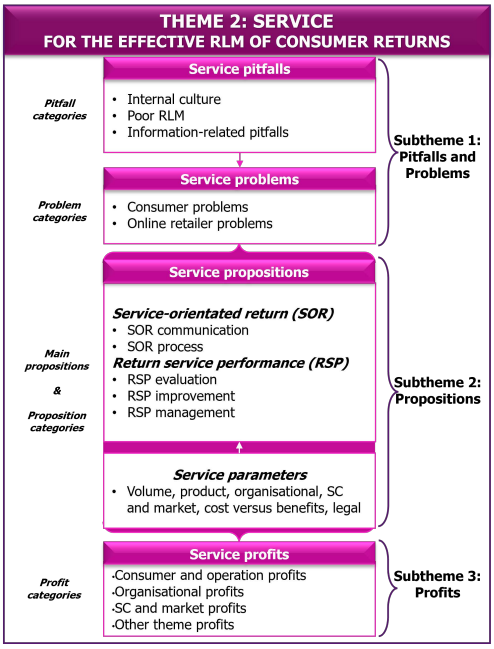


Figure 8.12 Overview of Theme 2 – Service for the effective RLM of consumer returns
Source: Compiled by the researcher

In the subsequent sections, a detailed overview, analysis and discussion of the interview findings for each subtheme, including service pitfalls and problems (subtheme 1), service propositions (subtheme 2) and service profits (subtheme 3) will be given. The section concludes with a framework, summary and overall analysis of the service findings for the effective RLM of consumer returns.

8.5.1 Service pitfalls and problems – Subtheme 1

As illustrated in Figure 8.12, and discussed in section 8.2.2, the service pitfalls include internal culture, poor RLM and information-related pitfalls, and the service problem categories include consumer and online retailer problems. Based on the interview findings, Figure 8.13 provides a detailed overview of the service pitfalls and problems in RL that will be discussed in this section.

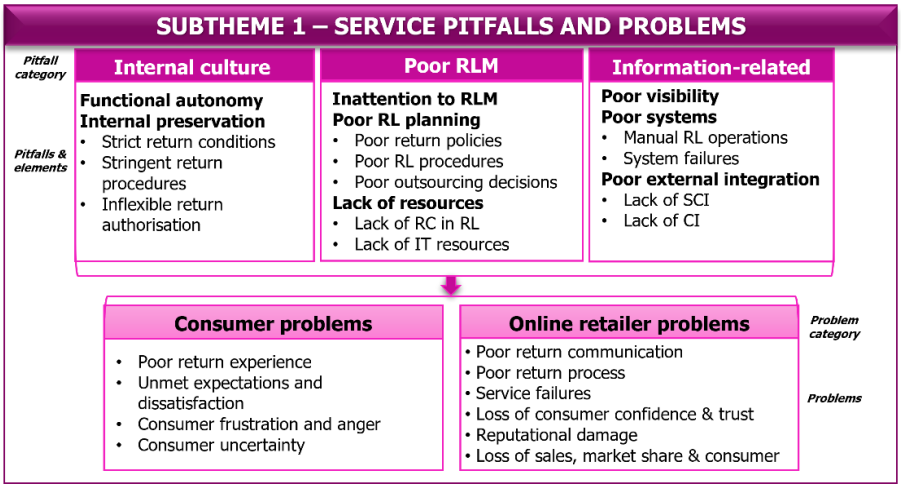


Figure 8.13 Detailed overview of service pitfalls and problems
Source: Compiled by the researcher

Based on the interview findings, Figure 8.13 shows the *service pitfall* categories with related pitfalls and pitfall elements (if applicable), and the *service problem* categories with related problems, which can hamper the effective RLM of consumer returns in online retailing. Section 8.2.2 provides details regarding the presentation and format of the pitfalls and problems applicable to each theme. In the subsequent sections, the service pitfall categories of internal culture, poor RLM and information-related pitfalls, and associated service pitfalls, pitfall elements and consumer and online retailer problems will be discussed. The section concludes with a framework and summary of findings to demonstrate the relationship between specific service pitfalls and problems.

8.5.1.1 Internal culture service pitfalls and related service problems

Internal culture as a service pitfall category involves functional autonomy and internal preservation, which can lead to various consumer and online retailer problems.

Functional autonomy involves a lack of cross-functional integration (CFI), which can be problematic for consumers and online retailers. Particularly, participants indicated that functional departments of online retailers often work in silos, which means that functional departments are unwilling to collaborate due to internal politics. Additionally, online retailers may contribute to the silo mentality through poor cross-functional performance evaluation. For instance, online retailers may implement heterogenous performance measures, meaning that different departments get measured on different areas in RL, which can hamper consumer-centricity. The participants indicated that a silo mentality and a lack of CFI can cause bottlenecks in the return process, which can result in a poor return experience, consumer dissatisfaction and frustration (consumer problems), poor return processes, service failures and reputational damage (online retailer problems). The following quotations confirm the impact of functional autonomy on consumer return experience and RL process efficiency:

> "I think when it comes to inter-departmental [integration], the scary part that we have these days in organisations is that everyone works within silos […] because everyone has an ego. Who suffers in the end, the customer? […] for example, […] if logistics delays on some certain items or certain activities, it'll create an impact or bottleneck on the entire [RL] operation. The same applies for the call centre. If the call centre, do not follow up on a call, I could have a delay on the entire [RL] process. If finance delay on refunding a customer […], and remember, it's not only about collecting a unit and delivering it to the warehouse […] there is still the refund process. That's the most critical part, because I want to see as a customer, I want to see my money in my account right now." (P10, Head of Sales and Logistics, OEM/multichannel retailer)

> "[…] the worst thing that can happen is that different departments get measured on different things and they are reporting on different aspects [in RL], which may not be customer centric." (P8, logistics manager, multichannel retailer)

> "[…] we have different departments, you have the service division, and you have the logistics division. And you have the reverse logistics division that falls under service. Everyone was not singing from the same hymn sheet, and there was no [cross-functional] alignment. OK, we would believe that it should be done this way. They believe it should be done the other way. Therefore, when the customer calls, the call centre realise, wow, OK, we're looking terrible here [with inconsistent return procedures]." (P10, Head of Sales and Logistics, OEM/multichannel retailer)

Internal preservation as an internal culture service pitfall involves an online retailer adopting a self-protective stance by implementing stringent return conditions and procedures, demonstrating distrust towards consumers. While poor return prevention pitfalls involved return leniency and poor gatekeeping that cause prevention and control problems (see section 8.4.1.3), stringent return procedures can be regarded as the opposite, involving strict returns, stringent return request procedures and inflexible return authorisation (pitfall elements).

Participants indicated that *strict returns* involve return restrictions, like charging for returns, which can lead to the consumer problem of unmet expectations and the online retailer problem of a loss of market share. Additionally, *stringent return request procedures* can involve asking consumers too many questions and proof of product condition or expecting consumers to physically return products to facilities/locations, which can lead to consumer uncertainty (consumer problem) and a loss of consumer trust and confidence, sales, market share and consumers (online retailer problems). The following quotations support these findings:

> "[…] the online retailer that doesn't do so [by offering lenient returns] will be behind in the marketplace, because within a very short period of time, the consumer has come to expect that everything is a free delivery and is a free return." (P2, owner, supply chain consultancy firm)
>
> "So, you don't want to be sticky with the returns. You don't want to ask them 17 questions before you accept their return because then they will be more apprehensive about repurchase online. You know, they'll happily go back to the type of brick-and-mortar retail stores." (P5, general manager, online retailer)
>
> "[…] it shouldn't be a hassle for any person […] to return an item, because then it will make them skittish to buy from you again." (P3, returns manager, online retailer)

Inflexible return authorisation as an internal preservation pitfall element involves the use of non-human gatekeeping or non-discerning gatekeepers for return request authorisation and gatekeeping. Particularly, participants indicated that inflexible return authorisation can involve using a computer or online authorisation system to automatically reject returns based on return policy parameters (e.g. rejecting a return on day eight of the seven-day return period), without affording consumers, with potential legitimate return reasons, opportunities to return products. Similarly, inflexible return authorisation can involve using non-discerning gatekeeping staff to reject returns based on return policy parameters, without affording consumers, with legitimate return reasons, to explain the reasons for requesting the returns.

A legitimate return reason might involve a consumer expecting the seven-day return period to start from the delivery date, while the online retailer's return policy stipulate that the seven-day return period starts on the date of purchase. Alternatively, a consumer might open the parcel after seven days of the delivery noticing that the incorrect product was delivered or that the product is damaged or defective. Subsequently, online retailers with inflexible return authorisation can contribute to the consumer problems of unmet expectations, dissatisfaction, frustration and anger and online retailer problems of a loss of sales and consumers. The following quotations justify these findings:

> "[…] to stop a customer from returning a product legitimately, the worst thing you can do is to put a computer system in there, that says okay 14 days old, I'm going to reject this [return]. If it was me as a consumer, I would want to speak to a human being and say, hey pal, this is what I want to send back, and these are the reasons why." (P4, owner/CEO, 3PRL provider firm)

> "So, you need to have a discerning employee managing that [gatekeeping], because if the customer's 18 days out [of the return period] and they wanted to return the product [for a legitimate reason] and you say, no, I'll [as a consumer] never go back and buy from those people again […]." (P4, owner/CEO, 3PRL provider firm)

The interview findings related to *internal culture* service pitfalls align with various studies from the reviewed literature. Particularly, Hjort *et al.* (2019:784) found that poor cross-functional coordination means that each function focuses on optimising its performance at the expense of other functions, which can result in poor RL processes and service performance. Furthermore, several studies identified the problems associated with internal preservation pitfalls. Specifically, literature identified that return restrictions can result in a loss of sales (Biswas & Abdul-Kader, 2018:1016; Starostka-Patryk *et al.* 2013:509; Zhang *et al.* 2023:10), increase product return complexity for consumers (Zhang *et al.* 2023:10), and ultimately impact consumer satisfaction (Badenhorst, 2022:230). Additionally, complicated return processes can increase consumer uncertainty (Bozzi *et al.* 2022:12) and a loss of sales and consumers (Lin & Hsu 2017:218). Consequently, internal culture service pitfalls can cause various problems for consumers and online retailers, which mean that online retailers should identify and implement practices to mitigate internal culture pitfalls for the effective RLM of consumer returns.

8.5.1.2 Poor RLM service pitfalls and related service problems

Poor RLM as a service pitfall category involves the service pitfalls of inattention to RLM, poor RL planning and a lack of resources (see **Figure 8.20**), which can lead to various consumer and online retailer problems. These poor RLM service pitfalls and related service problems will be briefly discussed and analysed in the subsequent sections.

8.5.1.2.1 Inattention to RLM pitfall and related service problems

Inattention to RLM involves the failure of online retailers to recognise the impact of poor RLM on consumer experience, service and retention. Online retailers may be unaware that a poor RL function without proper management (e.g. no dedicated manager) can be detrimental to the sustainability and image of the online retailer. Subsequently, inattention to RLM can lead to the online retailer problems of reputational damage and a loss of market share and consumers, as expressed in the following quotations:

> "[…] your biggest risk in terms of customer retention sits in that returns department. So, that's another thing that people neglect is that they don't necessarily understand that when things go wrong in that [returns] department, you are bound to lose thousands of customers by word of mouth." (P5, general manager, online retailer)

> "[A dedicated manager for RLM is important] in ecommerce, because the reputational risks are so high […] to get it wrong is quite rife." (P6, logistics manager, multichannel retailer)

These findings correspond to the reviewed literature in terms of management's failure to understand the importance of RLM (Davidavičienė & Al Majzoub, 2021:21; Chen *et al.* 2017:253; Lin & Hsu, 2017:218), which can result in reputational damage (Ahsan & Rahman, 2021:21; Bozzi *et al.* 2022:12) and a loss of market share (Ahsan & Rahman, 2021:21; Bozzi *et al.* 2022:12; Davidavičienė & Al Majzoub, 2021:2). Evidently, online retailers must pay attention to RLM, ensuring long-term sustainability through a positive public image and consumer retention.

8.5.1.2.2 Poor RL planning pitfalls and related prevention and control problems

Poor RL planning can involve, poor return policies, poor RL procedures, and poor outsourcing decisions (pitfall elements), which can be problematic for consumers and online retailers.

Particularly, participants indicated that *poor return policies* as a service pitfall element can be a poorly planned policy and an open-ended (or open for interpretation) return policy and a complicated return policy, which can lead to consumer problems. Participants indicated that a poorly planned policy often entails focusing on legal compliance, without considering the impact of the return policy on consumer return experience. Similarly, the return policy might involve only legal terms and conditions that can be difficult for consumers to understand, causing consumer uncertainty. Furthermore, from the internal preservation pitfall example (section 8.5.1.1), an open-ended return policy can be failing to indicate the start of the return acceptance period, for example, mentioning a seven-day return window without stipulating that return period starts on the date of purchase. Subsequently, the consumer might expect that the seven-day return period starts on the delivery date, which can result in a rejected return request and a frustrated and angry consumer (problem). The following quotations demonstrate the impact of poor return policies:

> "[…] you first start with legal compliance […] so that you make sure you're legally compliant and then you forget about it, […] and when you get to a place where you actually started to measure customer experience […] you then start looking at your returns policy. And then often you've got, hamstrung by legacy systems." **(**P1, operations manager, 3PRL provider firm)

> "Return policy needs to go through the whole legal department […] [but] must not be difficult for that customer to understand." (P10, Head of Sales and Logistics, OEM/multichannel retailer)

> "[…] if you leave something open for interpretation from a customer perspective, which we've obviously had quite frequently, you get a lot of upset customers because the [return] policy was a bit open-ended." (P3, returns manager, online retailer)

Similarly, *poor RL procedures* can cause inconsistencies in return decision-making, which can be problematic for consumers and the online retailer. For instance, online retailers with various decentralised facilities without clear SOPs in RL can run the risk of inconsistent decisions regarding the acceptance and rejection of product returns, creating unmet expectations, consumer frustration and uncertainty (consumer problems), and a loss of consumer confidence (online retailer problems). Similarly, online retailers that standardised RL but fail to enforce standards and procedures (e.g. allowing employees to make return decisions without following the SOPs) can contribute to the

consumer problems of unmet expectations and dissatisfaction, leading to a loss of consumer trust. These findings can be supported by the following quotations:

> "Absolutely, I think it [formalisation and standardisation in RL] is imperative because, […] If it doesn't happen within my own reasonable expectation [as a consumer], I get very frustrated." (P7, owner, 3PRL provider firm)

> "[…] you do not want six or seven reclaim centres where the six or seven people that handled electronics all have a different view of what is used. Because that creates uncertainty with the consumer." (P5, general manager, online retailer)

> "[...] there's nothing worse than a consumer having an expectation of X but getting Y because somebody decided that the SOP wasn't the one, they wanted to follow today. There's no debate on those things because there's a commitment you make." (P6, logistics manager, multichannel retailer)

Finally, *poor outsourcing decisions* involve online retailers, deciding to outsource the entire RL function to third parties (i.e. couriers) that may lack RL capabilities or expertise for effective RL service performance and management. Specifically, participants indicated that outsourcing the entire RL function to incapable service providers can run the risk of service failures (online retailer problem), which can lead to a poor return experience (consumer problem) and reputational damage (online retailer problem). The following quotations portray these findings:

> "I am totally against outsourcing, because when you outsource, especially the reverse logistics […] because if your outsource company would fail in any of those [RL] services, it's you [the online retailer] that will have to bear the brunt for it." (P9, regional & online DC manager, online retailer)

> "So, if I had to run a little courier service to manage my returns, the consumer experience would have been a shocker." (P6, logistics manager, multichannel retailer)

A few studies from the reviewed literature focused on the impact of poor RL planning on service performance. Relating to poor return policies, Robertson *et al.* (2020:174) indicated that return policies must reflect the service and marketing strategies of online retailers and should never be turned over to the legal departments, which can negatively impact consumer value. Additionally, Davidavičienė and Al Majzoub (2021:7) mentioned that an unclear return policy can be the same as no return policy, demonstrating the importance of well-developed return policies. Finally, poor outsourcing decisions might lead to the outsourcing risk related to the inability of 3PL providers to develop necessary resources for flexibility and innovation in RL (Panjehfouladgaran & Lim, 2020:1461), which can lead to inefficiencies and impact consumer service (Tavana *et al.* 2016:555). Additionally, Ahsan and Rahman (2021:21) and Bozzi *et al.* (2022:12) emphasised that mismanagement of product returns and subsequent service failures can contribute to consumer dissatisfaction and reputational damage.

Nevertheless, no studies identified the impact of poor RL procedures, including a lack of standardisation, consistency and compliance with SOPs, on consumer satisfaction and the service performance of online retailers. Consequently, this study extends the literature, demonstrating the importance of proper RL procedures for the effective RLM of consumer returns in online retailing. Subsequently, online retailers with poor return policies, poor RL procedures and poor outsourcing decisions as poor RL planning pitfall elements can contribute to various service problems, which can hinder the effective RLM of consumer returns.

8.5.1.2.3 Lack of resources pitfalls and related prevention and control problems

A lack of resources as a service pitfall involves a lack of resource commitment (RC) in RL and a lack of IT resources (pitfall elements), which can result in various consumer and online retailer problems.

Particularly, *lack of RC* in RL involves failure to allocate and invest in sufficient resources in RL, which can be problematic for consumers and online retailers. Participants indicated that online retailers often invest in resources to provide consumers with exceptional shopping and delivery experiences but fail to commit adequate resources in RL, which can reverse the effects of an exceptional forward experience. Consequently, a lack of RC in RL can result in a poor return experience (consumer problem), service failures and a loss of consumers (online retailer problems). These findings can be supported by the subsequent quotations:

> "But I think there's very little investment in the reverse logistics […], which means that you might want to give a customer great experience just on the purchase, but when it comes to return, you might actually lose that customer if you don't deal with it properly." **(**P12, Head of logistics, online retailer)

> "[Resource commitment in RL is] as important, if not equally as important as what you would spend on delivering your outbound experience. […] if you spent a whole lot of money developing a site that ships products, lovely experience on the outbound [delivery], lots of marketing goes into driving those customers. All that money is being spent and they come to return the product and it's a poor experience, you lose that customer." (P1, operations manager, 3PRL provider firm)

Similarly, participants indicated that a *lack of IT resources* involves the unwillingness of online retailers to invest in IT resources needed for efficient RL processes and communication. Subsequently, failure to invest in IT resources for RL can lead to the consumer problem of a poor return experience and the online retailer problems of poor return communication, poor return processes, a loss of consumer trust and confidence, and a loss of market share and consumers. The following quotations illustrate these findings:

> "Now you want a smooth flow, the same technology to be applied […] backwards. That is not happening at the moment. I think companies don't want to […] outlay money with an expense." (P9, regional & online DC manager, online retailer)

> "[Investment in IT for RL is] crucial […] to smoothen the reverse logistics [process]. Because I tell you why, this is where online companies lose business and, in the end, they lose the customer's trust." **(**P9, regional & online DC manager, online retailer)

> "I think investment in technology […] is paramount. Without investment in technology, your customers will not shop with you anymore because they'll get much better experiences elsewhere because they'll know where their stuff is." (P8, logistics manager, multichannel retailer)

While various studies in the reviewed literature indicated that a lack of investment in resources hampers effective RLM (Lamba *et al.* 2020:397; Zailani *et al.* 2017:37), no studies identified the service-related problems of a lack of RC. Additionally, apart from identifying that a lack of IT resources hampers RL process efficiency (Frei *et al.* 2020:1619), no studies from the reviewed literature identified the various service problems associated with inadequate IT resources. Evidently, this study extends literature by demonstrating additional problems, including poor return experiences,

service failures and a loss of consumer confidence, trust, market share and consumers, which can be expected with a lack of RC and IT resources in RL.

Essentially, poor RLM involves the service pitfalls of inattention to RLM, poor RL planning and a lack of resources, which can lead to various consumer and online retailer problems. Subsequently, the impact of ineffective RLM on the service performance of online retailers, emphasises the importance of implementing efficient and effective RLM practices for the effective RLM of consumer returns.

8.5.1.3 Information-related service pitfalls and related service problems

As highlighted in **Figure 8.20**, information-related service pitfalls involve poor visibility, poor systems and poor external integration in RL, which can be problematic for consumers and online retailers.

Poor visibility as an information-related service pitfall entails the inability of online retailers to provide consumers with return updates and notifications throughout the returns process. For example, after the consumer logged a return, the courier collects the product unannounced, and the consumer waits for the outcome of a refund without any updates on return receipt, inspection and processing. Participants indicated that poor visibility in the return process can lead to a poor return experience, consumer uncertainty (consumer problems), poor return communication and a loss of consumer confidence (online retailer problems). The following quotations reveal the significance of poor visibility as an information-related service pitfall in RL:

> "Our visibility is poor, so customers will return something […] things happen in the background. So, the courier will collect it and then they [the consumer] will just have to wait until one day they get a refund. It's not visible as to what step in the [return] process they're in. […] visibility creates confidence in the buying cycle." (P8, logistics manager, multichannel retailer)

> "[…] for reverse logistics […] the customer wants to see, have they logged my call? It's approved or not approved, and when are they going to come and collect? […] if you go with a company that does not have it, then you going to be on the phone all the time. It's quite a bad experience then at the end of the day." (P12, Head of logistics, online retailer)

Poor systems involve manual RL operations and systems failure (pitfall elements), linking with a lack of IT resources (section 8.4.1.2.3) and poor visibility pitfalls. Particularly, *manual RL operations* means that consumers must phone a call centre to log a return, the call centre agent must phone the courier to collect the product return, and once the product arrives at the facility all RL processes (e.g. receiving, inspection and processing) are performed manually. Subsequently, neither the consumer service agent nor the consumer can track the progress of the product return, resulting in consumer uncertainty (consumer problem) and poor return communication (online retailer problem). Additionally, manual operations cause return processes to be slow, resulting in poor return processes (online retailer problem) and consumer frustration (consumer problems).

System failures might be worse than manual return operations, if consumers expect that the online return request process and return process tracking takes place online. Therefore, system failures can cause unmet expectations and dissatisfaction, consumer frustration and anger (consumer problems), and service failures (online retailer problem). The following quotations illustrate the impact of poor systems as an information-related service pitfall on consumers and online retailers:

> "I would tell you that reverse logistics is simply not possible without a solid technology platform, because what you'll end up doing is, you'll sit in a position where you manually logging things in, but you've got no idea of who's doing what, and how to track it. And the moment that the customer phones, they're [consumers] going to say, well, what's happening with my product? And you'll [customer service agent] say, oh, sorry, I'll have to get back to you. And that is a sin." (P5, general manager, online retailer)

> "[…] you need an end-to-end inventory management system […]. There's nothing worse than a customer that doesn't know what's going on, how far in the process the return is, when are they getting their money, when are they getting their return, […] because ultimately, in that [return] process, you haven't given the customer their money back yet. So, me as a customer, I paid you X amount of money, you sent me a product that I've returned to you, you've acknowledged the receipt of that product, but you haven't done anything about it yet. So, I'm still sitting at this point as a customer, without money and I'm sitting without the product. So that creates a lot of frustration from the customer's point of view." (P5, general manager, online retailer)

> "But if your front-line system is not up to scratch and there's a lot of glitches within that system, then you're going to have massive problems. You're going to have huge VOC levels. I mean, the voice of customer is going to be crazy […] your call centre will experience a spam of calls from these customers because they feel that you know what? How can you have an online system that doesn't work for us?" (P10, Head of Sales and Logistics, OEM/multichannel retailer)

Finally, *poor external integration* involves the pitfall elements of a lack of SCI (supply chain integration) and CI (consumer integration) that causes consumer and online retailer service problems. Specifically, a *lack of SCI* involves an unintegrated online retailer enterprise resource planning (ERP) and courier systems, which can cause poor return communication, poor return processes and service failures (online retailer problems). Furthermore, participants indicated that online retailers often procure the same products from different suppliers, which means that a lack of integration with suppliers can cause delays in the return process, resulting a poor return experience, unmet expectations and dissatisfaction, consumer frustration (consumer problems) and poor return processes (online retailer problem). The following quotations expand on these findings:

> "[…] when the customer generates a return, she will obviously go into the website into her account and generate that return. And if the courier company and the fulfilment centre's ERPs are not plugged in […] you're going to have a break in communication and a delay [in the return process]. And this is what we don't want […]. It's very slow […]. You want the return process [running] smoothly […]." (P9, regional & online DC manager, online retailer)

> "[…] the more integrated, the less likelihood of collection failures, return failures, service failures. So, whether your logistics provider is external courier or an internal provider, you know that integration from a systems perspective is important." (P1, operations manager, 3PRL provider firm)

> "[…] you can buy the same type of product from multiple suppliers, so you've got to be able to identify which supplier did it come from, […] so we can send it back to the right supplier […]. What is the impact [of poor integration] on your customer? Your customer's experience is, I've got a defective item and I've returned it. And my expectation is either a replacement or a refund. And if it's already taken a week to get the product back to a warehouse, the experience isn't great to tell them, it's taking another two weeks for the supplier to have a look at it and decide whether it's valid or not." (P1, operations manager, 3PRL provider firm)

Associating with poor visibility and systems, *a lack of CI* involves the inability to effectively communicate and share information with consumers in the return process. On the one hand, a lack of

CI may involve poor email or SMS communication systems and a poor website platform that hamper transparency and real-time information sharing, resulting in consumer frustration (consumer problem), poor return communication, a loss of consumer trust and a loss of sales (online retailer problem). On the other hand, a lack of CI may involve automated communication without giving consumers the opportunity to interact with call centre staff on return-related queries, causing consumer frustration, uncertainty (consumer problems) and poor return communication (online retailer problem). The following quotations show the service problems associated with a lack of CI:

> "Because if it's not integrated, then the customer will not have access to all the relevant information, and trust is established through transparency, which means access to current [return] information." (P8, logistics manager, multichannel retailer)

> "[Consumer integration is important] without a doubt. I mean, if you've ever bought online and you can't see what's happened to your order when you try to return it, it frustrates you and it probably will encourage you to shop somewhere else." (P8, logistics manager, multichannel retailer)

> "But it certainly needs integration between transportation management system and a customer relationship management system, which is often lacking […]. You can still return it through an automated system, but you can't talk to the person or get more information […]. And retailers are not making it easier for consumers to interact with them […]. A lot of them have got bots nowadays for chatting, but you can click on that chat-box, and you can ask a question and five hours can go past before you actually get an answer, if you're lucky enough to get an answer." (P2, owner, supply chain consultancy firm)

A few studies from the reviewed literature examined the impact of poor systems and integration on the RLM performance of online retailers. Specifically, poor systems means that online retailers perform the RL process manually (Bozzi *et al.* 2022:15), which hampers return authorisation, visibility (Badenhorst, 2022:330) and RL process efficiency (Frei *et al.* 2020:1619). Likewise, a lack of systems integration with SC partners can hamper consumer return experience (Bozzi *et al.* 2022:19), efficiency of product returns (Bozzi *et al.* 2022:19; Zailani *et al.* 2017:29) and the operational performance of online retailers (Soltany *et al.* 2018:780; Dapiran & Kam, 2017:831). Lastly, Bozzi *et al.* (2022:29) found that consumers dislike communicating with AI chatbots and prefer personal communication, echoing the findings of this study. Nevertheless, this study uniquely identified various consumer and online retailer service problems associated with poor visibility, poor systems and poor external integration, emphasising that online retailers need to implement practices to address information-related service pitfalls and related service problems for the effective RLM of consumer returns.

The next section summarises the interview findings for the service pitfalls and problems that can hamper the effective RLM of consumer returns.

8.5.1.4 Framework and summary of findings of service pitfalls and problems in RLM

The interview findings presented in section 8.5.1 shows that various service pitfalls and problems can hamper the effective RLM of consumer returns in online retailing. Online retailers must identify the service pitfalls and problems and understand the cause-and-effect relationship between the service

pitfalls and problems, which can guide them with the implementation of appropriate practices to mitigate specific pitfalls and problems.

Figure 8.**14** provides an overview demonstrating the links between the service pitfalls and problems in RLM.

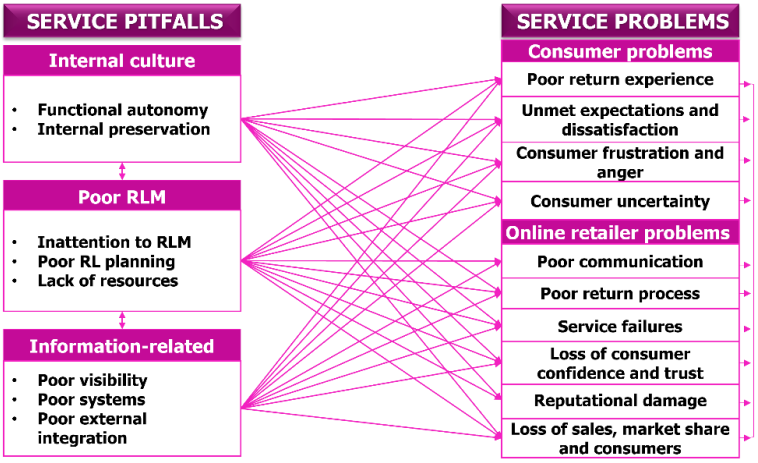


Figure 8.14 Relationship between service pitfalls and problems in RLM
Source: Compiled by the researcher

Figure 8.**14** shows an overview of the relationship between service pitfalls and specific service problems that can hamper the effective RLM of consumer returns. The links between the service pitfalls and problems in RL can demonstrate the most problematic factors in RL, which must be first addressed by online retailers that experience problems related to service in RL. Additionally, the framework illustrates links between the service pitfalls, as well as the links between the service problems, which can be important considerations in identifying the most significant service pitfalls and problems.

Specifically, the framework shows that poor RLM can be the most significant service pitfall category, contributing to all consumer and online retailer problems. Consequently, online retailers that experience service pitfalls related to inattention to RLM, poor RL planning and a lack of resources, can expect all consumer problems and online retailer problems. Therefore, online retailers must prioritise the mitigation of poor RLM pitfalls for the effective RLM of consumer returns. Moreover, the framework demonstrates that the biggest consequences of the service pitfall categories can be all the consumer problems, including a poor return experience, unmet expectations and dissatisfaction, consumer frustration and anger and consumer uncertainty, and most online retailer problems, including poor return processes, service failures, a loss of consumer confidence and trust and a loss of sales, market share and consumers. Subsequently, online retailers with internal culture, poor RLM and information-related service pitfalls can expect all consumer problems and most of the online retailer problems, which can hamper the effective RLM of consumer returns.

From the findings presented in section 8.5.1, examples of links between the service pitfalls include the links between (1) internal preservation (internal culture) and poor external integration (information-related) pitfalls, (2) poor RL planning (poor RLM) and internal preservation (internal culture) pitfalls, and (3) lack of resources (poor RLM) and poor visibility and systems (information-related) pitfalls. Subsequently, addressing internal preservation can help address poor external integration, addressing poor RL planning can help address internal preservation and addressing a lack of resources can help address poor visibility and systems. Therefore, online retailers can benefit from identifying and addressing the service pitfalls that contribute to other service pitfalls first.

Similarly, examples of links between service problems include the links between (1) poor return process and service failures (online retailer) and a poor return experience (consumer) problems, (2) consumer uncertainty (consumer) and a loss of confidence (online retailer) problems, (3) unmet expectations (consumer) and a loss of consumer trust (online retailer) problems, (4) poor return experience (consumer) and reputational damage (online retailer) problems, (5) consumer frustration and anger (consumer) and a loss of sales and a loss of market share (online retailer) problems, and (6) poor return communication (online retailer) and consumer uncertainty (consumer) problems. Consequently, addressing a poor return process and service failures can help to address a poor return experience, addressing consumer uncertainty can help to address a loss of consumer confidence, addressing unmet expectations can help to address a loss of consumer trust, addressing a poor return experience can help to address reputational damage, addressing consumer frustration and anger can help to address and a loss of sales and market share, and addressing poor return communication can help to address consumer uncertainty. Evidently, online retailers should identify and address the service problems that can contribute to other service problems first.

Nevertheless, online retailers may experience specific service pitfalls and related service problems that require identification for the effective RLM of consumer returns. Subsequently, Table 8.18, provides a detailed summary of the interview findings, demonstrating links between the service pitfalls, service pitfall elements (if applicable), and the corresponding consumer and online retailer service problems.

Table 8.18 Service pitfalls and related service problems

Pitfall category	Pitfalls	Pitfall elements	Consumer problems	Online retailer problems
Internal culture	***Functional autonomy***	-	•Poor return experience •Consumer dissatisfaction •Consumer frustration	•Poor return process •Service failures •Reputational damage
	Internal preservation	Strict returns	•Unmet expectations	•Loss of market share
		Stringent return request procedures	•Consumer uncertainty	•Loss of consumer confidence and trust •Loss of sales, market share and consumers
		Inflexible return authorisation	•Unmet expectations and dissatisfaction •Consumer frustration and anger	•Loss of sales and consumers
Poor RLM	***Inattention to RL***	-	-	•Reputational damage •Loss of market share & consumers
	Poor RL planning	Poor return policies	•Poor return experience •Consumer frustration and anger	-

Pitfall category	Pitfalls	Pitfall elements	Consumer problems	Online retailer problems
			•Consumer uncertainty	
		Poor RL procedures	•Unmet expectations and dissatisfaction •Consumer frustration •Consumer uncertainty	•Loss of consumer confidence and trust
		Poor outsourcing decisions	•Poor return experience	•Service failures •Reputational damage
	Lack of resources	Lack of RC in RL	•Poor return experience	•Service failures •Loss of consumers
		Lack of IT resources	•Poor return experience	•Poor return communication •Poor return process •Loss of consumer confidence and trust •Loss of market share and consumers
Information-related pitfalls	***Poor visibility***	-	•Poor return experience •Consumer uncertainty	•Poor return communication •Loss of consumer confidence
	Poor systems	Manual RL operations	•Consumer frustration •Consumer uncertainty	•Poor return communication •Poor return process
		System failures	•Unmet expectations and dissatisfaction •Consumer frustration and anger	•Service failures
	Poor external integration	Lack of SCI	•Poor return experience •Unmet expectations and dissatisfaction •Consumer frustration	•Poor return communication •Poor return process •Service failures
		Lack of CI	•Consumer frustration and anger •Consumer uncertainty	•Poor return communication •Loss of consumer trust and sales

Source: Compiled by the researcher

Table 8.18 summarises the findings for subtheme 1 (of theme 2), linking the service pitfalls, pitfall elements and resulting problems. Online retailers can use the table to identify service pitfalls and related elements with corresponding service problems, which can help them to address specific service pitfalls and problems in RL.

For example, online retailers with strict return conditions (pitfall element of internal preservation) can identify the resulting consumer problem of unmet expectations and online retailer problem of a loss of market share, which might motivate them to relax strict return conditions. Additionally, online retailers that experience, for example, service failures as a service problem can investigate the possible causes, which may include the pitfall elements of poor outsourcing decision-making (poor RL planning), a lack of RC in RL (lack of resources) and a lack of SCI (poor external integration). Subsequently, online retailers that experience service failures can identify that they must prioritise addressing poor RL planning, lack of resources and poor external integration pitfalls.

Moreover, online retailers can use the table to identify the *most problematic service pitfalls and/or pitfall elements* that they should address or avoid for effective RLM. For instance, the most problematic service pitfall includes *poor external integration*, associating with thirteen service problems, which means that online retailers need to address poor external integration for the effective management of consumer returns. Additionally, the most problematic service pitfall elements include *a lack of IT resources* and *a lack of SCI* each associating with seven service problems, which means that online retailers need to address a lack of IT resources and SCI to manage consumer returns effectively. Lastly, online retailers can use the table to identify the *most significant service problems* in RL that they should address for effective RLM. For instance, online retailers can identify that *consumer frustration* (linked

to eight pitfalls/elements), followed by *a poor return experience* (linked to seven pitfalls/elements), can be the most significant service problems in RL, which may motivate them to implement various RL practices to reduce consumer frustration and improve return service experience.

Although online retailers can focus on addressing specific service pitfalls and related problems to improve consumer service in RL, they can gain even more advantages by identifying and implementing appropriate service propositions in RL. Subsequently, the next section will focus on the *service propositions* in RL that online retailers can implement to address service pitfalls and problems in RL as well as realise service profits for the effective RLM of consumer returns.

8.5.2 Service propositions – Subtheme 2

As illustrated in Figure 8.12, and discussed in section 8.2.2., the main service propositions, including *service-orientated returns (SOR)* (section 8.5.2.1), *return service performance (RSP)* (section 8.5.2.2) and *service parameters* (section 8.5.2.3), consist of proposition categories, key practices/parameters and support practices, which can be implemented and considered for the effective RLM of consumer returns. Based on the interview findings, Figure 8.**15** provides a detailed overview of the service propositions for the effective RLM of consumer returns in online retailing.

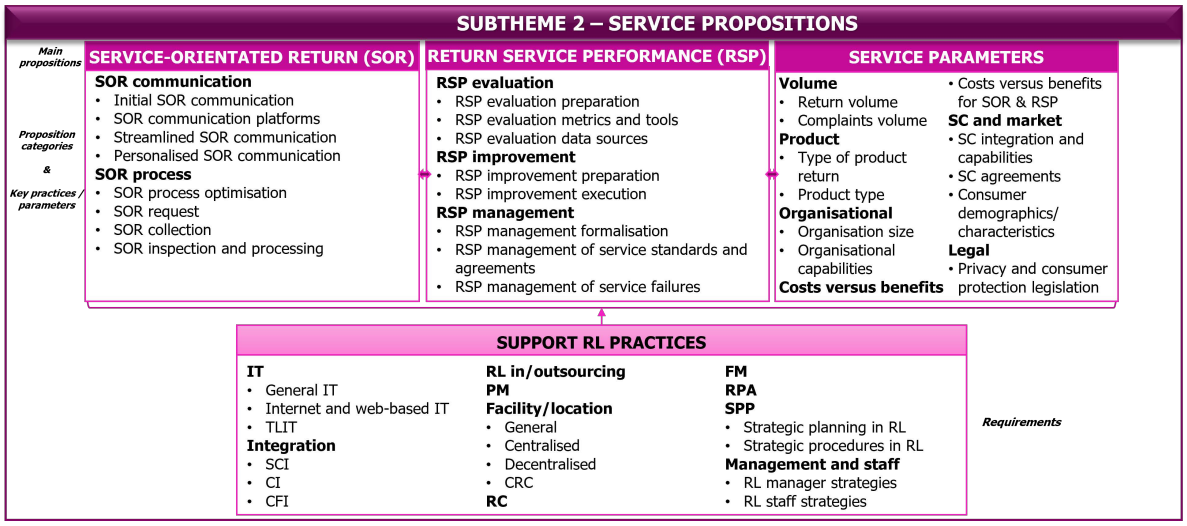


Figure 8.15 Detailed overview of service propositions in RL
Source: Compiled by the researcher

Particularly, Figure 8.**15** shows that the main service propositions, service proposition categories, key practices/parameters and support RL practices. Section 8.2.2 provided details regarding the presentation and format of the propositions applicable to each theme, including key practice/parameter elements (not listed in **Figure 8.15** but emphasised in the discussion). Based on **Figure 8.15**, the main service propositions, including service proposition categories, key practices/parameters, key practice/parameter elements (if applicable) and support RL practices, will be discussed in the

subsequent sections. This section concludes with a service proposition framework and a summary of the findings, demonstrating the links between the service propositions.

8.5.2.1 Service-orientated return (SOR) propositions

SOR as a main service proposition involves the proposition categories of *SOR communication* and *SOR processes*, which can be implemented to address various service pitfalls and problems. In the subsequent sections, SOR communication and SOR processes will be described and analysed.

8.5.2.1.1 Service-orientated return (SOR) communication

SOR communication as a SOR proposition category involves initial and continuous service-oriented communication in RL to address service pitfalls and problems for the effective RLM of consumer returns. As illustrated in **Figure 8.15**, several key practices can be implemented for SOR communication, including (1) initial SOR communication, (2) SOR communication platforms, (3) streamlined SOR communication, and (4) personalised SOR communication, which will be described and analyse in the succeeding sections.

- *Initial SOR communication*

Initial SOR communication practices involve information sharing about return conditions and procedures before a consumer logs a return request. Particularly, online retailers must communicate clear return conditions and procedures to consumers, including clear descriptions of return conditions, clear explanations of return processes, and clear descriptions of consumer responsibilities in the return process. Participants indicated that policies and procedures must be standardised, understandable, identifiable, visible and accessible on the website to avoid unmet consumer expectations and uncertainty. For example, online retailers can provide the return conditions (e.g. 30-day free returns on unused items) on the product description page and provide a return request and procedure link on the order page. The following quotations support these findings:

> "You have to be clear about what the process looks like […] How do you log return? How does that process work? […] you want to make sure that process is as well explained as it can be and as standardised as it can be for your customer." (P13, supply chain manager, multichannel retailer)

> "The return policy […] needs to be posted on your website. If the customer wants to view it, he must be able to click, and all the details should be there. And it must not be difficult for that customer to understand. He must know what's his role and what's his responsibility and he must understand the roles and responsibility of both customer and [the online retailer as the] supplier." (P10, Head of Sales and Logistics, OEM/multichannel retailer)

> "[…] I think [standardisation in RL] it is imperative […] put it [your return policy] out there boldly, big red letters to say your expectation should be A, B or C. And the guide should be as simplistic, as bold, as easy to read as possible." (P7, owner, 3PRL provider firm)

As support RL practices for the establishment of initial SOR communication, online retailers can implement (as supported by literature) the (1) Internet and web-based IT the strategy of using the

Internet and website for RL (section 6.3.2), (2) consumer integration (CI) strategies of developing and implementing consumer service and support initiatives and consumer communication and information sharing (section 6.4.2), and (3) strategic procedure strategies of defining roles and responsibilities in RL, standardising RL processes and publishing accessible strategic procedures for RL (section 6.9.4). Additionally, the interview findings coincide with a few studies from the reviewed literature, including effective communication of the return policy and procedures on the website (Zhang *et al.* 2023:10), clear presentation of the return policies and conditions at obvious locations on the website and clear presentation of the return procedures (Zhang *et al.* 2017:157), which provide consumers with a better understanding about the return conditions and return processes (Nel & Badenhorst 2020:127; Mathu & Khunou, 2021:443).

Consequently, initial SOR communication can help online retailers address the (1) service pitfalls of poor RL planning (poor RLM) and poor external integration (information-related pitfall), and (2) service problems of poor return experience, unmet expectations, consumer frustration and uncertainty (consumer problems), poor return communication and a loss of consumer trust (online retailer problems).

- *SOR communication platforms*

SOR communication platforms form the foundation for the subsequent key SOR communication practices of streamlined and personalised SOR communication. As key practice elements online retailers can use telephonic and/or electronic SOR communication platforms. Telephonic means that online retailers use call centres and systems for SOR communication and electronic means that online retailers use online systems, messaging and emails for SOR communication. The following quotation illustrates some of the SOR communication platforms that online retailers can select:

> "[…] making sure that the communication [platform] is there. When I'm talking about communication, making sure that you are able to communicate to that customer, whether it's online, whether it's via telephone, whether it's by email, whether it's via SMS." (P10, Head of Sales and Logistics, OEM/multichannel retailer)

Using *telephonic SOR communication platforms* means that online retailers must establish call centres to telephonically engage with consumers. The participants indicated that online retailers should commit human resources and use IT platforms for effective telephonic SOR communication. Specifically, human resources must be capable of effectively engaging with consumers telephonically. Additionally, online retailers should use a well-established IT platform with software, like CRM and API (Application Programming Interface), to facilitate call centre staff with ticket logging, changing and updating return statuses, and communicating the correct return statuses telephonically. Alternatively, participants indicated that online retailers could use third-party contact centres for the establishment of a telephonic SOR communication platform. However, online retailers that outsource their contact

centre must ensure that the staff of the service provider be treated as employees for effective SOR communication. These findings can be demonstrated by the following quotations:

> "Look, resources [for] […] customer engagement in your call centres are important [for] customer service in [RL]." (P7, owner, 3PRL provider firm)

> "So, a well-established technology platform that gives you not only the [return] status updates […] [but also] ticket logging. If you can imagine any call centre you phone in your life, you get a reference number and a ticket […] all the type of live updates. That's critical." (P5, general manager, online retailer)

> "So, a solid technology system that gives you the ability to change status, update status and communicate the new status to the customer […]." (P5, general manager, online retailer)

> "And you able to have a system of communication to the customer that comes in various formulas, that is CRMs to APIs, you have various logistics platforms that kind of help you to do those kinds of things. […] So, its CRMs or logistics software systems that allow you to track every event to see where your parcel is so you can communicate that to the customer." (P13, supply chain manager, multichannel retailer)

> "[…] you can outsource the whole [RL process] […] like outsourcing a contact centre […] you still got to make those [contact centre] people feel like they're your [customer service] people […] to not degrade the [consumer's] experience." (P1, operations manager, 3PRL provider firm)

Similarly, using *electronic SOR platforms* means that online retailers can share return information with consumers electronically via the Internet, website, online system, SMS, WhatsApp and/or emails. Subsequently, online retailers can establish a self-service functionality, using the Internet, website and online system, which enable consumers to track return statuses. Additionally, online retailers can establish integrated IT systems (e.g. ERP and website) to notify consumers via SMS or emails about their return statuses. Evidently, like telephonic SOR communication, online retailers can implement a well-established IT platform to electronically communicate return status updates with consumers. The following quotations support these findings:

> "So, if they have returned it, they need to be able to log on their Internet, on the order system […] to get tracking […] information […]." (P8, logistics manager, multichannel retailer)

> "[…] our ERP system that is integrated into the website as well. Every movement or every movement of that [return] shipment the customer gets an SMS notification." (P9, regional & online DC manager, online retailer)

> "So, a well-established technology platform that gives you […] the [return] status updates […]. And email confirmation and SMS all the type of live updates. That's critical." (P5, general manager, online retailer)

As support RL practices for using SOR communication platforms, online retailers can implement (as supported by literature) the (1) general IT strategies of using integrative IT and IT with information management capabilities (section 6.3.1), (2) Internet and web-based IT strategies of web-based systems for RL, using the Internet and website for RL and integrating Internet and web-based IT with other IT (section 6.3.2), (3) TLIT (traditional logistics IT) strategies of integrating TLIT with other IT, using ERP, LIMS (Logistics Information Management System), ordering systems and CRM for RL (section 6.3.3), (4) CI strategies of consumer service and support initiatives and strategic communication, information sharing and interaction with consumers (section 6.4.2), (5) RL outsourcing strategies of deciding on the degree of RL outsourcing, type of RL activities to outsource and type of service providers to select (section 6.5.1), and (6) RC (resource commitment) strategies of IT, infrastructure and human RC for RL (section 6.9.1).

A few studies from the reviewed literature identified the importance of multiple contact points/platforms for effective consumer communication, including telephonic via call centres (Jalil, 2019:4; Mostert *et al.* 2017:13) and electronic via email (Bozzi *et al.* 2022:19; Jalil, 2019:4), SMS, app notification and WhatsApp (Bozzi *et al.* 2022:19), using CRM software (Andresen & Istad, 2019:5). Consequently, the establishment of appropriate SOR communication platforms can be important for online retailers, enabling them to address the service (1) pitfalls of poor RL planning, a lack of resources (poor RLM), poor visibility, poor systems and poor external integration (information-related), and (2) problems of poor return experience, consumer frustration, anger and uncertainty (consumer problems), poor return communication, poor return processes, service failures, a loss of consumer trust and confidence, reputational damage and a loss of sales (online retailer problems).

- *Streamlined SOR communication*

Based on the SOR communication platforms, online retailers can establish streamlined SOR communication, ensuring effective execution of SOR communication. The participants indicated that streamlined SOR communication involves continuous updates, speed, consistency, accuracy and proactive information sharing, as illustrated in the following quotations:

> "But from a customer perspective, if I'm being updated continuously, I rather have a spam of information coming through and knowing that where I am within the [return] process, then having nothing coming through. So, I believe that communication flow […] it has to be streamlined." (P10, Head of Sales and Logistics, OEM/multichannel retailer)

> "[…] the communication channel that you have, you've got to enforce [it], making sure that there's speed. Speed is critical." (P10, Head of Sales and Logistics, OEM/multichannel retailer)

> "I think it's very important to be able to proactively share information with customers on what's happening." (P13, supply chain manager, multichannel retailer)

> "[…] trust is established through transparency, which means access to current information." (P8, logistics manager, multichannel retailer)

Additionally, the participants mentioned several initiatives for the establishment of streamlined SOR communication, representing the key practice elements of (1) standardised return communication, (2) systems-based communication, and (3) collaborative communication. Particularly, for streamlined telephonic communication, participants indicated that online retailers could *standardise return communication*, ensuring that customer service staff relay the correct information to consumers. For example, as a standard, customer service staff must provide estimated timeframes for collection, receiving, inspection and processing (refunds and replacements) and status updates for each return process. The following quotations demonstrate these findings:

> "[…] you need to tell Mrs. Jones, where is that parcel, what phase of the return is the parcel in, what is the envisaged timeframe we still going to have on it?" (P6, logistics manager, multichannel retailer)

> "[…] if you're communicating that [return status] to the customer, you definitely, have to have it standardised within your business […] because you probably want your customer service to follow the same [communication] processes […]." (P13, supply chain manager, multichannel retailer)

Regarding *systems-based communication,* the participants indicated that online retailers should share information in real-time regardless of the SOR communication platform. For example, telephonically a call centre agent must be able to inform the consumer that the parcel will be collected within 24 hours and processed within 48 hours through a well-established IT platform and a ticket logging system. Similarly, electronically, online retailers can (1) give consumers the option to track product return movement in real-time through the Internet and web-based system and (2) share real-time SMS/email notifications about the completion of each RL process through an integrated ERP system. The following quotations support these findings:

> "So, a well-established technology platform that gives you […] the status updates, […] a program, like a ticket logging [system]. If you can imagine any call centre you phone in your life, you get a reference number and a ticket and […] all the type of live updates. That's critical." (P5, general manager, online retailer)

> "And you need to be able to provide a customer with valid up to date information of where their stuff is. So, if they have returned it, they need to be able to log it on their Internet, on the order system […]. Then you need to get tracking of when the courier is going to come collect it. And then once the courier collected it, you need to be able to track what steps need to happen before you get your refund. So, it's a lot of visibility […]." (P8, logistics manager, multichannel retailer)

> "[…] our ERP system that is integrated into the website […] every movement of that shipment the customer gets an SMS gets a notification. As soon as she logs a return and when it's collected at her door, she gets a notification. When it's logged into the courier company for overnight delivery, she gets notified, once it leaves the courier and it lands into maybe the inter-regional branch at the courier company […] she gets notified. The moment it arrives at our door, she gets notified or the moment we process the return, and she gets a refund, she gets notified." (P9, regional & online DC manager, online retailer)

Finally, for *collaborative communication*, participants suggested that online retailers collaborate with SC partners for streamlined SOR communication. Specifically, online retailers must encourage SC information sharing through integrated systems. One participant provided an example of using SC collaboration for SOR communication, which involves an online retailer obtaining access to a supplier's database, registering a warranty return through a barcode system, sharing information with the consumer about the outcome of the warranty return and tracking the return if the return was sent to the supplier for repair. Evidently, this form of SC collaboration allows the online retailer to communicate return status updates even during disposition processes performed by suppliers. Similarly, online retailers can collaborate with 3PL providers through integrated systems to track returns and communicate return status updates to consumers. The following quotations denote collaborative communication in the SC for the implementation of streamlined SOR communication in RL:

> "So, if you [the consumer] purchased a television set from Retailer C, and the TV set breaks […] Retailer C is saying, we will come and collect it. But we're not going to give you the money, we need to get the money back from the supplier first. And in that case, your supplier needs to act out the warranty. Now, from an integration point of view, it would be brilliant if you [as the online retailer] had access to the supplier system, where they could say to you, you know what, we've got a list of barcodes that we sold to you in the last two or three years because they need to keep a record of those names. And you can simply enter their website and say, […] I'm looking up this barcode and the barcode tells you, no problem, this is still under warranty […]. But then also you can track what's happening on your supplier side, so that you can give accurate information to your customer saying, we've established that this product is still under warranty […] the product has left our hands. The supplier has spoken to us, […] the supplier is going to fix your item. It's going to take X amount of days. We'll keep you updated […]." (P5, general manager, online retailer)

> "[…] when you have a logistics service provider, these APIs are quite important. So, you can see the integration between your system and their systems. You can communicate to the customer so you can track certain events,

> especially in reverse logistics. And you can say to the customer, we've collected your parcel, your parcel is now where it needs to be. We're busy refunding the parcel. Your item is being refunded. And I think that's super important." (P13, supply chain manager, multichannel retailer)

Subsequently, the effective implementation of streamlined SOR communication requires the implementation of various support RL practices (as supported by literature in chapter 6). Specifically, online retailers can implement the (1) *general IT strategies* of integrative IT systems, IT with information management capabilities and using real-time and responsive IT (section 6.3.1), (2) *Internet and web-based IT strategies* of collaborative web-based IT, integration of web-based IT with SC partner IT systems and using the Internet and website for RL (section 6.3.2), (3) *TLIT strategies* of integrating TLIT with other IT and using ERP for RL (section 6.3.3), (4) *barcode strategy* of using barcode IT for RL (section 6.3.4), (5) *SCI strategies* of communicating, collaborating and cooperating in the SC, and integration and sharing of information and IT (section 6.4.1), (6) *CI strategies* of communication, information sharing and interaction with consumers (section 6.4.2), and (7) *strategic procedure strategies* of developing SOPs and manuals for RL, standardising RL processes and implementing strategic procedures in RL (section 6.9.4).

The interview findings show the importance of streamlining communication and information sharing for a consumer-centric return experience. Despite this importance, few studies in the reviewed literature explored streamlined communication for a consumer-centric RL process (see section 2.5.5.3). Nevertheless, Bozzi *et al.* (2022:18) found that an integrated system in the call centre provide customer service staff access to information about the order, which enables them to effectively assist consumers throughout the return process. Additionally, Lai *et al.* (2022:4) indicated that effective communication with consumers and SC partners can be essential for meeting consumer expectations. Moreover, Triani *et al.* (2019:469) found that complete and detailed information sharing demonstrates exceptional service capabilities that enhances consumer trust.

Subsequently, this study provides additional insights into the importance of and initiatives for streamlined SOR communication, which can help online retailers address the service (1) pitfalls of poor RL planning (poor RLM), poor visibility, poor systems and poor external integration (information-related) and (2) problems of poor return experience, unmet expectations and dissatisfaction, consumer frustration, anger and uncertainty (consumer problems), poor return communication, poor return processes, service failures, and a loss of consumer trust, confidence and sales (online retailer problems).

- *Personalised SOR communication*

Personalised SOR communication is an extension of streamlined SOR communication, which involves personalised assistance and arrangements before collection and personalised contact after return processing (key practice elements).

For *personalised assistance* and *arrangements before collection*, participants indicated that online retailers must demonstrate empathy and facilitate individual consumers that struggle with online return logging procedures as well as contact individual consumers to arrange convenient collection times. Participants suggested that online retailers involve RL managers in the execution of personalised SOR communication, demonstrating attentive care and concern. Additionally, personalised assistance must be prioritised for individual consumers who complained about the delivery that resulted in the return request. For example, a consumer that received the wrong order/item might complain about the inability to log a return for items not linked to the contents of the order. Subsequently, the online retailer must take precaution in placating consumers by facilitating them in return logging and collection. The following quotations support these findings:

> "From a call centre perspective, again, is obviously giving the customer, understanding where the customer is coming from, giving him the empathy […]." (P10, Head of Sales and Logistics, OEM/multichannel retailer) SOR

> "[RL manager is] one of the most underrated positions and functions currently, I believe in the online industry […]. If I [the consumer] pick up a problem and I phone them [the online retailer] up, email them and they say, hang on, no problem, sir, go to this link, onto this portal, give us a little bit more information and we'll take care of you. And within twenty-four hours, they arrange the collection, the pickup and then they look after you." (P12, Head of logistics, online retailer)

> "We log the ticket, we create the return delivery order within the next day, and on day three, we are at your doorstep, collecting the unit. But before we at your doorstep you saying, Mandy, we are here to collect your product, right? We in the vicinity, can we collect it? Today or tomorrow? […] We're sorry about your bad experience. We will collect your units […] and you should have a refund within the next two days." (P10, Head of Sales and Logistics, OEM/multichannel retailer)

Similarly, the participants indicated that online retailers must *personalise communication after return processing* with individual consumers that complained about the order/delivery. Specifically, online retailers must personally contact individual consumers, informing them of the refund or replacement (e.g. delivery of correct items) and apologise for an unsatisfactory shopping experience. The following quotation substantiate this finding:

> "And then afterwards you contact the customer, […] we've processed your refund. We do apologise for your experience. Please feel free to contact us again and please feel free to visit our website and purchase another product." (P10, Head of Sales and Logistics, OEM/multichannel retailer)

Subsequently, an electronic SOR communication platform might be insufficient for the implementation of personalised SOR communication, indicating that telephonic SOR communication is a requirement for the effective RLM of consumer returns in online retailing. Additionally, as support RL practices for personalised SOR communication, online retailers can implement (as supported by literature) the (1) CI strategies of consumer service and support initiatives and strategic communication, information sharing

and interaction with consumers, (section 6.4.2), (2) RC strategy of human RC (section 6.9.1), and (3) RL manager strategies of creating a full-time RL manager portfolio and assigning a RL expert manager (section 6.9.5).

While no studies from the reviewed literature identified the value of personalised telephonic communication in RL for addressing service failures, Bozzi *et al.* (2022:29) found that online consumers dislike communication with AI bots and prefer more personal communication through WhatsApp. Additionally, Sajjanit and Rompho (2019:789) established evidence that intangible factors, including empathy and assurance, can be important for consumers in the return process. Evidently, online retailers can gain significant value by establishing platforms and resources for personalised SOR communication, which can help them address the service (1) pitfalls of internal preservation (internal culture), inattention to RLM, lack of resources (poor RLM) and poor external integration (information-related), and (2) problems of poor return experience, unmet expectations, dissatisfaction, consumer frustration, anger and uncertainty (consumer problems), poor return communication, service failures, a loss of consumer trust and confidence, reputational damage, and a loss of sales and consumers (online retailer problems).

8.5.2.1.2 Service-orientated return (SOR) processes

SOR processes as a SOR proposition category focus on the implementation of consumer-centric RL processes, addressing various service pitfalls and problems for the effective RLM of consumer returns in online retailing. As illustrated in Figure 8.15, several key practices can be implemented for a SOR processes, including SOR process optimisation, SOR request, SOR collection, SOR inspection and SOR processing, which will be described and analyse in the subsequent paragraphs.

- *SOR process optimisation*

SOR process optimisation as a key SOR process practice involves the establishment of a lenient and efficient RL process as key practice elements. Regarding the establishment of *a lenient SOR process,* the participants suggested that online retailers adopt a consumer-centric stance, implementing consumer-centric RL strategies and policies. Specifically, the participants felt that online retailers must adopt the notion of “the consumer is always right”, which must be captured in their RL strategies. Additionally, online retailers can implement lenient return policies and procedures, for example, providing a longer return period, like 30 days instead of 14 days, and free returns. Consequently, online retailers need to focus on consumers, demonstrate trust towards consumers and provide consumers with the security of returning unwanted products for the effective optimisation of SOR processes. The subsequent quotations support these findings:

> "The starting point is that the customer is always right, but not malicious. And that changes the whole customer's experience of the reverse logistics process." (P1, operations manager, 3PRL provider firm)
>
> "[…] we tend to ensure that our customers are happy. It is the fundamental reasons why we are here, […] and in terms of strategy, it is under the umbrella of focusing on the customer. We try to ensure that the customer always has the advantage over the deal […] So, we try to focus on […] the customer […] from a strategic point of view, our customer is always right." (P9, regional & online DC manager, online retailer)
>
> "[…] there's the [return] policy […] that generally rolls up to customer proposition. […] it's also the service element and the trust element […]. So, you know what? We trust you. No problem, no charge returns […] an easy return, generates trust in a business." (P1, operations manager, 3PRL provider firm)
>
> "[…] but it's worth thinking about the terms and conditions, policy and then customer proposition, […] your proposition could be better […] you could offer returns a lot longer […]." (P1, operations manager, 3PRL provider firm)
>
> "So, as an online retailer, you need to give your customers that peace of mind so that if you are unhappy with the product, we will take it back." (P3, returns manager, online retailer)

Evidently, a lenient SOR process can complement the implementation of initial SOR communication, involving clear communication of return policies, conditions and procedures on the website (see section 8.5.2.1.1).

In terms of *an efficient SOR process*, online retailers can establish a speedy, streamlined and consumer-friendly process with the aim of enhancing consumer experience. The participants suggested that online retailers encourage cross-functional collaboration and train staff to perform RL activities correctly. Moreover, participants advised that online retailers use centralised facilities to allocate more human resources to RL, avoid duplication of RL activities and improve return decision-making for an optimised SOR process. Similarly, the participants indicated that online retailers could invest in IT resources to expedite and streamline RL processes. Alternatively, online retailers can outsource the RL process to 3PRL providers with the appropriate resources and capabilities for the establishment of an optimised SOR process. The following quotations demonstrate some of the practices associated with the establishment of an efficient SOR process as a key practice element of SOR process optimisation:

> "[…] making sure that you have speed, and you expedite and execute [RL processes], making sure that […] you are nimble and swift […] for the logistics part of things. So, integration between departments is critical because the people need to work together. They've got to work hand-in-hand." (P10, Head of Sales and Logistics, OEM/multichannel retailer)
>
> "[Staff training in RL is important for] efficiencies and it should enhance the customer experience, and [help] people [the staff] to know what to do, but it's an efficiency and effectiveness issue [in the return process]." (P6, logistics manager, multichannel retailer)
>
> "I would say the best thing is to have a centralised facility […] from a reverse logistics point of view, having a central unit makes a lot of sense. Specifically, because you've got the ability to employ bigger and better teams that can speed up [return] processes […] you do not want six or seven reclaim centres where the six or seven people that handled electronics all have a different view of what is used. Because that creates uncertainty with the consumer." (P5, general manager, online retailer)
>
> "I believe with it being centralised is that you collect that unit and deliver it directly to your warehouse for sorting and grading. Why I say that again is because the less activities involved, […] the quicker lead-times, et cetera." (P10, Head of Sales and Logistics, OEM/multichannel retailer)
>
> "[…] you should have the resources available to expedite a collection and return. Therefore, I believe that investing in information technology, that's going to expedite and streamline the [return] process." (P10, Head of Sales and Logistics, OEM/multichannel retailer)
>
> "We don't annoy the customer by saying, well, the truck will be there in two weeks' time. We have people out there in the field on a very specific logistics model that we've developed, and our [reverse logistics] turnaround

> time is maybe forty-eight hours at max […]. Our facilities are adopted for the management of reverse logistics." (P7, owner, 3PRL provider firm)

Consequently, an efficient SOR process can complement the key SOR communication practice of implementing of streamlined SOR communication (section 8.5.2.1.1). Online retailers can implement (as supported by literature) various support RL practices for SOR process optimisation, including the (1) *general IT strategy* of appropriate and state-of-the-art IT for RL (section 6.3.1), (2) *cross-functional integration (CFI) strategies* of establishing cross-functional teams, developing functional relationships and collaborating, cooperating and coordinating between functions (section 6.4.3), (3) *CI strategies* of adopting a strategic approach for CI, developing customer service elements and developing and implementing consumer-centric return policies and RL processes (section 6.4.2), (4) *RL outsourcing* strategies of deciding on the types of 3Ps for RL outsourcing, and selecting a 3PRL provider (section 6.5.1), (5) centralised facility/location strategy of using centralised facilities for RL (section 6.8.4), (6) RC (resource commitment) strategies of IT and human RC for RL (section 6.9.1), (7) strategic planning strategy of adopting a strategic approach and perspective for strategic planning in RL (section 6.9.4), and (6) RL staff strategies of implementing RL staff training and education and producing skilled and well-trained staff in RL (section 6.9.5).

The interview findings related to the optimisation of the RL process through leniency and efficiency correlate with the reviewed literature. Specifically, Hjort *et al.* (2019:778) found that online retailers generally accept any returns regardless of their return policies to attract more consumers. Similarly, a study by Heyns and Kilbourn (2022:11), focusing on online shopping in South Africa, found that a lenient return policy was regarded as one of the most important factors for shoppers to migrate from traditional (brick-and-mortar) shopping to online shopping. Consequently, a clear return policy and an easy return process reduces the perceived risk of buying online, providing consumers with the security of returning products without hassle (Bozzi *et al.* 2022:26; Jalil, 2019:3). Likewise, various studies aligned with the interview findings in terms of establishing an efficient SOR process through various practices, including using skilled staff (Ashan & Rahman, 2021:22), internal integration (Ashan & Rahman, 2021:21; Mostert *et al.* 2017:13), strategically located facilities (Misni & Lee, 2017:92), appropriate IT systems (Ahlén & Johansson, 2023:31; Bozzi *et al.* 2022:21, 23; Hjort *et al.* 2019:788; Nel & Badenhorst, 2020:125) and outsourcing to 3PRL providers (Wang, Dang *et al.* 2021:2).

Consequently, this study reaffirms the importance of leniency and efficiency for an optimised SOR process, which can help online retailers address the (1) service pitfalls of functional autonomy, internal preservation (internal culture), poor RL planning, lack of resources (poor RLM), poor systems and poor external integration (information-related pitfall), and (2) service problems of a poor return experience, unmet expectations and dissatisfaction, consumer frustration and uncertainty (consumer problems),

poor return processes, service failures, a loss of consumer confidence and trust, and a loss of sales, market share and consumers (online retailer problems).

- *SOR request*

SOR request as a key SOR process practice complements SOR process optimisation, involving the key practice elements of a hassle-free and streamlined return logging procedure and various return request options. A *hassle-free* and *streamlined return logging procedure* involves affording consumers with the option to easily log a return on the website without the need to rely on a call centre or email correspondence to request a return. Consequently, online retailers can utilise their websites and online systems with a self-service return request functionality for an easy, hassle-free and streamlined return logging procedure, as illustrated in the following quotations:

> "[…] it shouldn't be a hassle for any person to log a return […] because then it will make them skittish to buy from you again. So, I think in any circumstances like that, a very good interface between the company and the customer is of the utmost importance to make it work." (P3, returns manager, online retailer)

> "[…] to have a system that is quick, easy to use, streamlined and gives them that unique, authentic customer experience […]." (P10, Head of Sales and Logistics, OEM/multichannel retailer)

> "So, I think in that case, if you have a system that can allow the customer or the consumer to initiate the request for a return by themselves on their own, it makes for a lot more smoother [sic] process." (P3, returns manager, online retailer)

Nevertheless, some participants indicated the importance of providing consumers with *various return request options* to accommodate consumers that may be less tech-savvy. For instance, allowing consumers to phone a call centre or email customer service for assistance with the return request process, linking with the key SOR communication practice of SOR communication platforms and personalised SOR communication (section 8.5.2.1.1). Subsequently, online retailers must train staff to assist consumers effectively and empathetically with the return request process, as demonstrated by the following quotation:

> "[Staff training in RL is] absolutely important […]. So, it has to be the sensitivity of that [customer service] department […] where a customer calls in to state that I have an item, [and] she doesn't know how to log in and she doesn't know how to create a return from her account. So, we've got to establish that sensitivity and that urgency to assist, to help [with] return [logging] […]." (P9, regional & online DC manager, online retailer)

Evidently, as support RL practices for a SOR request, online retailers can implement (as supported by literature) the (1) Internet and web-based IT strategies of developing online return capabilities and using the Internet and website for RL (section 6.3.2), (2) CI strategies of implementing consumer-centric RL processes, consumer service and support initiatives and strategic communication and interaction with consumers (section 6.4.2), and (3) RL staff strategies of implementing RL staff training and education and producing skilled and well-trained staff in RL (section 6.9.5). A few studies from the reviewed literature correspond with the interview findings on a SOR request. Specifically, automating the return request procedure (Hjort *et al.* 2019:788), offering consumers flexible return option channels (De Borba *et al.* 2021:137) and minimising consumer effort (Ashan & Rahman, 2021:20) can be

important for a SOR request. Additionally, Ashan and Rahman (2021:22) identified that using skilled staff for the return request and gatekeeping processes can mitigate service failures in the delivery process and lead to service differentiation.

Essentially, SOR request as a key SOR process practice can help online retailers address the (1) service pitfalls of internal preservation (internal culture), poor systems and poor external integration (information-related), and (2) service problems of poor return experience, consumer frustration and uncertainty (consumer problems), poor return communication, poor return processes, service failures, a loss of consumer trust and confidence, and a loss of sales, market share and consumers (online retailer problems).

- *SOR collection*

SOR collection as a key SOR process practice involves simultaneous return pick-up and replacement delivery, streamlined SOR collection and various return drop-off points (key practice elements) for the implementation of a speedy, efficient and convenient return collection process.

Regarding *simultaneous return pick-up and replacement delivery,* the participants indicated that as the consumer request a return and selects a replacement the return pickup and replacement delivery must be synchronised. Subsequently, online retailers can simultaneously perform return collection and return processing (i.e. issuing a replacement product), enhancing the consumer's return experience and RL process speed. Furthermore, the participants indicated that online retailers could implement simultaneous return pick-up and replacement delivery through CFI (cross-functional integration), involving coordination between the RL department tasked with return collection and the FL department tasked with replacement delivery. These findings can be supported by the following quotations:

> "I'd like to return this and exchange it for a different size. The two processes happen at the same time, trigger the return and trigger the outbound order for the replacement item. So, the courier going to fetch the returned item is also dropping off the replacement […] [that] truncates that wait period […]." (P1, operations manager, 3PRL provider firm)

> "[…] cross-functional [integration] is imperative in providing the customer with a pleasant customer experience. If the guy gets the wrong thing and he wants it replaced […] they [online retailers] come up with two different deliveries […] so, I thought to myself, if we [as the 3PRL provider] could convince them [the online retailer] that when you [the consumer] do a request for return and you [want to] replace […] you hook the two together. Those are the kind of cross-functional examples that I can think of." (P7, owner, 3PRL provider firm)

Additionally, some participants indicated that online retailers could *streamline SOR collection* using 3PRL providers, which enhances the speed and efficiency of return collection. Moreover, online retailers can *use various return drop-off points*, providing consumers with a convenient return drop-off collection option at locations of their choice. Online retailers can adopt a decentralisation location strategy and use 3PL provider drop-off locations or other bricks-and-mortar retail stores (e.g. convenience stores) as drop-off points. The following quotations support these findings:

> "[RL outsourcing is important because] how do you attribute saving costs where your customers are getting that kind of service? That you [as the consumer] buy it [a clothing item] today, it doesn't fit. I [as the 3PRL provider] pick it up tomorrow and that is done very quickly, very efficiently. And you have a very happy customer who buys again." (P7, owner, 3PRL provider firm)
>
> "I think what would be awesome for a return process is to have lots of different points of contact with consumers where they can easily drop something off unpackaged […]." (P4, owner/CEO, 3PRL provider firm)
>
> "[…] from an efficiency point of view […] if you can have a lot of drop off points for your consumers to return products, all the better […] they would be able to go to a Caltex garage and there's a drop point there. So, definitely decentralised […]." (P4, owner/CEO, 3PRL provider firm)
>
> "[…] having multiple hundreds of drop off points for returning items, like [the 3PL providers] Pargo, [and] DSV has got their own." (P12, Head of logistics, online retailer)

Subsequently, as support RL practices for SOR collection, online retailers can implement (as supported by literature) the (1) SCI strategies of SC agreements and arrangements and sharing of infrastructure and facilities (section 6.4.1), (2) CFI strategies of establishing cross-functional teams, developing functional relationships and collaborating, cooperating, coordinating and information sharing between functions (section 6.4.3), (3) RL outsourcing strategies of deciding on the type of RL service and third party for RL outsourcing (section 6.5.1), and (4) decentralised facility/location strategies of using retail locations and multiple/flexible locations for RL (section 6.8.4).

The interview findings related to SOR collection matches the findings of few studies from the reviewed literature. Specifically, Bozzi *et al.* (2022:19) identified that online retailers with a highly integrated system can perform simultaneous return pickup and delivery of an exchange. Similarly, Pal (2017:885) found that internal integration between functions can enhance consumer convenience through effective collection. Additionally, De Borba *et al.* (2021:131) discovered that multiple collection points increase convenience in the collection process. Likewise, Nel and Badenhorst (2020:123) suggested that online retailers use 3PL providers or couriers to collect products either at consumer or drop-off locations, enhancing efficiency in the collection process. Essentially, SOR collection can help online retailers mitigate the service (1) pitfalls of functional autonomy (internal culture), poor RL planning (poor RLM) and poor external integration (information-related), and (2) problems of a poor return experience, unmet expectations, consumer dissatisfaction and frustration (consumer problems), poor return processes, service failures and a loss of sales and consumers (online retailer problems).

- *SOR inspection and processing*

SOR inspection and processing as a key SOR process practice involves pre-return inspection at consumer locations, instant replacement dispatch and fast/instant refunds as key practice elements. Specifically, the participants indicated that online retailers could appoint dedicated inspection staff to *inspect* product returns at *consumer locations* to (1) assist consumers who logged "false failure" returns with the correct use of non-defective products or (2) identify faults in defective products or incompatibility problems in non-defective products and immediately order replacements. Therefore,

pre-return inspection not only enhances consumer service and but also increases return processing speed. The following quotation supports this finding:

> "If you were able to put a dedicated returns team, […] our first line evaluators, […] that can go to the customer and say, you know what, before I take this laptop from you, can we quickly do one, two, three and four, maybe solve them right there […]. Or you know what? I can see that you've got the incorrect phone. It's not compatible with this device. No problems, no questions asked. I'll update the return right here now and do a resell. So, they can sell them the correct device […] just to give them a better service […]." (P5, general manager, online retailer)

Alternatively, in absence of pre-return inspection at consumer locations, online retailers can perform *instant replacement dispatch* before returns arrive at the facility. Online retailers that instantly dispatch a replacement before return receipt demonstrates trust to consumers, complementing SOR process optimisation (i.e. establishing a lenient SOR process) that involves the notion of consumers are always right. The following quotation expands on this finding:

> "[…] a lot of the returns there's a replacement attached to it as well. For example, a customer orders an item which is blue, and they receive an item that is red. Now, you want the reverse logistics to kick in, but […] it has to be efficient enough where it comes back to us and the correct item gets shipped out, in time, to the customer […]. So, what I do, I fulfil the correct item first […] and we ship it on an overnight delivery at our cost and then we wait for that [return] to come. So, this is where we announce trust to the customer […]. We know the customer has been satisfied." (P9, regional & online DC manager, online retailer)

Similarly, issuing *fast/instant refunds* means that online retailers process refunds speedily before product returns arrive at their facilities, which can be beneficial for consumers and online retailers. Specifically, the participants indicated that fast/instant refunds can be beneficial for consumers who are uncertain about giving their parcels to the courier, not knowing if the product return will arrive at the online retailer's facility to receive a refund. Additionally, fast/instant refunds can be beneficial for online retailers that issue instant refunds as soon as consumers logged returns on the website, keeping consumers on the shopping site and encouraging them to purchase another product. Evidently, fast/instant refunds as a SOR inspection and processing element complements the SOR request element of a hassle-free and streamlined self-service return request on the website. The following quotations illustrate the value of issuing fast/instant refunds:

> "I think in terms of online retailing, the refund process needs to be quite slick and quite fast." (P8, logistics manager, multichannel retailer)

> "[…] as a consumer don't want to hand it [the returned product] over without knowing that when you've signed it over to the collecting courier that you will be refunded […] because the consumer can't take responsibility for what happens to the product in transit." (P2, owner, supply chain consultancy firm)

> "[…] the instant refund […] to keep you shopping on the site […] So, instead of looking at it as the returns are a fact of life, how do we make this work to our advantage instead of trying to protect ourselves from them?" (P1, operations manager, 3PRL provider firm)

As support RL practices for SOR inspection and processing, online retailers can implement (as supported by literature) the (1) CI strategies of implementing consumer-centric RL processes and consumer service and support initiatives, using CI for RL and interacting with consumers (section 6.4.2), (2) RC strategy of human RC in RL (section 6.9.1) and (3) RL staff strategies of establishing a RL function and producing skilled staff (section 6.9.5). While limited studies from the reviewed literature focused on SOR inspection and processing, Hjort *et al.* (2019:775) observed that online

retailers can use pre-return inspection at consumer locations to ensure that the product condition matches the return claim. Additionally, Euchi *et al.* (2019:44) found that some online retailers send replacements before return receipt, especially, for delayed return pickups.

Nevertheless, no studies from the reviewed literature found that instant refunds can reduce consumer uncertainty and salvage sales on the shopping site. Evidently, this study provides new insights into the value of instant/fast refunds for both consumers and online retailers. Consequently, SOR inspection and processing can help online retailers address the service (1) pitfalls of internal preservation (internal culture), a lack of resources (poor RLM) and poor external integration (information-related), and (2) problems of a poor return experience, unmet expectations, dissatisfaction, consumer frustration and uncertainty (consumer problems), poor return process, service failures and a loss of consumer trust and sales (online retailer problems).

In conclusion, implementing SOR propositions, including SOR communication and SOR processes, can help online retailers to improve consumer service in RL as well as address various service pitfalls and problems. Therefore, online retailers must implement SOR propositions for the effective RLM of consumer returns. In the next section, return service performance (RSP) propositions will be discussed and analysed.

8.5.2.2 Return service performance (RSP) propositions

RSP as a main service proposition focuses on evaluating, improving and managing service performance in RL to address several service pitfalls and practices. RSP propositions involve the proposition categories of *RSP evaluation*, *RSP improvement* and *RSP management*, which will be analysed and discussed in subsequent sections.

8.5.2.2.1 Return service performance (RSP) evaluation

RSP evaluation as a RSP proposition category involves the evaluation of service performance in RL to address service pitfalls and problems for the effective RLM of consumer returns in online retailing. As illustrated in **Figure 8.15**, RSP evaluation involves the key practices of (1) RSP evaluation preparation, (2) RSP evaluation metrics and tools, and (3) RSP evaluation data sources, which will be described and analyse in the succeeding paragraphs.

- *RSP evaluation preparation*

Before effective RSP evaluation can be conducted, online retailers must adequately prepare for RSP evaluation, which can simplify the evaluation of service performance in RL. Participants indicated that

RSP evaluation preparation can include standardisation of RL processes and guidelines, staff training and internal and external systems integration (key practice elements).

Specifically, participants indicated that *standardising RL processes* and *guidelines* can help online retailers to prepare for accurate PM of all employees/departments involved in the RL process. Similarly, *training staff* involved in RL enhances consistency in the execution of RL processes, which simplifies RSP evaluation. Moreover, the participants emphasised that *internal* and *external* systems integration can be valuable for accurate and effective RSP evaluation. For internal system integration, the participants suggested the establishment a centralised PM database, providing all departments involved in RL access to metrics and benchmarks in RL for effective cross-functional RSP evaluation. Similarly, online retailers can establish external integration through integrated IT systems for effective RSP evaluation of SC partners. These findings can be supported by the subsequent quotations:

> "And we have to have all employees follow the same guidelines, it's standardised […] it is part of the customer service offering and […] it also affects our KPIs our measures, because if you don't have a standardised formula of the process, you will never be able to measure it." (P9, regional & online DC manager, online retailer)
>
> "[Staff training in RL is important] because it ensures consistency of approach and clear measurement of processes." (P8, logistics manager, multichannel retailer)
>
> "[…] the worst thing that can happen is that different departments get measured on different things and they are reporting on different aspects, which may not be customer centric. So, I think the most important thing is that the [RL] metrics and benchmarks in an organisation need to be centralised and the data visibility must be available to all those parties easily." (P8, logistics manager, multichannel retailer)
>
> "[…] you've got internal/external kind of system integrations, […] so you can measure how long it's taking, are they [the service providers] meeting service level requirements?" (P13, supply chain manager, multichannel retailer)

As support RL practices for RSP evaluation preparation, online retailers can implement (as supported by literature) the (1) SCI strategy of integrating and sharing of IT (section 6.4.1), (2) CFI strategies of coordination and information sharing between functions and implementing CFI for RL (section 6.4.3), (3) PM strategies of benchmarking, establishing teams for PM in RL and establishing standardised PM (section 6.7.1), (4) strategic procedure strategies of developing standard operating procedures (SOPs) and manuals, standardising RL processes and publishing RL standards (section 6.9.4), and (5) RL staff strategy of implementing RL training and education (section 6.9.5). Although unrelated to the preparation of RSP evaluation, a few studies from the reviewed literature identified that (1) staff training ensures staff compliance and consistency in the RL process (Bozzi *et al.* 2022:21), (2) a performance metric system facilitates effective measurement of RLM performance (Lamba *et al.* 2020:384), (3) a centralised information system facilitates capturing and sharing of return information across departments (Mostert *et al.* 2017:8), and (4) internal integration enables cross-functional performance measurement (Karlsson *et al*. 2023:9).

However, no study from the reviewed literature indicated that integrated IT systems with SC partners can help online retailers measuring SC partner performance. Evidently, this study adds to the literature

by highlighting additional reasons for SCI to manage consumer returns effectively. Essentially, RSP evaluation preparation can help online retailers address the service (1) pitfalls of functional autonomy (internal culture), poor RL planning (poor RLM), poor visibility, poor systems and poor external integration (information-related), and (2) problems of a poor return experience, unmet expectations, dissatisfaction, consumer frustration and uncertainty (consumer problems), poor return processes, service failures and a loss of consumer confidence and trust (online retailer problems).

- *RSP evaluation metrics and tools*

Following RSP evaluation preparation, RSP evaluation metrics and tools can be identified and used for effective RSP evaluation. As key practice elements, participants suggested that online retailers could identify and use (1) operational metrics and related tools, (2) SC metrics and related tools and (3) consumer service metrics and related tools for effective RSP evaluation.

Regarding *operational metrics* and *tools*, online retailers can identify *return cycle time* and *turnaround time* as appropriate *operational metrics* and use *timestamping* as a related *tool* for effective RSP evaluation. Using timestamping and return cycle time as an operational metric can help online retailers measure the total time of completing the entire return process from the return request to the time of resolving the request (e.g. finalising the refund). Likewise, turnaround time as a metric can be measured by timestamping the completion of each RL process, including the time of the return request and authorisation (or gatekeeping), time of collection and transportation, time of receiving at the facility, time of inspection in the facility and time of processing a refund.

Concerning *SC metrics* and *tools*, participants indicated that online retailers could identify *service performance of service providers* as an appropriate SC *metric*, and *timestamping* as a related *tool* for RSP evaluation. For example, online retailers can use timestamping to measure the time between receiving the collection instruction and physical collection at the consumer location, and the time between physical collection and delivery at the facility. Evidently, the use of operational and SC metrics and tools emphasise the importance internal and external integration as part of RSP evaluation preparation. The following quotations illustrate the use of operational metrics, SC metrics and timestamping as a tool for RSP evaluation:

> "So obviously if you look at forward logistics, you have order cycle time, right from the time the sales orders created all the way to delivery. I just believe that you need to do a reversal and you call it reverse order cycle time […]. We should have a reverse order cycle time because that measures from the time the customer picks up the phone and logs his collection requests to the time he receives his refund." (P10, Head of Sales and Logistics, OEM/multichannel retailer)

> "[…] from a customer service point of view, your turnaround time is probably the most important metric. The time spent from the time that the call was logged, so they've got different timestamps where they measure […] the call was logged on the first, then we've got a set target of collection. So, we'll collect within 48 hours of receiving your call. There's a measurement for that […]. Did your couriers receive instruction, and did they collect a parcel within the 48 hours that we've agreed with our consumer? Second, once they've delivered it to the distribution

> centre for evaluation, how long did it actually take for it to be received? […] So, the second one is the time it takes from when the driver delivered it to the DC to when you actually updated it as returned on the system. Third measure is once it's been updated, how long did it take to evaluate? And from evaluation, how long did it take to close the call? So, it's all about timestamps trying to understand the turnaround time from when the customer logged the call to when they got the resolve." (P5, general manager, online retailer)

> "[…] how long does it take for that process to be completed? How long does it take for you to refund the customer? […] you have to measure that stuff because it's a touchpoint with the customer in terms of a service that you're delivering. And whether the service providers are achieving the service levels […]." (P13, supply chain manager, multichannel retailer)

> "[…] you've got internal/external kind of system integrations, […] And then those key events are then, like we call it, timestamping […] to understand the time when each [return] event took place […] so you can measure how long it's taking, are they [the service providers] meeting service level requirements?" (P13, supply chain manager, multichannel retailer)

While operational and SC metrics mostly focus on the speed and efficiency of RL processes, *consumer service metrics* and *tools* focus on consumer perceptions and experiences in the RL process. Subsequently, the participants indicated that online retailers could identify *consumer experience* and *consumer satisfaction* as appropriate consumer service *metrics* for RSP evaluation. For example, measuring consumer return experience against consumer shopping experience and measuring the number of consumers complaints in RL. Furthermore, the participants suggested that online retailers could use *experience measuring toolkits* as *tools* for measuring consumer experience, which may involve digital analytic platforms. Additionally, online retailers can use *surveys* and *managers* as *tools* for measuring consumer satisfaction. While a survey can be used as a quantitative satisfaction measurement tool, involving questions on a measurement scale (e.g. highly satisfied, satisfied, unsatisfied and highly unsatisfied), managers can be used as a qualitative tool to effectively evaluate consumer complaints. The following quotations show consumer service metrics and related tools for RSP evaluation:

> "Is your reverse logistic experience for the customer just as good as your outbound?" (P13, supply chain manager, multichannel retailer)."

> "So, Retailer K used to measure their customer service performance, and the way they measured it was they had fewer reverse logistics complaints […]." (P4, owner/CEO, 3PRL provider firm)

> "I think you want to look at sort of your customer experience. So, you […] could look at the usual sort of experience measuring toolkits […]." (P1, operations manager, 3PRL provider firm)

> "If you look at it […] a survey […] you pick up the feeling of your customers […]." (P9, regional & online DC manager, online retailer)

> "[…] the responsible party [to review complaints] has to be the manager […] a majority of our complaints were due to […] reverse logistics and returns right now." (P9, regional & online DC manager, online retailer)

Subsequently, as supporting RL practices for RSP evaluation metrics and tools, online retailers can implement (as supported by literature) the (1) general IT strategy of using integrative and compatible IT systems (section 6.3.1), (2) CI strategy of attaining consumer input (section 6.4.2), (3) PM strategies of establishing appropriate KPIs and metrics, performance monitoring and review, creating feedback mechanisms and evaluating performance results (section 6.7.1), and (4) RL manager strategy of assigning experienced managers to RL (section 6.9.5).

While few studies focus on metrics and tools for RSP evaluation, Sajjanit and Rompho (2019:772) performed an in-depth investigation into the development of metrics for measuring consumer-oriented product return service. Resultingly, Sajjanit and Rompho (2019:772) identified an extensive list of measures that can be used for measuring return service performance, including non-tangible measures like empathy, convenience and communication, which extend the findings of this study. However, aligning with the interview findings, Karlsson *et al.* (2023:10) mentioned that consumer centric KPIs must focus on speed and timeframes for the processing of returns. Additionally, Jalil (2019:2) suggested consumer satisfaction as a metric for the measurement of RL performance. Furthermore, Hjort *et al.* (2019:778) found that online retailers can use a net promoter score tool to measure consumer experience. Finally, De Araújo *et al*. (2018:354) emphasised that effective performance evaluation requires skilled managers.

Consequently, this study uniquely identified SC metrics and timestamping as tools for effective RSP evaluation. Furthermore, this study shows that RSP evaluation metrics and tools can help online retailers address the service (1) pitfalls of inattention to RLM (poor RLM) and poor external integration (information-related), and (2) problems of a poor return experience, unmet expectations, dissatisfaction, consumer frustration, anger and uncertainty (consumer problems), poor return processes, service failures, a loss of consumer confidence and trust, reputational damage and a loss of market share and consumers (online retailer problems).

- *RSP evaluation data sources*

Complementing RSP evaluation metrics and tools, online retailers can use RSP evaluation data sources for effective RSP evaluation. As key practice elements online retailers can use (1) consumer feedback and complaints data, (2) consumer return data and (3) mystery shopper data as sources for effective RSP evaluation.

Consumer feedback and *complaints data* for RSP evaluation can involve feedback platforms and software and consumer care log sheets. Specifically, the participants indicated that online retailers could use social media as a feedback platform to obtain data for RSP evaluation. Moreover, online retailers can allocate consumer feedback software as an IT resource for consumer feedback as a data source for RSP evaluation. Additionally, consumer care log sheets can be used to obtain consumer complaint data for RSP evaluation. The following quotations illustrate consumer feedback and complaints as data sources for RSP evaluation:

> "If you look at all the other social media platforms, like, Hello Peter, and all of that […], you pick up the feeling of your customers […]." (P9, regional & online DC manager, online retailer)

> "It's probably more from a software consumer feedback perspective. […] We should have as many resources as possible […] [for] consumer relations stuff […]." (P6, logistics manager, multichannel retailer)

> "So, if you keep on getting client complaints about your courier has not collected, […] that needs to raise red flags so that data comes from your customer care log sheets […]." (P12, Head of logistics, online retailer)

For *consumer return data,* participants indicated that online retailers could use third parties, like 3PRL providers, with appropriate consumer return data capabilities to evaluate consumer return experiences and consumer confidence in the return process. Subsequently, using third parties for consumer return data can complement the use of consumer experience and satisfaction as RSP evaluation metrics for evaluating consumer experience and satisfaction. The following quotation identifies the value of using third parties to obtain consumer return data for RSP evaluation:

> "[…] the benefit [of RL outsourcing] lies in all the [return] data and the benefit can be reviewed as a customer experience benefit […]. Does that mean that the customer has got confidence in us handling the return or the product? […] What is the whole experience like? […] knowing that if the customer is going to have a problem, the customer feels it's fine because they deal with any of their returns […]. So, I feel strongly that the benefit in having a company that specialises in reverse logistics is that they [the 3PRL provider] will get much more data that is relevant for your customer experience." (P12, Head of logistics, online retailer)

Finally, *obtaining* and *using mystery shoppers* as a RSP evaluation data source can help online retailers to determine consumer return experience and RL service performance. Consequently, online retailers may appoint mystery shoppers to purchase and return products and record their return experiences and the RL service performance of the online retailer. Evidently, the mystery shopper can provide valuable information to online retailers about user return experience, complementing experience measuring toolkits as a consumer service measure tool for effective RSP evaluation. This finding can be demonstrated by the following quotation:

> "I don't think they [online retailers] spend time on the UX, on the customer [return] experience and the user experience […]. Through the marketing, people are doing things, but they haven't tried and tested it themselves. I think with mystery shoppers in businesses that's going around assessing the actual in-store experience. You need mystery shoppers in an online environment […]." (P2, owner, supply chain consultancy firm)

As supporting RL practices for RSP evaluation data sources, online retailers can implement (as supported by literature) the (1) CI strategy of attaining consumer input and participation (section 6.4.2), (2) RL outsourcing strategy of selecting appropriate 3PRL providers (section 6.5.1), (3) PM strategy of creating PM feedback mechanisms (section 6.7.1), and (4) RC strategies of IT and human RC in RL (section 6.9.1). The interview findings related to obtaining consumer feedback as a data source for RSP evaluation align with the findings of Bozzi *et al.* (2022:15, 16, 21), who identified that online retailers must focus on obtaining feedback from consumers through customer service calls and IT to analyse consumer complaint data. However, no studies identified the use of mystery shoppers as a data source for the evaluation of service performance in RL. Subsequently, this study provides additional initiatives that online retailers can consider for RSP evaluation.

Essentially, RSP evaluation data sources can help online retailers mitigate the service (1) pitfalls of poor RL planning, a lack of resources (poor RLM) and poor external integration (information-related), and (2) service problems of poor return experience, unmet expectations and dissatisfaction, consumer frustration and anger, consumer uncertainty (consumer problem), poor return processes, service

failures, loss of consumer confidence and trust, reputational damage, and a loss of sales, market share and consumers (online retailer problems). In the next section, RSP improvement practices will be analysed and discussed.

8.5.2.2.2 Return service performance (RSP) improvement

RSP improvement as a RSP proposition category involves the identification of service problem areas, development of service improvement plans and implementation of RSP improvement initiatives for the effective RLM of consumer returns. As illustrated in **Figure 8.15**, RSP improvement involves the key practices of RSP improvement preparation and RSP improvement execution, which will be described in the subsequent paragraphs.

- *RSP improvement preparation*

Before online retailers can improve their service performance in RL, they must adequately prepare for effective RSP execution. For RSP improvement preparation, participants indicated that online retailers must (1) understand consumer needs and behaviour, (2) identify and share service problems and (3) brainstorm improvement plans.

In terms of *understanding consumer needs* and *behaviour*, the participants suggested that online retailers start with RSP evaluation to identify consumer requirements (section 8.5.2.2.1). Additionally, the participants indicated that online retailers could create platforms to integrate and engage with consumers for consumer input on their needs, expectations, experiences and requirements. For example, emailing consumers after resolving their return requests, asking them open-ended questions about their return experiences and expectations and asking for any suggestions on improving RSP. However, the participants mentioned that online retailers must engage in active listening for improved understanding of consumer needs. Moreover, the participants suggested that online retailers train staff to understand consumer return experiences and behaviour and use appropriate IT systems with the capabilities to understand consumers and consumer behaviour. The following quotations support these findings:

> "[Performance measurement] is imperative because it has a direct effect on the customer. And [without it] you don't know what's going on with your customer […]." (P7, owner, 3PRL provider firm)

> "I always would like to hear the voice of the customer […] to know what makes that customer happy. What does he believe in? What does he want? What does he prefer? What is his perception and what makes him tick?" (P10, Head of Sales and Logistics, OEM/multichannel retailer)

> "[External integration is important in RL for] […] listening to your external customer, which is your consumer, then you understand their wants and needs better, which […] harbours a lot of trust between retailer and consumer." (P4, owner/CEO, 3PRL provider firm)

> "[…] that type of engagement is critical. […] to understand how that customer feels about that [RL] journey and knowing how he felt with regards to that experience." (P10, Head of Sales and Logistics, OEM/multichannel retailer)

> "[…] from the customer's perspective, they were returning something, so [understanding] why they have done it and understanding their [return] experience […]. So, that does require a level of training." (P1, operations manager, 3PRL provider firm)

> "[…] educate the staff […]. Train them on consumer behaviour […]." (P5, general manager, online retailer)

> "[IT in RL is] absolutely [important]. I think, besides understanding the customer more and consumer behaviour, I think it helps you understand product behaviour too." (P4, owner/CEO, 3PRL provider firm)

Pertaining to *identifying* and *sharing service problems*, the participants indicated that online retailers could identify service problems from consumer complaints based on RSP evaluations, for example, using a manager as an evaluation tool and consumer complaints as data sources (see section 8.5.2.2.1). Additionally, the participants suggested that online retailers use appropriate IT systems to share service problems internally. For instance, using CRM software to log service failures in the return process, which can be visible to all functional departments involved in the RL process. Therefore, sharing service problems across functional departments can highlight inefficiencies and problems in specific functions, which can facilitate the development of improvement plans. These findings can be substantiated by the subsequent quotations:

> "[…] the responsible party has to be the manager […] the customer always complained […] 90 percent related to returns. So, it just becomes so important for us because this is where we improve our business. […] we pull from that complaint's to iron out the creases in the [return] processes and to improve […] our offering to the customer." (P9, regional & online DC manager, online retailer)

> "So, if you keep on getting client complaints about your courier has not collected […] that needs to raise red flags so that data comes both from your customer care log sheets and from your customer calling. […] if you're getting four and a half thousand calls a day of which 40 percent relates to […] the time of collection […] that needs to raise some red flags." (P12, Head of logistics, online retailer)

> "So, if there's been a delivery failure or a collection failure that should also appear in your CRM. […] often your customer service [staff] in a warehouse are not the same people that are refunding customers. So, making sure that information is visible […] and [for] feedback […] this is what the customer said […] this is what the customer experienced […]." (P1, operations manager, 3PRL provider firm)

Finally, understanding consumer needs and behaviours and identifying and sharing service problems can help online retailers *brainstorm improvement plans.* The participants claimed that successful improvement plans in RL require collaborative brainstorming. Collaborative brainstorming sessions enable members from various functional departments involved in RL to provide input and share ideas on improving RSP, which can be used for the development of cross-functional improvement plans. Additionally, by documenting the outcomes of the collaborative brainstorming session, online retailers can standardise RL processes and guidelines, which can be important for streamlined SOR communication (section 8.5.2.1.1) and RSP evaluation preparation (section 8.5.2.2.1). The following quotations convey the key practice element of brainstorming improvement plans:

> "[…] we have different departments, you have the service division, and you have the logistics division. And you have the reverse logistics division that falls under service. Everyone was not singing from the same hymn sheet, and there was no [cross-functional] alignment. OK, we would believe that it should be done this way. They believe it should be done the other way. Therefore, when the customer calls, the call centre realise, wow, OK, we're looking terrible here. Guys let's have a caucus. Let's have a workshop that's a brainstorming session. Let us document the processes. So, when that customer contacts the call centre, the call centre agent knows exactly what he needs to say to the customer from the get-go. […] it is critical that you have your returns process drafted, approved and defined." (P10, Head of Sales and Logistics, OEM/multichannel retailer)

Online retailers can implement (as supported by literature) various RL support for RSP improvement preparation, including the (1) *general IT strategy* of implementing and using appropriate state-of-the-art and capable IT for RL (section 6.3.1), (2) *TLIT* (traditional logistics IT) *strategy* of using CRM for RL (section 6.3.3), (3) *CI strategies* of communicating and interacting with consumers, attaining consumer input and implementing CI for RL (section 6.4.2), (4) *CFI strategies* of implementing CFI for RL, establishing cross-functional teams and functional collaboration, cooperation, coordination, communication and knowledge and information sharing (section 6.4.3), (5) *PM strategies* of implementing PM in RL, creating feedback mechanisms and using performance data (section 6.7.1), (6) strategic procedure strategies of articulating and defining RL processes and practices, defining roles and responsibilities in RL, standardising RL processes and implementing strategic procedures in RL (section 6.9.4), (7) RL manager strategy of assigning experienced managers to RL, and (8) RL staff strategies of training and education programmes and producing skilled and well-trained staff in RL (section 6.9.5).

Various studies from the reviewed literature identified similar initiatives that can be used by online retailers as foundations for service improvements, including (1) understanding and studying consumer behaviour (Ashan & Rahman, 2021:20; De Borba *et al.* 2021:137), (2) using performance measures and managers (Sajjanit & Rompho, 2019:790), (3) obtaining consumer feedback (Bozzi *et al.* 2022:16; Lamba, *et al.* 2020:388), (4) using customer service interactions, social media platforms and active listening (Bozzi *et al.* 2022:15-16), (5) using appropriate IT (Ahlén & Johansson, 2023:31; Bozzi *et al.* 2022:15) and centralised information systems (Mostert *et al.* 2017:8), (6) using cross-functional coordination (Ashan & Rahman, 2021:21; Karlsson *et al.* 2023:8; Mostert *et al.* 2017:1), meetings and information sharing (Mostert *et al.* 2017:13), and (7) creating a problem-solving internal culture (Ermes & Niemann, 2023:9). Nevertheless, this study uniquely identifies that online retailers can train staff on consumer return behaviour as a RSP improvement initiative.

Clearly, RSP improvement preparation can be important for the effective management of consumer returns, enabling online retailers to address the service (1) pitfalls of functional autonomy (internal culture), inattention to RLM, poor planning in RL (poor RLM), poor systems and poor external integration (information-related), and (2) problems of a poor return experience, unmet expectations and dissatisfaction, consumer frustration and anger, consumer uncertainty (consumer problems), poor return communication, poor return processes, service failures, a loss of consumer confidence and trust, reputational damage, and a loss of sales, market share and consumers (online retailer problems).

- *RSP improvement execution*

Based on the findings and initiatives from RSP improvement preparation, online retailers can perform RSP improvements. Since RSP improvements can be different for each online retailer, the key practice elements provide suggestions for RSP improvement execution areas. Specifically, online retailers can execute RSP improvements by (1) addressing consumer complaints, (2) enhancing consumer experience, (3) improving consumer service, and (4) improving return processes.

In terms of executing RSP improvements by *addressing consumer complaints*, one participant provided the example of an online retailer who established a separate returns facility using consumer complaints data. Studying the consumer complaints the online retailer noted that consumers located further from the main warehouses complained about slow return lead times. Subsequently, the online retailer adjusted their facility/location strategy in RL from a centralisation strategy using combined facilities to a more decentralised location strategy using a separate returns facility to improve RSP. Similarly, another participant indicated that consumers complained about slow return processing, resulting in the online retailer deciding to outsource RL to a 3PRL provider. By using a 3PRL provider, the online retailer could reduce credit processing from a month to three days, which drastically improved return lead time. The following quotations demonstrate these examples:

> "[…] so, we are only started out with two DCs, the one in Joburg and the one in Cape Town. […] they then made the decision to have a return facility in KZN […]. And so, the guys [consumers] in KZN complained about their returns being taking too long to process […]. So, they made that decision to actually help with the turnaround time […] to kind of mitigate the […] customer complaints of the [returns] turnaround time from KZN […]." (P3, returns manager, online retailer)

> "[…] they [online retailers] had fewer reverse logistics complaints […] we've [the 3PRL provider] taken their credit timings from sort of a month or more to a couple of days. So, where they would wait a month to credit a customer, now they can do it in three days." (P4, owner/CEO, 3PRL provider firm)

Regarding *practices to enhance consumer experience*, participants indicated that online retailers could use third parties, train staff and offer greater visibility in the return process. Specifically, participants indicated that outsourcing RL to appropriate third parties can help enhance consumer return experiences. Additionally, staff training in RL ensures that staff execute the return process correctly, which enhances consumer experience. Similarly, the participants suggested that online retailers could enhance consumer experience through greater return visibility, which involves return status tracking and updates. Therefore, establishing streamlined SOR communication (section 8.5.2.1.1) can form part of RSP improvement execution. The following quotations illustrate executing RSP improvement by implementing practices to improve consumer experience:

> "I believe outsourcing is an amazing opportunity to ensure that the customer gets the best experience possible […]." (P6, logistics manager, multichannel retailer)

> "[…] it should enhance the customer experience and people know what to do […] why do you train anybody? […] you want them to do the right thing […]." (P6, logistics manager, multichannel retailer)

> "The more visibility you give to the customer, the better experience that the customer will have […] So, the customer wants to see, have they logged my call? It's approved or not approved, and when are they going to come and collect. It just makes that whole experience much better." (P12, Head of logistics, online retailer)

For *practices to improve consumer service*, online retailers can consider internal resources and insourcing, outsourcing to 3PRL providers, return leniency and pre-return inspection at consumer locations. Specifically, several participants suggested that online retailers use internal resources and insource RL for the execution of RSP improvements, relating to the poor RL planning practice of poor outsourcing decisions (section 8.4.1.2.2). Evidently, online retailers that previously outsourced RL to incapable service providers that resulted in service failures, can insource RL to improve RSP. Contrastingly, other participants suggested that online retailers can improve consumer service by using 3PRL providers that specialises in RL. Additionally, the participants suggested that online retailers enhance return leniency through the implementation of lenient return policies for improved consumer service, which complements SOR process optimisation (see section 8.5.2.1.2). Similarly, online retailers can improve consumer service through pre-return inspections at consumer locations, involving SOR inspection and processing. The following quotations support these findings:

> "I would rather have control of it [reverse logistics] here in our fulfilment centre, within our company, within our own resources. So, that's effectively giving our customers a better service." (P9, regional & online DC manager, online retailer)

> "[RL outsourcing is important because] how do you attribute saving costs where your customers are getting that kind of service? That you [as the consumer] buy it [a clothing item] today, it doesn't fit. I [the 3PRL provider] pick it up tomorrow and that kind of thing is done very quickly, very efficiently. And you have a very happy customer who buys again." (P7, owner, 3PRL provider firm)

> "[…] but it's worth thinking about the terms and conditions, policy and then customer proposition, […] your proposition could be better […] you could offer returns a lot longer […]." (P1, operations manager, 3PRL provider firm)

> "If you were able to put a dedicated returns team […] that can go to the customer and say, you know what, before I take this laptop from you, can we quickly do one, two, three and four, maybe solve them right there […] just to give them a better service […]." (P5, general manager, online retailer)

Finally, the participants suggested strategic planning, internal integration and IT resources as initiatives to *improve return processes* for effective RSP improvement execution. Specifically, the participants indicated the importance of including RL in the overall strategic planning of online retailers, which optimise and improve efficiencies in the return processes. Additionally, online retailers must encourage internal integration, involving cross-functional collaboration and information sharing, to counteract silo mentalities that cause bottlenecks in the return process. Lastly, some participants mentioned that developing and investing in appropriate IT resources could help online retailers improve return processes. Evidently, online retailers can implement SOR process optimisation (section 8.5.2.1.2) for the effective execution of RSP improvements. The subsequent quotations convey these findings:

> "[…] you have to [include RL in your strategic planning] […] you can have it [reverse logistics] as part of a strategic plan to […] optimise, building efficiencies [in return processes]." (P6, logistics manager, multichannel retailer)

> "I think when it comes to inter-departmental [integration], the scary part that we have these days in organisations is that everyone works within silos […]. Who suffers in the end, the customer? […] for example, […] if logistics delays on some certain items or certain activities, it'll create an impact or bottleneck on the entire [RL] operation

> […]. So yes, […] integration is critical because the people need to work together. They've got to work hand-in-hand." (P10, Head of Sales and Logistics, OEM/multichannel retailer)
>
> "[Investment in IT for RL is] crucial. If somebody could develop a platform that could plug into anyone's online portals to smoothen the reverse logistics that would be great. Because I tell you why, this is where online companies lose business and, in the end, they lose the customer's trust […]." (P9, regional & online DC manager, online retailer)

Based on the examples and suggestions for RSP improvement execution, online retailers can implement (as supported by literature) various support RL practices, including the (1) *general IT strategies* of implementing and using integrative, compatible and capable IT for RL (section 6.3.1), (2) *CI strategies* of implementing consumer-centric return policies, RL processes and consumer service and support initiatives, attaining consumer input, and interacting and sharing information with consumers (section 6.4.2), (3) *CFI strategies* of establishing cross-functional teams, developing functional relationships and functional collaboration, cooperation and coordination (section 6.4.3), (4) *RL in/outsourcing strategies* of analysing RL in/outsourcing decisions and selecting a 3PRL provider (section 6.5.1), (5) *decentralised facility/location strategies* of establishing facilities close to the markets and using decentralised facilities for RL (section 6.8.5), (6) *RC strategies* of allocating sufficient and appropriate resources for RL and financial, IT and human RC in RL (section 6.9.1), (7) *strategic planning strategy* of integrating the strategic plan for RL with organisational strategic plans (section 6.9.4), and (8) *RL staff strategies* of establishing a dedicated RL function, implementing RL staff training and education and producing skilled and well-trained staff in RL (section 6.9.5).

As emphasised in RSP improvement preparation, the interview findings related to RSP improvement coincided with various studies from the reviewed literature. Therefore, executing RSP improvements can be achieved through various RLM practices, including (1) strategic location of facilities for maximum consumer responsiveness (Misni & Lee, 2017:92), (2) outsourcing RL to 3PRL providers for improvement of RL processes and management (Badenhorst, 2017:617; Wang, Dang *et al.* 2021:2), (3) insourcing (Badenhorst, 2017:616) and using of human resources (Lamba *et al.* 2020:384), staff training (Bozzi *et al.* 2022:21; Lamba *et al.* 2020:384) and IT resources (Ahlén & Johansson, 2023:31; Bozzi *et al.* 2022:21), (4) transparency for enhanced experience (Eriksson & Käck, 2023:25), and (5) integration between functions (Ashan & Rahman, 2021:20; Mostert *et al.* 2017:13; Sajjanit & Rompho, 2019:772).

Clearly, online retailers can improve RSP through assorted proven practices to not only improve RLM but also address various service pitfalls and problems, including the service (1) pitfalls of functional autonomy and preservation (internal culture), poor RL planning, a lack of resources (poor RLM), poor visibility, poor online systems and poor external integration (information-related), and (2) problems of poor return experience, unmet expectations and dissatisfaction, consumer frustration, anger and uncertainty (consumer problems), poor communication, poor return processes, service failures, a loss of

consumer trust and confidence, reputational damage, a loss of sales, market share and consumers (online retailer problems). In the next section, RSP management practices as the final RSP proposition category, will be analysed and discussed.

8.5.2.2.3 Return service performance (RSP) management

RSP management as a RSP proposition category can be important to manage and maintain service standards and reducing the impact of service failures. Therefore, RSP management ensures that online retailers satisfy consumers in the long-term and continue to maintain effective RL service performance. As illustrated in **Figure 8.15**, the key practices for RSP management involve (1) RSP management formalisation, (2) RSP management maintenance and (3) RSP management of service failures, which will be discussed in subsequent paragraphs.

- *RSP management formalisation*

RSP management formalisation as a key RSP management practice involves the establishment of RL service benchmark, service standards, strategies and policies and service agreements for effective RSP management. Evidently, as key practice elements online retailers can (1) benchmark RL service standards against FL service standards, (2) create consumer-focused RL service standards, (3) establish a consumer service strategy and policy based on RL service standards, and (4) establish service agreements based on RL service standards.

Specifically, the participants indicated that online retailers could *benchmark RL service standards against FL standards* for RSP management formalisation. Therefore, online retailers can adopt the same service standards that guides FL service excellence. For example, if the online retailer created the service standards of efficiency for the delivery process, the online retailer should adopt the same service standards of efficiency for the return process. Based on the benchmarked service standards for RL, participants indicated that online retailers must *create consumer-focused standards* that involves service quality, reliability, dependability, transparency, visibility, efficiency and speed. Subsequently, benchmarking and creating consumer-focused service standards can help online retailers with the implementation of SOR, RSP evaluation and RSP improvement propositions. The following quotations demonstrate these findings:

> "[…] you want everything done online […], it's the same […] when the [forward logistics] order is expedited. You want the same process coming back smoothly in the return process." (P9, regional & online DC manager, online retailer)

> "I'm talking about both forward and reverse logistics […] making sure that you give him the best service in terms of quality, in terms of the product you've been providing […] if you can check those boxes and you can make sure that you're meeting the customer's [needs] […], and the end result is you have a happy customer that buys more from you." (P10, Head of Sales and Logistics, OEM/multichannel retailer)

> "There is transparency. There's visibility. […] what you are presenting from an online perspective is what that customer would receive in terms of quality, in terms of reliability, dependability, speed, etc." (P10, Head of Sales and Logistics, OEM/multichannel retailer)

Following the creation of consumer-focused standards in RL, online retailers can *establish a consumer service strategy* and *policy* to capture the established service standards. Consequently, the consumer service strategy that online retailers can establish for RL must focus on quality, reliability, communication and efficiency for effective RSP management. Additionally, online retailers can formalise the service standards by establishing a consumer service policy, ensuring effective implementation of RL service standards for RSP management. Consequently, establishing service policies based on service standards can facilitate RSP evaluation preparation (see section 8.5.2.2.1). These findings can be supported by the subsequent quotations:

> "[…] from a customer service perspective, we believe in first things first, customer service is all about quality, reliability, […] making sure that the communication is there with the customer. […]. That's the strategy that all businesses need to follow […] if you're not communicating and keeping the customer up to date, up to speed as to what's going on […], that really places a dampener on the customer experience […]. So, quality is important within every step of the [returns] process […] and that's the strategy going forward. And if we follow those steps […] from a strategic perspective, you can thrive on that benchmark of customer service." (P10, Head of Sales and Logistics, OEM/multichannel retailer)

> "Because policy and guiding guides and principles that's agreed up front drives efficiency and compliance. You know, there's nothing worse than a consumer having an expectation of X but getting Y because somebody decided that the SOP wasn't the one, they wanted to follow today." (P6, logistics manager, multichannel retailer)

Finally, online retailers need to extend RSP management formalisation to the SC and *establish service agreements* with SC partners based on the established consumer-focused RL service standards. The participants indicated that online retailers must clearly define established RL service standards in the service level agreements (SLAs) to effectively manage RSP. For example, if the online retailer wants a service provider to collect a product return within 48 hours, the SLA must stipulate the service standard of 48 hours for return collection. Additionally, participants indicated that the SLA must be captured on the online retailer's system as well as the service provider's system, meaning that systems integration can be important for managing RSP externally. The subsequent quotations support these findings:

> "The courier […] you know, my SLA with him should be defined as close to what I want the consumer to experience." (P6, logistics manager, multichannel retailer)

> "[…] the only integration is our third-party agreement, which you have with the logistics company that's just doing some of your […] reverse logistics. And there's also agreements in place on our system [that] automatically integrates with their system." (P11, Demand and sales manager, FMCG distributor)

As support RL practices for RSP management formalisation, online retailers can implement (as supported by literature) the (1) general IT strategy of using integrative and compatible IT (section 6.3.1), (2) SCI strategies of SC agreements, sharing goals and objectives and integrating IT (section 6.4.1), (3) CI strategies of developing consumer service elements and initiatives and implementing customer service management (section 6.4.2), (4) strategic planning strategy of developing RL strategies, and (5) strategic procedure strategies of developing formal SOPs and manuals for RL,

publishing strategic procedures in RL and formally implementing strategic procedures in RL (section 6.9.4).

No studies from the reviewed literature aligned with the interview findings in terms of benchmarking RL service standards against FL service standards, consumer-focused service standards, consumer service strategy and policy and service agreements based on service standards for RSP management. Therefore, this study identified additional initiatives that online retailers can implement for effective RSP management formalisation. Nevertheless, a few studies mentioned the importance of a consumer-centric approach (Bozzi *et al.* 2022:16; Karlsson *et al.* 2023:8) and focusing on reliability (Sajjanit & Rompho, 2019:772), transparency (Eriksson & Käck, 2023:25; Hjort *et al.* 2019:774), visibility (Triani *et al.* 2019:469), efficiency and speed (Hjort *et al.* 2019:774; Karlsson *et al.* 2023:9-10; Sajjanit & Rompho, 2019:772).

Essentially, RSP management formalisation can help online retailers address the service (1) pitfalls of poor RL planning (poor RLM), poor visibility and poor external integration (information-related), and (2) problems of a poor return experience, unmet expectations, dissatisfaction, consumer frustration (consumer problems), poor return communication, poor return processes, service failures, a loss of consumer confidence and trust, and a loss of sales and consumers (online retailer problems).

- *RSP management of service standards and agreements*

RSP management of service standards and agreements as a key RSP management practice entails the monitoring, maintenance and governance of service standards and agreements through various key practice elements, including systems and integrations, performance measures, RL insourcing and dedicated resources, and appropriate facilities.

In terms of *systems* and *integrations*, the participants suggested the implementation of IT with integrative functionalities (such as WMS or CRM software) to ensure that all internal and external RL parties receive instructions to achieve service standards. Additionally, online retailers can create a database to record service events and monitor compliance of service standards. Moreover, some participants suggested the *use of performance measures* for managing and maintaining service standards and agreements. Consequently, online retailers can implement RSP evaluation (see section 8.5.2.2.1) to govern internal and external service performance, ensuring that agreed RL service standards and commitments are met and maintained. The following quotations show the importance of using systems, integrations and performance measures for RSP management of service standards and agreements:

> "[…] we have this IT interface that's channelling every activity or giving instruction to every stakeholder on what needs to be done. And we've got to make sure there's a lead time in place to make sure that it's governing, to

ensure that we meet the total standard lead time to achieve customer service [standards] […] and to make sure that customer is happy […].” (P10, Head of Sales and Logistics, OEM/multichannel retailer)

“[…] so, you’ve got internal/external kind of system integrations, people do in different ways, whether they do it in their CRM or their WMS […] you’re always going to need some internal/external integration. And then those key events are then [monitored], like we call it timestamping. So, when you do SLA management, [systems integration helps] to understand the time when each event took place. So, you need that data somewhere in the data table, so you can measure how long it’s taking, are they [the service providers] meeting service level requirements […].” (P13, supply chain manager, multichannel retailer)

“[RL performance measurement is important for] giving our customer an efficient service that’s one and […] also ensuring that our fulfilment centres and the returns process is carried out efficiently.” (P9, regional & online DC manager, online retailer)

Linking with the of RSP improvement execution through the internal resources and RL insourcing (section 8.5.2.2.2), the participants indicated that effective management of RL service standards and agreements relies on *RL insourcing* and *dedicated resources*. Subsequently, service providers may fail to comply with the established RL service standards and strategies of the online retailer and neglect the management of service standards (i.e. ensuring on-time collection takes place) and agreements with suppliers. However, online retailers should use dedicated resources that involves the commitment of various IT, financial and human resources, enabling consistent achievement of RL service standards. Moreover, online retailers can use a dedicated manager (either a RL or an ecommerce manager) to ensure that service standards and agreements are maintained. The following quotations demonstrate the importance of RL insourcing and dedicated resources for RSP management of service standards and agreements:

“[…] we don’t outsource [reverse logistics] […] because we have our own facility, […] we also like to manage that from a customer service perspective to [use] our own people with our customers. So that’s our view and our strategy.” (P13, supply chain manager, multichannel retailer)

“[…] if you outsource the entire reverse logistics to an external company […], you’re obviously going to struggle to get the supplier agreements and all of that upheld by a different company […] and getting a courier to go and collect your parcels from the customers and making sure it gets delivered [to the facility] […].” (P3, returns manager, online retailer)

“[…] the commitment you make up front as long as you stick to it. So, in that instance, […] we should have as many resources as possible […] to ensure that the commitment we give is the commitment that’s achieved.” (P6, logistics manager, multichannel retailer)

“I think it’s quite an important part of the customer journey, […] you would have to invest in some sort of resources, whether it be IT integration, investing money, putting heads where it counts towards that process and managing it.” (P13, supply chain manager, multichannel retailer)

“I do think you need somebody who’s focused on managing […] online [reverse] logistics […] it’s a very customer orientated one-on-one focus in terms of making sure that it’s running smoothly.” (P13, supply chain manager, multichannel retailer)

Finally, online retailers can *use appropriate facilities* to ensure that service standards are consistently maintained. Specifically, participants indicated that centralised facilities can be important for RSP management of service standards. For instance, the more facilities online retailers use for RL the less uniform the activities, complicating the ability to maintain promised service standards, which can lead to consumer uncertainty. The following quotation illustrates this finding:

“I would say the best thing is to have a centralised facility. […] from a reverse logistics point of view, having a central unit makes a lot of sense. […] you have got the same method of thinking in one facility; you do not want six or seven reclaim centres where the six or seven people that handled electronics all have a different view of

> what is used. Because that creates uncertainty with the consumer […]. So, I would go towards having a centralised reclaimed centre […] so that you've got that uniform approach in your [RL] activity." (P5, general manager, online retailer)

As support RL practices for RSP management of service standards and agreements, online retailers can implement (as supported by literature), the (1) *general IT strategy* of developing and using integrative and compatible IT systems (section 6.3.1), (2) *TLIT* (traditional logistics IT) strategies of integrating TLIT systems with other systems and use WMS and CRM software for RL (section 6.3.3), (3) *SCI strategy* of integrating and sharing of IT (section 6.4.1), (4) *CFI strategy* of implementing CFI for RL (section 6.4.3), (5) *RL in/outsourcing strategy* of organisational considerations for RL in/outsourcing decisions (section 6.5.1), (6) *PM strategy* of performance monitoring and review (section 6.7.1), (7) *centralised facility/location strategy* of using a centralised facility for RL (section 6.8.4), (8) *centralised return centre* (CRC) *strategy* of establishing and using CRCs (section 6.8.6), (9) *RC strategies* of sufficient and appropriate resources for RL and financial, IT and human RC in RL (section 6.9.1), and (10) *RL manager strategy* of assigning experienced managers to RL (section 6.9.5).

The interview findings related to the practices that can be implemented for RSP management of service standards and agreements coincide with the reviewed literature, including (1) functional integration (Ashan & Rahman, 2021:21; Karlsson *et al.* 2023:8; Pal, 2017:885), (2) appropriate IT systems with integrative capabilities (Karlsson *et al.* 2023:8), (3) performance measures (Jalil, 2019:2; Karlsson *et al.* 2023:9; Sajjanit & Rompho, 2019:790), (4) RLM insourcing (Lamba *et al.* 2020:338), and (5) dedicated human resources (Davidavičienė & Al Majzoub, 2021:4; Mostert *et al.* 2017:13) and service managers (Sajjanit & Rompho, 2019:790). However, this study uniquely identified the use of CRCs or centralised facilities for managing service standards and agreements, providing an additional practice for enhanced RSP management.

Essentially, RSP management of service standards and agreements can help online retailers address the service (1) pitfalls of functional autonomy (internal culture), inattention to RLM, poor RL planning, a lack of resources (poor RLM), poor systems and poor external integration (information-related), and (2) problems of poor return experience, unmet expectations and dissatisfaction, and consumer frustration, anger and uncertainty (consumer problems), poor return processes, service failures, a loss of consumer confidence and trust, reputational damage and a loss of market share and consumers (online retailer problems).

- *RSP management of service failures*

Apart from RSP management of service standards and agreements, online retailers must implement practices for RSP management of service failures, which can minimise the occurrence or impact of

service failures in RL. As key practice elements, online retailers can use systems and integrations, RL insourcing and staff training for the effective RSP management of service failures.

In terms of *using systems and integrations*, some participants indicated that online retailers must capture service failures on the system (such as the CRM system), which can help customer service staff to demonstrate awareness of service failures and communicate mitigating solutions to consumers. Additionally, some participants suggested that effective internal and external integration of systems can minimise the occurrence of RL service failures, reemphasising the importance of systems and integrations for RSP management of service standards and agreements. The following quotations convey these findings:

> "So, if there's been a […] collection failure that should also appear in your CRM, […] and [when] that customer calls in, they're able to service their customers and are able to identify, 'hey, listen, we are aware that there have been these problems and this is what's being done to sort it' […] So, making sure that information is visible." (P1, operations manager, 3PRL provider firm)

> "[…] the more integrated, the less likelihood of collection failures, return failures, service failures. So, whether your logistics provider is external courier or an internal provider, you know that integration from a systems perspective is important." (P1, operations manager, 3PRL provider firm)

Additionally, the participants indicated that *RL insourcing* can be important to minimise the likelihood of service failures, which associates with the RL planning pitfall of poor outsourcing decisions (section 8.5.1.2.2). Subsequently, RL insourcing not only facilitate RSP management of service standards and agreements but also with managing service failures in RL. Furthermore, the participants indicated that online retailers must *train staff* on consumer behaviour, people management and complaint resolutions, which can minimise the impact of service failures for effective RSP management. For example, online retailers can train staff to effectively communicate with consumers who experienced service failures, facilitating personalised SOR communication (section 8.5.2.1.1) and complementing RSP improvement preparation (section 8.5.2.2.2). These findings can be supported by the subsequent quotations:

> "I am totally against outsourcing […], especially the reverse logistics […] because if your outsource company would fail in any of those [RL] services, it's you [the online retailer] that will have to bear the brunt for it […]. I would rather have control of it [reverse logistics] here in our fulfilment centre […]." (P9, regional & online DC manager, online retailer)

> "Train them on consumer behaviour […] there needs to be a big element of human interaction, people management, complaint resolution, [and] to know how to speak to people, etc." (P5, general manager, online retailer)

> "We're sorry about your bad experience. We will collect your units […] and you should have a refund within the next two days. And then afterwards you contact the customer, […] we've processed your refund. We do apologise for your experience. Please feel free to contact us again and please feel free to visit our website and purchase another product." (P10, Head of Sales and Logistics, OEM/multichannel retailer)

As support RL practices for RSP management of service failures, online retailers can implement (as supported by literature) the (1) general IT strategy of using integrative and compatible IT systems (section 6.3.1), (2) TLIT strategy of implementing CRM for RL (section 6.3.3), (3) SCI strategy of integrating and sharing of IT (section 6.4.1), (4) CI strategies of consumer service and support initiatives, consumer communication, information sharing and interaction, and implementing customer

service management (section 6.4.2), (5) RL in/outsourcing strategy of organisational considerations for RL in/outsourcing decisions (section 6.5.1), and (6) RL staff strategies of implementing RL training and education and producing well-managed, -skilled and -trained staff in RL (section 6.9.5).

While no studies from the reviewed literature focused on managing service complaints, Jalil (2019:2) indicated that service recovery can be critical for managing service failures in RL and Bozzi *et al.* (2022:16) identified that IT systems can be used for managing consumer complaints. Additionally, Badenhorst (2017:616) found that RL outsourcing in South Africa was the least favourable practice for addressing RLM barriers and problems. Lastly, Dapiran and Kam (2017:831) emphasised the importance of training staff to communicate effectively with consumers, and Nel and Badenhorst (2020:125) suggested that staff must be trained to provide exceptional consumer service in RL.

Subsequently, RSP management of service failures can help online retailers to mitigate the service (1) pitfalls of inattention to RLM, poor RL planning (poor RLM), poor visibility, poor systems and poor external integration (information-related), and (2) problems of poor return experience, unmet expectations and dissatisfaction, consumer frustration, anger and uncertainty (consumer problems), poor return communication, poor return processes, service failures, a loss of consumer confidence and trust, reputational damage, and a loss of sales, market share and consumers (online retailer problems).

In conclusion, RSP propositions, including RSP evaluation, RSP improvement and RSP management, can help online retailers to evaluate, improve and manage consumer service performance in RL as well as address various service pitfalls and problems. Therefore, online retailers must implement RSP propositions as a main service proposition for the effective RLM of consumer returns. In the next section, the final service proposition category, namely service parameters, will be analysed and discussed.

8.5.2.3 Service parameters

Service parameters as the final main service proposition, involve various proposition (parameter) categories, including volume, product, organisational, cost versus benefit, SC and market, and legal parameters (see Figure 8.**15**). Like the prevention and control parameters (section 8.4.2.4), no studies in the reviewed literature focused on the factors (parameters) that can impact the implementation of service propositions, meaning that this study adds new insights into important considerations for the effective implementation of service-orientated return (SOR) and return service performance (RSP) propositions. Nevertheless, a few studies (unintentionally) identified parameters that align with the interview findings, which will be referenced in the discussion. The various service parameters will be discussed in the subsequent sections.

8.5.2.3.1 Volume service parameters

As illustrated in Figure 8.**15**, volume service parameters involve the key parameters of return volume and complaints volume, which can be important for the implementation of a few service propositions.

Return volume as a service parameter associates with the key SOR process practice of SOR inspection and processing and the key RSP improvement practice of RSP improvement execution. Particularly, performing pre-return inspection at consumer locations for improved consumer service might be more appropriate for locations with higher return volumes. Additionally, online retailers with lower return volumes might benefit from using 3PL providers for RSP improvement execution. These findings can be illustrated in the following quotations:

> "[…] a practical way of putting a team of people into the street and saying, you know what, returns is such a big thing in our world […] So, let's put a dedicated team in there that are our first line evaluators […] that can go to the customer and say, you know what, before I take this laptop from you, can we quickly do one, two, three and four, maybe solve them right there […]. Or you know what? I can see that you've got the incorrect phone. It's not compatible with this device. No problems, no questions asked. I'll update the return right here now and do a resell. So, they can sell them the correct device […] just to give them a better service […]." (P5, general manager, online retailer)

> "I believe outsourcing is an amazing opportunity to ensure that the customer gets the best experience possible, and the reason I say that is I don't have scale in returns." (P6, logistics manager, multichannel retailer)

In terms of *complaints volume*, online retailers can consider complaints volume for the implementation of RSP propositions, including key RSP evaluation and key RSP improvement practices. Specifically, online retailers should consider complaints volume for (1) RSP evaluation metrics and tools (i.e. consumer satisfaction as a metric), (2) RSP evaluation data sources (i.e. complaints data), (3) RSP improvement preparation (i.e. sharing service problems and brainstorming improvement plans) and (4) RSP improvement execution (e.g. using 3PRL provider to reduce return processing time). Subsequently, complaints volume can be an important consideration for the implementation of RSP propositions. The following quotations support these findings:

> "So, Retailer K used to measure their customer service performance, and the way they measured it was they had fewer reverse logistics complaints […]." (P4, owner/CEO, 3PRL provider firm)

> "So, if you keep on getting client complaints about your courier has not collected […] that needs to raise red flags so that data comes both from your customer care log sheets and from your customer calling. […] if you're getting four and a half thousand calls a day of which 40 percent relates to […] the time of collection […] that needs to raise some red flags." (P12, Head of logistics, online retailer)

> "[…] they [online retailers] had fewer reverse logistics complaints […] we've [the 3PRL provider] taken their credit timings from sort of a month or more to a couple of days. So, where they would wait a month to credit a customer, now they can do it in three days." (P4, owner/CEO, 3PRL provider firm)

As support RL practices for considering volume service parameters, online retailers can implement (as supported by literature) the (1) CI strategies of considerations for CI, attaining of consumer input and interacting with consumers (section 6.4.2), (2) RL in/outsourcing strategies of considering and analysing RL in/outsourcing decisions (section 6.4.1), (3) PM strategy of considerations for PM (section 6.7.1), (4) RC strategy of considerations for RC (section 6.9.1), and (5) RL staff strategy of

establishing a dedicated RL function (section 6.9.5). No studies in the reviewed literature identified the importance of considering return and complaint volume for the effective implementation of service propositions. Subsequently, this study identifies new factors that online retailers can consider for the effective implementation of SOR and RSP propositions.

Additionally, considering volume parameters can facilitate online retailers with addressing the service (1) pitfalls of internal preservation (internal culture), poor RL planning, a lack of resources (poor RLM) and lack of external integration (information-related pitfall), and (2) problems of a poor return experience, unmet expectations, dissatisfaction, consumer frustration, anger and uncertainty (consumer problems), poor return communication, poor return processes, service failures, a loss of consumer trust, reputational damage and a loss of sales (online retailer problems).

8.5.2.3.2 Product service parameters

The product service parameters involve the key parameters of type of product return and product type (see Figure 8.**15**), which associate with SOR propositions.

For instance, *type of product return* as a parameter can be important for implementing key SOR process practices. Specifically, online retailers can consider the type of product return for SOR collection that involves simultaneous return pickup and replacement drop-off and SOR inspection and processing that involves instant replacement dispatch. For example, if the type of product return involves incorrectly received items, online retailers can consider simultaneous return pickup and replacement drop-off and instant replacement dispatch, as displayed in the following quotations:

> "If the guy gets the wrong thing and he wants it replaced […] they [online retailers] come up with two different deliveries […] so I thought to myself, if we could convince them that when you do a request for return and you [want to] replace […] you hook the two together. Those are the kind of cross-functional examples that I can think of." (P7, owner, 3PRL provider firm)

> "[…] a lot of the returns, obviously, there's a replacement attached to it as well. For example, a customer orders an item which is blue, and they receive an item that is red […]. So, what I do, I fulfil the correct item first […] and we ship it on an overnight delivery […]. So, this is where we announce trust to the customer […]. We know the customer has been satisfied." (P9, regional & online DC manager, online retailer)

Moreover, online retailers can consider the *type of product return* and *product type* for the key SOR communication practice of streamlined SOR communication. For example, online retailers can consider defective and warranty returns as product return types, and electronics as product types to collaborate with suppliers to provide consumers with return status updates from suppliers. The following quotation expands on this finding:

> "So, if you [the consumer] purchased a television set from Retailer C, and the TV set breaks […] Retailer C is saying, we will come and collect it. But we're not going to give you the money, we need to get the money back from the supplier first. And in that case, your supplier needs to act out the warranty. Now, from an integration point of view, it would be brilliant if you [as the online retailer] had access to the supplier system […]. And you can simply enter their website and say, […] I'm looking up this barcode and the barcode tells you, no problem, this is still under warranty […]. But then also you can track what's happening on your supplier side, so that you can give accurate information to your customer […]." (P5, general manager, online retailer)

Finally, *product type* can be considered for the key SOR process practice of SOR inspection and processing and the key RSP improvement practice of RSP improvement execution. For example, the online retailer can consider using dedicated staff to perform pre-return inspection at consumer locations for electronics, appliances and computers to improve consumer service, linking with return volume as a parameter (section 8.5.2.3.1). The following quotation shows the importance of considering product type for SOR inspection and processing and RSP improvement execution:

> "So, let's put a dedicated team in there that are our first line evaluators […] that can go to the customer and say, you know what, before I take this laptop from you, can we quickly do one, two, three and four, maybe solve them right there […] Or you know what? I can see that you've got the incorrect phone. It's not compatible with this device. No problems, no questions asked. I'll update the return right here now and do a resell. So, they can sell them the correct device […] just to give them a better service […]." (P5, general manager, online retailer)

As support RL practices for product service parameters, online retailers can implement (as supported by literature) the (1) barcode IT strategy of considerations for barcode IT (section 6.3.4), (2) SCI strategies of SCI considerations, collaboration, integration and information sharing (section 6.4.1), (3) CI strategies of CI considerations and interacting with consumers (section 6.4.2), (4) CFI strategy of implementing CFI (section 6.4.3), (5) RC strategy of considerations for RC (section 6.9.1), and (6) RL staff strategy of establishing a dedicated RL function (section 6.9.5).

Like the volume service parameters, this study distinctly identified the consideration of product parameters, including type if product return and return type, for the effective implementation of SOR and RSP propositions. Ultimately, considering product service parameters can help online retailer address the service (1) pitfalls of functional autonomy and preservation (internal culture), a lack of resources (poor RLM), poor visibility and poor external integration (information-related), and (2) problems of a poor return experience, unmet expectations, dissatisfaction, consumer frustration and uncertainty (consumer problems), poor return communication, poor return process, service failures, a loss of consumer confidence and trust, and a loss of sales (online retailer problems).

8.5.2.3.3 Organisational service parameters

The organisational service parameters involve the key parameters of organisation size and organisational capabilities (see Figure 8.**15**) that can be important for the implementation of various SOR and RSP propositions.

Organisation size can be an important parameter for the implementation of service propositions that involves third parties. While larger online retailers might be more capable of using internal resources and initiatives for service propositions, smaller online retailers might rely on third parties for service propositions, linking with the return volume parameter (see section 8.5.2.3.1). For example, a smaller online retailer interested in using various drop-off locations for the implementation of SOR collection can use service providers with decentralised locations for drop-off collection. Evidently, online retailers

must consider their size for the implementation of service propositions, involving third parties, like SOR communication platforms, streamlined SOR process and RSP improvement execution (see sections 8.5.2.1.1, 8.5.2.1.2 and 8.5.2.2.2). The following quotations portray organisation size as a service parameter:

> "I think that really is dependent on […] the size of your business […]. I think outsourcing is an option, but it really is depending on what you would like to have happen as a business […] to manage that [reverse logistics] from a customer service perspective […]." (P13, supply chain manager, multichannel retailer)

> "[…] a large firm that has got satellite branches in all your main CBDs, it will be […] a quicker cycle of […] returning an item […] having multiple hundreds of drop off points for returning items, like [the 3PL providers] Pargo, [and] DSV has got their own. So that's another option […]." (P12, Head of logistics, online retailer)

Nevertheless, *organisational capabilities*, involving resources, staff, RL process, IT and information management capabilities (key parameter elements) can be a more significant organisational parameters for the implementation of various service propositions and RL in/outsourcing decision-making. Specifically, online retailers must consider their *resource capabilities* for key RSP improvement and RSP management practices. For example, online retailers can keep RL inhouse if they possess the necessary resources for RSP improvement execution. Likewise, online retailers must consider their existing resources, like infrastructure and human resources for RSP management of service standards and agreements. The following quotations illuminate these findings:

> "I would rather have […] [reverse logistics] here in our fulfilment centre, within our company, within our own resources. So, that's effectively giving our customers a better service." (P9, regional & online DC manager, online retailer)

> "I think outsourcing is an option, but it really is depending on what you would like to have happen […] we don't outsource [reverse logistics] […] because we have our own facility, […] we also like to manage that from a customer service perspective to [use] our own people with our customers." (P13, supply chain manager, multichannel retailer)

Additionally, online retailers can consider their human resource capabilities for SOR communication platforms (key SOR communication practice). Evidently, online retailers that lack human resources can use a third-party contact centre as a telephonic SOR communication platform. Nevertheless, online retailers must be capable of training the employees of the outsourced service providers for effective telephonic SOR communication. Lastly, online retailers must consider their financial resource capabilities to invest in IT and/or facility resources for SOR process optimisation (key SOR process practice) and RSP improvement execution (key RSP improvement practice). The following quotations illustrate the importance of considering organisational resource capabilities for the implementation of SOR and RSP improvement propositions:

> "[…] you can outsource the whole [RL process] […] like outsourcing a contact centre […] you still got to make those [contact centre] people feel like they're your [customer service] people. You still got to train them to talk like your people […] to not degrade the [consumer's] experience." (P1, operations manager, 3PRL provider firm)

> "[…] you should have the resources available to expedite a collection and return. Therefore, […] investing in information technology that's going to expedite and streamline the [return] process." (P10, Head of Sales and Logistics, OEM/multichannel retailer)

> "[…] so, we are only started out with two DCs, the one in Joburg and the one in Cape Town. […] they [Retailer C] then made the decision to have a return facility in KZN due to Cape Town and Joburg is decentralised from KZN. And so, the guys [consumers] in KZN complained about their returns being taking too long to process […]. So,

> they made that decision to help with the turnaround time […] to kind of mitigate the […] customer complaints of the [returns] turnaround time from KZN […]." (P3, returns manager, online retailer)

Furthermore, online retailers must consider their *staff capabilities* for the key SOR process practices of SOR process optimisation and SOR request. Specifically, for a lenient SOR process (key element of SOR process optimisation), the online retailer's staff must be capable of discerning a legitimate return reason from a non-legitimate (fraudulent) return reason for authorising returns. Additionally, online retailers' staff must be capable of showing empathy and assisting less tech-savvy consumers in the consumer return request process, enabling the use of various SOR request options. These findings can be supported by the subsequent quotations:

> "So, you need to have a discerning employee managing that [return authorisation], because if the customers […] wanted to return the product [legitimately] and you say, no, I [as a consumer] will never go back and buy from those people [the online retailer] again. But then you're also have the other side of it where people [consumers] are trying to commit fraud." (P4, owner/CEO, 3PRL provider firm)

> "So, it has to be the sensitivity of that [customer service] department […] where a customer calls in to state […] she doesn't know how to log in and she doesn't know how to create a return from her account. So, we've got to establish that sensitivity and that urgency to assist, to help [with] return [logging] […]." (P9, regional & online DC manager, online retailer)

In terms of *RL process capabilities*, online retailers must consider their RL process lead-time capabilities to effectively implement the key practices of SOR collection and RSP improvement execution. Consequently, online retailers that lacks the capabilities to implement an efficient return collection process or improve RL process efficiency can use 3PRL providers. These findings can be supported by the subsequent quotations:

> "We don't annoy the customer by saying, well, the truck will be there in two weeks' time. We have […] a very specific logistics model that we've developed, and our turnaround time is maybe forty-eight hours at max to be able to go and pick up a product." (P7, owner, 3PRL provider firm)

> "[RL outsourcing is important because] how do you attribute saving costs where your customers are getting that kind of service? That you [as the consumer] buy it [a clothing item] today, it doesn't fit. I [the 3PRL provider] pick it up tomorrow and that kind of thing is done very quickly, very efficiently. And you have a very happy customer who buys again." (P7, owner, 3PRL provider firm)

Online retailers must consider their *IT capabilities* to implement various key SOR communication, SOR process, RSP evaluation, RSP improvement and RSP management practices. Specifically, IT capabilities can be important SOR communication platforms and streamlined SOR communication. For instance, online retailers must consider the capability of their IT platform to provide return status updates and allow contact centre staff access to the system for telephonic SOR communication. Similarly, online retailers must consider the integration capabilities of their IT for collaborative SOR communication (key practice element). Additionally, considering system capabilities can be important for implementing a hassle-free and streamlined return logging procedure (key practice element of SOR request). Moreover, online retailers must consider their capabilities to develop appropriate IT for SOR process optimisation and RSP improvement execution. Consequently, if online retailers lack IT capabilities they must consider other practices for SOR process optimisation and RSP improvement execution, like using 3PRL provider (see sections 8.5.2.1.2 and 8.5.2.2.2). The following quotations

show the importance of considering IT capabilities for SOR propositions and RSP improvement execution:

> "And you also need a contact centre or a call centre of sort that can actually engage with the technology system, […], they are responsible for actually communicating with the customer. So, they need to be able to access that technology platform and they need to be able to take from the information [on the system] that they can relay back to the customer." (P5, general manager, online retailer)

> "[…] when you have a logistics service provider, these APIs are quite important. So, you can see the integration between your system and their systems. You can communicate to the customer so you can track certain events, especially in reverse logistics." (P13, supply chain manager, multichannel retailer)

> "[…] your systems and technologies that you use within the warehouse should give feedback towards the customer to say what is the update on their return and how long it will take, where it is tracking in the system or in the supply chain at the moment. So, I think for any business, it is highly important to get a system that is very two-way functional to make sure that customers updated at all times as well." (P3, returns manager, online retailer)

> "[…] it shouldn't be a hassle for any person to log a return […] because then it will make them skittish to buy from you again. So, I think in any circumstances like that, a very good interface between the company and the customer is of the utmost importance to make it work." (P3, returns manager, online retailer)

> "[…] if you have a system that can allow the customer or the consumer to initiate the request for a return by themselves on their own, it makes for a lot more smoother [sic] process." (P3, returns manager, online retailer)

> "If somebody could develop a platform that could plug into anyone's online portals to smoothen the reverse logistics that would be great. Because I tell you why, this is where online companies lose business and, in the end, they lose the customer's trust […]." (P9, regional & online DC manager, online retailer)

Finally, online retailers must consider both their *IT* and *information management capabilities* to implement key RSP evaluation, RSP improvement and RSP management practices, including (1) RSP evaluation preparation, (2) RSP evaluation metrics and tools, (3) RSP evaluation data sources, (4) RSP improvement preparation, (4) RSP management of service standards and agreements, and (5) RSP management of service failures. For example, online retailers must consider the integration and data management capabilities of their IT systems (such as CRM or WMS) to measure service performance and manage service standards of SC partners. Similarly, for RSP management of service failures, online retailers must consider the capabilities of the CRM system to capture service failures and provide data visibility of service failures to internal/external RL parties. The following quotations show the importance of considering IT and information management capabilities for RSP propositions:

> "[…] you've got internal/external kind of system integrations, people do it in different ways, whether they do it in their CRM or their WMS […]. And then those key events are then [monitored], like we call it timestamping. So, when you do SLA management, [systems integration helps] to understand the time when each event took place. So, you need that data somewhere in the data table, so you can measure how long it's taking, [and] are they meeting service level requirements […]." (P13, supply chain manager, multichannel retailer)

> "[…] the worst thing that can happen is that different departments get measured on different things and they are reporting on different aspects, which may not be customer centric. So, I think the most important thing is that the [RL] metrics and benchmarks in an organisation need to be centralised and the data visibility must be available to all those parties easily." (P8, logistics manager, multichannel retailer)

> "[…] the benefit [of RL outsourcing] lies in all the [return] data and the benefit can be reviewed as a customer experience benefit […]. What is the whole experience like? […] So, I feel strongly that the benefit in having a company that specialises in reverse logistics is that they will get much more data that is relevant for your customer experience." (P12, Head of logistics, online retailer)

> "[…] we have this IT interface that's channelling every activity or giving instruction to every stakeholder on what needs to be done. And we've got to make sure there's a lead time in place to make sure that it's governing, to ensure that we meet the total standard lead time to achieve customer service [standards] […] and to make sure that customer is happy […]." (P10, Head of Sales and Logistics, OEM/multichannel retailer)

> "So, if there's been a […] collection failure that should also appear in your CRM, […] and [when] that customer calls in, they're able to service their customers and are able to identify, 'hey, listen, we are aware that there have been these problems, and this is what's being done to sort it' […]. So, making sure that information is visible." (P1, operations manager, 3PRL provider firm)

Subsequently, online retailers can implement (as supported by literature) various support RL practices for the consideration of organisational service parameters, including the (1) *general IT strategies* of considerations for general IT and IT types for RL and developing IT capabilities and using IT with information management capabilities (section 6.3.1), (2) *Internet and web-based strategy* of developing online return capabilities (section 6.3.2), (3) *TLIT strategies* of integrating TLIT with other systems and using WMS and CRM for RL (section 6.3.3), (4) *SCI strategy* of considerations for SCI (section 6.4.1), (5) *CI strategy* of considerations for CI (section 6.4.2), (6) *RL in/outsourcing strategy* of considering and analysing RL in/outsourcing decisions (section 6.4.1), (7) *PM strategy* of considerations for PM (section 6.7.1), (8) *general facility/location strategy* of considering facility/location decision factors (section 6.8.1), (9) *decentralised facility/location strategies* of decisions and considerations related to decentralisation (section 6.8.5), (10) *RC strategy* of considerations for RC (section 6.9.1), and (11) *return prevention and avoidance (RPA)* strategy of considerations for gatekeeping practices (section 6.9.3).

Clearly, various organisational parameters must be considered for the effective implementation of service performance. While no studies in the reviewed literature directly focused on considering organisational parameters for the implementation of service propositions, a few studies identified the following: (1) resources must be considered for outsourcing to 3PRL providers (Wang, Dang *et al.* 2021:2), including appropriate human and IT resources (Prajapati *et al.* 2021:6), (2) staff must be capable of communicating effectively with consumers (Dapiran & Kam, 2017:831) and identify fraudulent returns (Zang *et al.* 2023:16), (3) RL process capabilities must be considered for outsourcing to 3PRL providers (Wang, Dang *et al.* 2021:2), (4) appropriate RL network and facility design for RL requires resources (Das *et al*. 2020:48), and (5) IT systems must be capable of internal and external integration, communication, real-time information sharing and supporting performance measurement (Karlsson *et al.* 2023:8-9). Evidently, this study uniquely identified that online retailers must consider their size for the implementation of service propositions.

Essentially, considering organisational service parameters can help online retailers to effectively implement various SOR and RSP propositions, and address the service (1) pitfalls of functional autonomy and preservation (internal culture), inattention to RLM, poor RL planning, a lack of resources (poor RLM), poor visibility, poor systems and poor external integration (information-related), and (2) problems of a poor return experience, unmet expectations and dissatisfaction, consumer frustration, anger and uncertainty (consumer problems), poor return communication, poor

return process, service failures, a loss of consumer confidence and trust, reputational damage, and a loss of sales, market share and consumers (online retailer problems).

8.5.2.3.4 Cost versus benefit service parameters

As illustrated in Figure 8.**15**, the cost versus benefit service parameters involves the key parameter elements of cost versus benefits for SOR process propositions and cost versus benefits for RSP propositions, ensuring that the benefits of implementation outweigh the potential costs.

Specifically, online retailers can consider the *costs versus benefits* for the key *SOR process* practice of SOR process optimisation, relating to the establishment of a lenient SOR process (key element). For instance, online retailers must consider the costs of free returns against the benefits of demonstrating trust to consumers. Evidently, online retailers must ensure that the RL costs associated with return leniency must be less than the benefits of meeting consumer expectations and retaining consumers and market share. Moreover, for establishing an efficient SOR process (key element of SOR process optimisation) online retailers must consider the costs of investment in resources against the benefits of an optimised and efficient return process. The following quotations illustrate these findings:

> "[…] there's the [return] policy […] that generally rolls up to customer proposition. […] it's also the service element and the trust element […]. So, you know what? We trust you. No problem, no charge returns […] an easy return, generates trust in a business." (P1, operations manager, 3PRL provider firm)

> "I think it is because the online retailer that doesn't do so will be behind in the marketplace, because within a very short period of time, the consumer has come to expect that everything is a free delivery and is a free return." (P2, owner, supply chain consultancy firm)

> "[…] you should have the resources available to expedite a collection and return. Therefore, I believe that investing in information technology, that's going to expedite and streamline the [return] process." (P10, Head of Sales and Logistics, OEM/multichannel retailer)

Similarly, online retailers must consider the costs versus benefits of the key SOR process practice of SOR inspection and processing, involving instant refunds and instant replacement dispatch (key practice elements). Specifically, participants indicated that online retailers must consider the costs of providing instant refunds that may result in high/fraudulent returns against the benefits of retaining sales/consumers and enhancing consumer certainty in the return process. Additionally, online retailers must consider the transportation cost of an instant replacement dispatch, which contrasts the more cost-effective SOR collection practice of simultaneous return pick-up and replacement drop-off. Consequently, the cost versus benefit parameters associated with SOR inspection and processing and SOR collection links with the key product parameter of product return type (section 8.5.2.3.2). The following quotations support these findings:

> "[…] the instant refund […] to keep you shopping on the site […] So, instead of looking at it as the returns are a fact of life, how do we make this work to our advantage instead of trying to protect ourselves from them?" (P1, operations manager, 3PRL provider firm)

> "[…] a consumer don't [sic] want to hand it [the returned product] over without knowing that when you've signed it over to the collecting courier that you will be refunded […] because the consumer can't take responsibility for what happens to the product in transit." (P2, owner, supply chain consultancy firm)

> "[…] a lot of the returns there's a replacement attached to it as well. For example, a customer orders an item which is blue, and they receive an item that is red. Now, you want the reverse logistics to kick in, but […] it has to be efficient enough where it comes back to us and to the correct item gets shipped out, in time, to the customer […]. So, what I do, I fulfil the correct item first […] and we ship it on an overnight delivery at our cost and then we wait for that [return] to come. So, this is where we announce the trust to the customer […] We know the customer has been so satisfied." (P9, regional & online DC manager, online retailer)

> "[…] cross-functional is imperative in providing the customer with a pleasant customer experience. If the guy gets the wrong thing and he wants it replaced […]. I think we could save […] a fortune […] when you do a request for return and you [want to] replace […] you hook the two together." (P7, owner, 3PRL provider firm)

Regarding the *cost versus benefits of RSP propositions*, online retailers must consider the costs versus benefits for the key RSP improvement practice of RSP improvement execution. For example, online retailers must consider the costs of investing in IT against the benefits of meeting consumer expectations. Similarly, for RSP management of service standards and agreement, online retailers must consider the costs of investing in various resources against the benefits of effectively managing service performance in RL. The following quotations substantiate these findings:

> "I think investment in technology […] is paramount […] So going into the future, it'll be very common practice that customers will expect a retailer to have all those things in place." (P8, logistics manager, multichannel retailer)

> "I think it's quite an important part of the customer journey, […] you would have to invest in some sort of resources, whether it be IT integration, investing money, putting heads where it counts towards that process and managing it." (P13, supply chain manager, multichannel retailer)

Consequently, cost versus benefit parameters can complement organisational capability parameters of resource and IT capabilities (see section 8.5.2.3.3). As support RL practices for cost versus benefit service parameters, online retailers can implement (as support by literature) the (1) CI strategies of considerations for CI and performing a cost-benefit analysis for CI practices (section 6.4.2), (2) RC strategy of considerations for RC (section 6.9.1), and (3) FM (financial management) strategy of performing cost-benefit analyses (section 6.9.2).

A few studies from the reviewed literature align with the interview findings for the costs versus benefits of SOR process optimisation and SOR inspection and processing. Relating to SOR process optimisation (i.e. lenient RL process), studies identified that the costs of a lenient return policy can be larger return volumes and higher RL costs (Andresen & Istad, 2019:7; Oghazi *et al.* 2018:190), while the benefits can be an increase in sales (Andresen & Istad, 2019:7; Dapiran & Kam, 2017:835) and profits (Davidavičienė & Al Majzoub, 2021:4). Additionally, Euchi *et al.* (2019:44) found that online retailers compensate consumers for delays in the return process by sending a replacement before return receipt, echoing the interview findings for the costs versus benefits of an instant replacement dispatch (SOR inspection and processing element). Although a few studies indicated that the cost of investment in resources can enhance RL process efficiency (Meyer *et al*. 2017:1) and improve the management of consumer returns (Frei *et al.* 2020:1619; Jović *et al*. 2020:160; Misni & Lee, 2017:92-93), no studies identified the benefits of meeting consumer expectations and managing service performance in RL.

Evidently, this study contributes to the literature by adding to the benefits of investing in resources for effective RSP improvement execution and RSP management of service agreements and standards.

Essentially, considering cost versus benefit service parameters can help online retailers address the service (1) pitfalls of internal preservation (internal culture), poor RL planning and a lack of resources (poor RLM), and (2) problems of a poor return experience, unmet expectations, dissatisfaction, consumer uncertainty (consumer problems), a poor return process, service failures, a loss of consumer confidence and trust, and a loss of sales, market share and consumers (online retailer problems).

8.5.2.3.5 SC and market service parameters

SC and market service parameters involve the key parameters of SC integration and resource capabilities, SC agreements and consumer demographics/characteristics (see Figure 8.**15**), which can influence the implementation of various SOR and RSP propositions.

SC integration and *resource capabilities* can be important considerations for SOR propositions and RSP propositions, involving 3PL providers/couriers, suppliers and 3PRL providers. Specifically, for the key SOR communication practice of streamlined SOR communication, online retailers must consider the IT integration capabilities and integration willingness of couriers and suppliers to provide return tracking information to keep consumers informed in the return process. Similarly, online retailers must consider the willingness of 3PRL providers to integrate and share information for key SOR process, RSP evaluation, RSP improvement and RSP management practices. Specifically, the SC integration and information sharing capabilities of 3PRL providers must be considered for (1) SOR process optimisation (section 8.5.2.1.2), (2) RSP evaluation data sources (section 8.5.2.2.1), (3) RSP improvement execution (section 8.5.2.2.2), and (4) RSP management of service standards and agreements (section 8.5.2.2.3). The following quotations convey these findings:

> "We have couriers […] so the integration between the systems is very important to make sure that the customer have visibility of where their returns are." (P3, returns manager, online retailer)

> "[…] when you have a logistics service provider, these APIs are quite important. So, you can see the integration between your system and their systems. You can communicate to the customer so you can track certain events, especially in reverse logistics." (P13, supply chain manager, multichannel retailer)

> "[…] from an integration point of view, it would be brilliant if you had access to the supplier system […]. And you can simply enter their website and say, […] I'm looking up this barcode and the barcode tells you, no problem, this is still under warranty […]. But then also you can track what's happening on your supplier side, so that you can give accurate information to your customer […]." (P5, general manager, online retailer)

> "[…] you can outsource all of that and somebody else does all that for you, but you still going to need the […] the visibility from their system." (P13, supply chain manager, multichannel retailer)

> "Look, I think that really is dependent on […] whether you found a partner that can give you what you would like your customer to have and get from you as a business and how you would like to be portrayed. […] I think outsourcing is an option […] [if] they [online retailers] have enough visibility on what that outsource service provider is providing." (P13, supply chain manager, multichannel retailer)

Moreover, online retailers must consider the IT integration capabilities and integration willingness of 3PL providers for the effective implementation of RSP evaluation preparation, RSP management formalisation and RSP management of service standards and agreements. Subsequently, without the willingness or capability of 3PL providers to integrate with online retailers, RSP evaluation and management that involves SC parties would be impossible. Consequently, SC integration and resource capabilities complement the organisational capabilities parameters relating to RL process, IT and information management capabilities (see section 8.5.2.3.3). The following quotations convey these findings:

> "[…] you're always going to need some internal/external integration. […]. So, when you do SLA management, [systems integration helps] to understand the time when each event took place. […] so, you can measure how long it's taking, are they meeting service level requirements […]." (P13, supply chain manager, multichannel retailer)

> "[…] with the logistics company that's just doing some of your […] reverse logistics. And there's also agreements in place on our system [that] automatically integrates with their system." (P11, Demand and sales manager, FMCG distributor)

> "[…] the more integrated, the less likelihood of collection failures, return failures, service failures. So, whether your logistics provider is external courier or an internal provider, you know that integration from a systems perspective is important." (P1, operations manager, 3PRL provider firm)

Regarding *SC agreements*, online retailers must consider their agreements with suppliers before outsourcing the RL process to 3PRL providers, which can be important for RSP management. For example, online retailers must consider supplier agreements before selecting a full RL outsourcing strategy since 3PRL providers might fail to comply with established RL service standards and neglect managing service agreements with suppliers. Moreover, online retailers must consider SC agreements that involves service level agreements (SLAs) with service providers (e.g. couriers) for RSP evaluation metrics and tools (key RSP evaluation practice) and RSP management of service standards and agreements (key RSP management practice). For example, if the courier agreed to collect returns within 48 hours, online retailers can use the agreed service standard to evaluate, manage and monitor the RSP of the courier. The following quotations demonstrate the importance of considering SC agreements for implementing RSP propositions:

> "[…] if you outsource the entire reverse logistics to an external company […], you're obviously going to struggle to get the supplier agreements and all of that upheld by a different company […] and getting a courier to go and collect your parcels from the customers and making sure it gets delivered [or returned] […]." (P3, returns manager, online retailer)

> "Did your couriers receive instruction, and did they collect a parcel within the 48 hours that we've agreed […]. So, it's all about timestamps […]." (P5, general manager, online retailer)

> "So, when you do SLA management, […] you need that data somewhere […] so you can measure how long it's taking, are they meeting service level requirements […]." (P13, supply chain manager, multichannel retailer)

Consumer demographics/characteristics parameters involve consumer region, preferences, generation/skills and types, which can influence the implementation of several SOR and RSP propositions. Specifically, online retailers must consider *consumer region* and *preferences* for the implementation of key SOR communication and SOR process practices. For example, consumers in a certain region might prefer human interaction, which means that online retailers must consider this for

(1) SOR communication platforms, (2) streamlined and personalised SOR communication (section 8.5.2.1.1), (3) SOR request (section 8.5.2.1.2), (4) RSP evaluation data sources (section 8.5.2.2.1), (5) RSP improvement preparation (section 8.5.2.2.2), and (6) RSP management of service failures (section 8.5.2.2.3). The following quotation portray the importance of considering consumer demographics for the implementation of service practices in RL:

> "What is very popular is to go the AI route […]. You've got an online customer service technology tool, which is based on AI, which is based on your standard queries and answers, […] and again, unfortunately, in Africa, there is still the human touch that is required with these types of things." (P12, Head of logistics, online retailer)

Similarly, online retailers must consider the *generation/skills* of their consumers for the implementation of the key SOR process practice of SOR request. Specifically, online retailers with an older-generation or less-technological inclined consumer base must consider implementing various return request options, allowing consumers to log returns via contact centres. Additionally, online retailers must consider *consumer types* for the implementation of SOR inspection and processing. For example, consumers might be less confident to hand a product return parcel over to a courier driver, not knowing if the product will arrive at the online retailer's facility for a refund. Therefore, considering the distrusting nature of consumers, the online retailer can implement instant refunds, linking with cost versus benefit parameters (see section 8.5.2.3.4). The following quotations demonstrate the impact of consumer generation/age/skills and types on the implementation of key SOR process practices:

> "[…] a customer calls in to state that I have an item, [and] she doesn't know how to log in and she doesn't know how to create a return from her account. So, we've got to establish that sensitivity and that urgency to assist, to help [with] return [logging] […]." (P9, regional & online DC manager, online retailer)

> "[…] the fraud on the other side […] so, you as a consumer don't want to hand it over without knowing that when you've signed it over to the collecting courier that you will be refunded at that point in time because the consumer can't take responsibility for what happens to the product in transit." (P2, owner, supply chain consultancy firm)

As support RL practices for the consideration of SC and market service parameters, online retailers can implement (as supported by literature) the (1) SCI strategy of considerations for SCI (section 6.4.1), (2) CI strategy of considerations for CI (section 6.4.2), and (3) RL in/outsourcing strategy of considerations and analysis of RL in/outsourcing decisions (section 6.4.1).

No studies in the reviewed literature focused on considering SC integration and resource capabilities of 3PL/3PRL providers and suppliers and SC agreements for the implementation of SOR and RSP propositions. However, Ashan and Rahman (2021:154) indicated that efficient RLM requires SCI since RL processes can involve suppliers and 3PL/3PRL providers, which emphasises the importance of considering SC integration and resource capabilities of SC partners for various SOR and RSP propositions. Regarding consumer demographics/characteristics, Bozzi *et al.* (2022:29) found that consumers in Brazil dislike talking to AI bots, preferring more personal communication, which aligns with the interview findings of considering consumer region and preferences for consumer communication. Similarly, De Borba *et al.* (2021:137) mentioned that return logging and return processes must be flexible to meet the needs of consumers. Nevertheless, no studies identified the

potential of consumers distrusting the 3PLs/couriers with return collection and transportation to justify an instant refund.

Subsequently, this study identified various SC and market parameters that must be considered for the effective implementation of various SOR and RSP propositions, which can help online retailer address the service (1) pitfalls of internal preservation (internal culture), poor RL planning (poor RLM), poor visibility and poor external integration (information-related), and (2) problems of a poor return experience, unmet expectations and dissatisfaction, consumer frustration, anger and uncertainty (consumer problems), poor return communication, poor return processes, service failures, a loss of consumer confidence and trust, reputational damage, and a loss of sales, market share and consumers (online retailer problems).

8.5.2.3.6 Legal service parameters

Legal service parameters involve the key parameter elements of privacy legislation and consumer protection legislation (see Figure 8.**15**), which can influence the implementation of various SOR and RSP propositions.

Specifically, online retailers must consider *privacy legislation*, like the protection of personal information act (POPIA), before implementing key SOR communication, RSP evaluation and RSP improvement practices. For instance, online retailers must consider South Africa's POPIA for streamlined and personalised SOR communication, which involves updating and personally contacting consumers through various SOR communication platforms. Subsequently, online retailers must first obtain permission from consumers to receive correspondence that requires personal information (e.g. cell phone and email contact details). Evidently, online retailers with consumers that opt-out to receive personal communication must consider providing these consumers with the capability to track their returns on the website for streamlined SOR communication. Similarly, online retailers must consider privacy legislation for RSP evaluation data sources (i.e. consumer complaints, feedback and return data) and RSP improvement preparation and execution (i.e. understanding consumer needs and behaviour for RSP improvements). The following quotations demonstrate the impact of privacy legislation on the implementation of service propositions:

> "The more visibility you give to the customer, the better experience that the customer will have. So, […] especially now with the POPI Act […], the customer has got a choice whether or not they want to stay subscribed to a certain online company or not […]. But it also allows you then that if the customer makes a purchase and that the customer is fully integrated with a firm, that customer can track their own purchase order and […] the same applies for reverse logistics." (P12, Head of logistics, online retailer)

> "I believe that I always would like to hear the voice of customer […]. You would like to know what makes that customer happy? What does he believe in? What does he want? What does he prefer? […] But customer information is very delicate, […] not many customers want to be probed and want to be questioned on certain things […]." (P10, Head of Sales and Logistics, OEM/multichannel retailer)

Likewise, online retailers must consider *consumer protection legislation*, like the Consumer Protection Act (CPA), for the implementation of the key SOR process practice of SOR process optimisation, involving the establishment of a lenient SOR process (key practice element). For instance, if South Africa's CPA stipulates that online retailers must accept returns for a seven-day period, they can consider extending the return period to 14 or 30 days for the effective implementation of a lenient SOR process. Consequently, the legal parameter of consumer protection legislation links with the cost versus benefit parameter for SOR process optimisation (section 8.5.2.3.4). The following quotation supports this finding:

> "[…] but it's worth thinking about the terms and conditions, policy and then customer proposition. What's your offer, because you could have terms and conditions that are by the book, straight down by the CPA. But your proposition could be better […] you could offer returns a lot longer than that." (P1, operations manager, 3PRL provider firm)

As a support RL practice for the consideration of legal parameters, online retailers can implement the CI strategy of considerations for CI (as supported by literature in section 6.4.2). No studies from the reviewed literature identified the importance of considering privacy legislation for the implementation of SOR and RSP propositions. Therefore, this study uniquely identifies that online retailers must consider consumer privacy for SOR communication, RSP evaluation and RSP improvement. Although a few studies in the reviewed literature mentioned the significance of consumer protection legislation for RLM adoption (see section 2.4.4), no studies mentioned that online retailers can consider consumer protection legislation for implementing lenient return processes.

Evidently, this study highlights the importance of considering legal parameters for the implementation of various SOR and RSP propositions, which can help online retailers mitigate the service (1) pitfalls of internal preservation (internal culture), poor RL planning (poor RLM), poor visibility and poor external integration (information-related), and (2) problems of a poor return experience, unmet expectations, consumer frustration and anger, consumer uncertainty (consumer problems), poor return communication, a loss of consumer confidence and trust, and a loss of sales and market share (online retailer problems).

Essentially, the service parameters can be important for implementing of SOR and RSP propositions and addressing various service pitfalls and problems. Therefore, online retailers must consider service parameters as a main service proposition for the effective RLM of consumer returns. The next section contains a framework and summary of the findings for service propositions in RLM.

8.5.2.4 Framework and summary of findings for service propositions in RLM

Clearly the discussion in section 8.5.2 showed that service propositions, including service-orientated return (SOR) propositions, return service performance (RSP) propositions and service parameters, can

be important for the effective RLM of consumer returns in online retailing. Based on the discussion of findings, Figure 8.**16** provides a broad overview of the service propositions for RLM, demonstrating the links between the RL support practices, main propositions and propositions categories (listed below the main propositions in the middle and right columns).

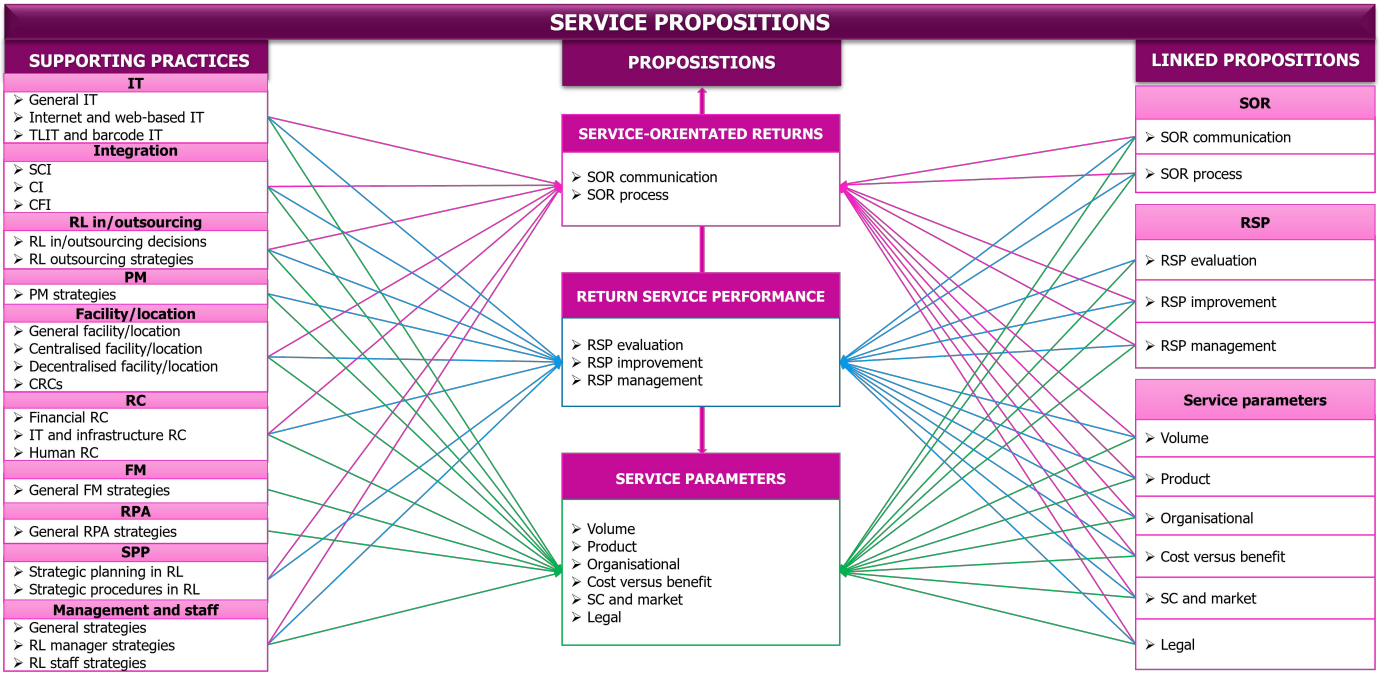


Figure 8.16 Framework for service propositions
Source: Compiled by the researcher

In terms of the *supporting practices*, the framework shows that service propositions can be supported by implementing strategies from most of the RL support practices (except disposition) from the QCA of RL literature findings. The most significant RL practice categories include IT, integration, RL in/outsourcing, facility/location, RC and management and staff practices, which means that online retailers can prioritise the implementation of these RL support practices for the successful implementation of service propositions. In contrast, the least significant support RL practice categories include FM (financial management) and RPA (return prevention and avoidance), which means online retailers can implement FM and RPA practices as a last priority for the successful implementation of service propositions.

In terms of the *propositions*, service parameters, followed by RSP propositions associate with the highest variety of RL support practices. Consequently, online retailers can benefit the most from implementing various RL support practices for the effective consideration of service parameters and implementation of RSP propositions. However, service parameters and RSP propositions might be more complicated to consider or implement for effective consumer service in RL.

Regarding the *links between service propositions*, the framework shows that RSP propositions and service parameters associate with the most proposition categories, indicating that online retailers must

pay attention to RSP propositions and service parameters for the implementation of various service proposition categories. Finally, the framework shows that all proposition categories, except legal parameters, equally link with all the service propositions. Evidently, online retailers may pay less attention to legal parameters in the consideration of various service propositions.

Table 8.**19** provides a detailed proposition framework and summary of the findings, demonstrating the service proposition categories, key practices/parameters (with elements if applicable), support RL practices, linked proposition categories, and the number of requirements per key service practice/parameter and per service proposition category. The links between the service propositions and the service pitfalls and problems will be summarised in the final framework and summary of findings for the service theme (section 8.5.4).

Table 8.19 Summary of findings for service propositions

Proposition categories	Key practices/parameters	Support RL practices	Linked proposition categories	Requirements per key practice/parameter	Requirements per proposition category
SOR communication	**Initial SOR communication**	• Internet and web-based IT • CI • Strategic procedures	• SOR process • RSP management	• Key practices – 1 • Support practices – 3 • Total requirements – 4	• ***Key practices – 8*** • ***Support practices – 19*** • ***Total requirements – 27***
	SOR communication platforms • Telephonic SOR communication platforms • Electronic SOR communication platforms	• General IT • Internet and web-based IT • TLIT • CI • RL outsourcing • RC	• SOR communication & process • RSP improvement and management • Organisational, SC and market parameters	• Key practices – 2 • Support practices – 6 • Total requirements – 8	
	Streamlined SOR communication • Standardised return communication • Systems-based communication • Collaborative communication	• General IT • Internet and web-based IT • TLIT and barcode IT • SCI • CI • Strategic procedures in RL	• SOR communication & process • RSP improvement and management • Product, organisational, SC, market and legal parameters	• Key practices – 3 • Support practices – 7 • Total requirements – 10	
	Personalised SOR communication • Personalised assistance and arrangements before collection • Personalised contact after return processing	• CI • RC • RL manager strategies	• SOR communication & process • RSP improvement and management • SC, market and legal parameters	• Key practices – 2 • Support practices – 3 • Total requirements – 5	
SOR process	**SOR process optimisation** • Establish a lenient SOR process • Establish an efficient SOR process	• General IT • CI and CFI • RL outsourcing • Centralised facility/location • RC • Strategic planning in RL • RL staff strategies	• SOR communication & process • RSP improvement and management • Organisational, cost versus benefits, SC, market and legal parameters	• Key practices – 2 • Support practices – 8 • Total requirements – 10 •	• ***Key practices – 10*** • ***Support practices – 18*** • ***Total requirements – 28***
	SOR request • Hassle-free and streamlined return request • Various return request options	• Internet and web-based • CI • RL staff strategies	• SOR communication & process • RSP management • Organisational, SC and market parameters	• Key practices – 2 • Support practices – 3 • Total requirements – 5	
	SOR collection • Simultaneous return pick-up and replacement delivery • Streamline SOR collection • Various return drop-off points	• SCI • CFI • RL outsourcing • Decentralised facility/location	• SOR process • RSP management • Product and organisational parameters	• Key practices – 3 • Support practices – 4 • Total requirements – 7	
	SOR inspection and processing • Pre-return inspection at consumer locations • Instant replacement dispatch • Fast/instant refunds	• CI • RC • RL staff strategies	• SOR process • RSP improvement and management • Volume, product and cost versus benefits	• Key practices – 3 • Support practices – 3 • Total requirements – 6	
RSP (return service performance) evaluation	**RSP evaluation preparation** • Standardise RL processes and guidelines • Train staff • Internal and external systems integration	• SCI • CFI • PM • Strategic procedures in RL • RL staff strategy	• RSP evaluation, improvement and management • Organisational, SC parameters	• Key practices – 3 • Support practices – 5 • Total requirements – 8	• ***Key practices – 9*** • ***Support practices – 13*** • ***Total requirements – 22***
	RSP evaluation metrics and tools	• General IT • CI	• RSP evaluation, improvement and management	• Key practices – 3 • Support practices – 4	

Proposition categories	Key practices/parameters	Support RL practices	Linked proposition categories	Requirements per key practice/parameter	Requirements per proposition category
	• Operational metrics and related tools • SC metrics and related tools • Consumer service metrics and related tools	• PM • RL manager strategy	• Volume, organisational, SC and market parameters	• Total requirements – 7	
	RSP evaluation data sources • Consumer feedback and complaint data • Consumer return data • Mystery shopper data	• CI • RL outsourcing • PM • RC	• RSP evaluation and improvement • Volume, organisational, SC, market and legal parameters	• Key practices – 3 • Support practices – 4 • Total requirements – 7	
RSP improvement	**RSP improvement preparation** • Understand consumer needs and behaviour • Identify and share service failures • Brainstorm improvement plans	• General IT and TLIT • CI and CFI • PM • Strategic procedures in RL • RL manager strategy • RL staff strategies	***Practices*** • SOR communication • RSP evaluation and improvement • Volume, organisational, SC, market and legal parameters	• Key practices – 3 • Support practices – 8 • Total requirements – 11	• ***Key practices – 7*** • ***Support practices – 17*** • ***Total requirements – 24***
	Execute RSP improvements • Address consumer complaints • Enhance consumer experience • Improve consumer service • Improve return processes	• General IT • CI and CFI • RL in/outsourcing • Decentralised facility/location • RC • Strategic planning in RL • RL staff strategies	• SOR communication & process • RSP evaluation, improvement and management • Volume, organisational, cost versus benefits, SC, market and legal parameters	• Key practices – 4 • Support practices – 9 • Total requirements – 13	
RSP management	**RSP management formalisation** • Benchmark RL service standards against FL service standards • Create consumer-focused RL service standards • Establish a consumer service strategy and policy • Establish service agreements	• General IT • SCI • CI • Strategic planning in RL • Strategic procedures in RL	• SOR communication & process • RSP evaluation, improvement and management • SC and market parameters	• Key practices – 4 • Support practices – 5 • Total requirements – 9	• ***Key practices – 11*** • ***Support practices – 21*** • ***Total requirements – 32***
	RSP management of service standards and agreements • Use systems and integration • Use performance measures • Use RL insourcing and dedicated resources • Use appropriate facilities	• General IT and TLIT • SCI and CFI • RL insourcing • PM • Centralised facility/location • CRCs • RC • RL manager strategy	• RSP evaluation, improvement and management • Organisational, costs versus benefits, SC and market parameters	• Key practices – 4 • Support practices – 10 • Total requirements – 14	
	RSP management of service failures • Use systems and integration • Use RL insourcing • Use staff training	• General IT and TLIT • SCI and CI • RL insourcing • RL staff strategies	• SOR communication • RSP management • Organisational, SC and market parameters	• Key practices – 3 • Support practices – 6 • Total requirements – 9	
Volume parameters	**Return volume**	• CI • RL in/outsourcing • RC • RL staff strategies	• SOR process • RSP improvement • Product and organisational parameters	• Key parameter – 1 • Support practices – 4 • Total requirements – 5	• ***Key parameters – 2*** • ***Support practices – 7*** • ***Total requirements – 9***
	Complaints volume	• CI • RL in/outsourcing • PM	• RSP evaluation and improvement	• Key parameter – 1 • Support practices – 3 • Total requirements – 4	
Product parameters	**Type of product return**	• Barcode IT • SCI and CI • CFI	• SOR communication & process • Cost versus benefits, SC and market parameters	• Key parameter – 1 • Support practices – 4 • Total requirements – 5	• ***Key parameters – 2*** • ***Support practices – 9*** • ***Total requirements – 11***
	Product type	• Barcode IT • SCI and CI • RC • RL staff strategy	• SOR communication & process • RSP improvement • Volume, SC and market parameters	• Key parameter – 1 • Support practices – 5 • Total requirements – 6	
Organisation parameters	**Organisation size**	• RL in/outsourcing • Decentralised facility/location • RC	• SOR process • Volume parameter	• Key parameter – 1 • Support practices – 3 • Total requirements – 4	• ***Key parameters – 6*** • ***Support practices – 13*** • ***Total requirements – 19***
	Organisational capabilities • Resource capabilities • Staff capabilities • RL process capabilities • IT capabilities • Information management capabilities	• General IT and TLIT • Internet and web-based IT • SCI and CI • RL in/outsourcing • PM • General facility/location • RC and RPA	• SOR communication & process • RSP evaluation, improvement and management • Cost versus benefit, SC and market parameters	• Key parameters – 5 • Support practices – 10 • Total requirements – 15	
Cost versus benefits parameters	**Cost versus benefits for SOR process propositions**	• CI • RC • FM	• SOR process • Product, organisational, SC, market and legal parameters	• Key parameter – 1 • Support practices – 3 • Total requirements – 4	• ***Key parameters – 2*** • ***Support practices – 5*** • ***Total requirements – 7***
	Cost versus benefits for RSP propositions	• RC • FM	• RSP improvement • Organisational parameter	• Key parameter – 1 • Support practices – 2 • Total requirements – 3	

Proposition categories	Key practices/parameters	Support RL practices	Linked proposition categories	Requirements per key practice/parameter	Requirements per proposition category
SC and market parameters	**SC integration and resource capabilities**	• SCI • RL in/outsourcing	• SOR communication & process • RSP evaluation, improvement and management • Organisational parameters	• Key parameter – 1 • Support practices – 3 • Total requirements – 4	• ***Key parameters – 3*** • ***Support practices – 7*** • ***Total requirements – 10***
	SC agreements	• SCI • RL in/outsourcing	• RSP evaluation and management	• Key parameter – 1 • Support practices – 3 • Total requirements – 4	
	Consumer demographics /characteristics	• CI	• SOR communication & process • RSP evaluation, improvement and management • Cost versus benefit parameter	• Key parameter – 1 • Support practices – 1 • Total requirements – 2	
Legal parameters	**Privacy legislation**	• CI	• SOR communication • RSP evaluation and improvement	• Key parameter – 1 • Support practices – 1 • Total requirements – 2	• ***Key parameters – 2*** • ***Support practices – 2*** • ***Total requirements – 4***
	Consumer protection legislation	• CI	• SOR process • Cost versus benefit parameter	• Key parameter – 1 • Support practices – 1 • Total requirements – 2	

Source: Compiled by the researcher

Table 8.**19** provides a detailed summary of the interview findings for service propositions, which can help online retailers identify the (1) requirements for specific service proposition categories, (2) support practices that links with the highest number of service propositions, (3) key practice and key parameter that links with the highest number of service proposition categories, (4) proposition categories that require the most key practices/parameters and key elements, (5) key practice or parameter that require the most key elements, (6) proposition categories that associate with the most support practices, (7) key practice or parameter that associates with the most support practices, and (8) proposition category and key practice/parameter that involves the most requirements for successful implementation/consideration. Some examples of using the framework will be given in the subsequent paragraphs.

In terms of the *requirements for specific service proposition categories*, an online retailer interested in implementing, for example, RSP evaluation propositions in RL can identify (1) RSP evaluation preparation, RSP evaluation metrics and tools and RSP evaluation data sources as key practices, (2) general IT, SCI, CI, CFI, RL outsourcing, PM, RC, strategic procedures in RL, and RL manager and RL staff strategies as required support RL practices, and (3) RSP evaluation, improvement and management and volume, organisational, SC and market-related and legislation parameters as associated proposition categories. Similarly, online retailers that experience, for example, fluctuations in return volume (as a key volume parameter) must focus on return volume when implementing/considering (1) CI, RL in/outsourcing PM, RC and RL staff strategies as support RL practices, (2) SOR process and RSP improvement as associated proposition categories, and (3) product and organisational parameters as associated parameter proposition categories.

The most *significant support RL practices* for the implementation of service proposition categories include CI practices. Subsequently, to effectively implement/consider various service propositions,

online retailers must prioritise the implementation of CI as a support RL practice. Furthermore, the *key practice* of RSP improvement execution and *key parameter* of organisational capabilities *associates with the highest number of proposition categories*, which means that online retailers must pay attention to RSP improvement execution and organisational capabilities for the successful implementation of various service proposition categories. Regarding the *proposition categories*, RSP management *require the most key practices/elements*, which means that online retailers must implement various key practices/elements for the effective implementation of RSP management. Additionally, the *key parameter* of organisational capabilities *requires the most key elements*, which means that online retailers must consider various key elements to effectively consider organisational capabilities.

The *proposition category* of RSP management *associate with the most support RL practices*, which means that support RL practices can be the most beneficial for the implementation of various RSP management practices. Similarly, the *key practice* of RSP management of service standards and agreements, and the *key parameter* of organisational capabilities *associate with the most support RL practices*, which means that support RL practices can be the most beneficial for implementing RSP management of service standards and agreements and considering organisational capabilities. However, RSP management as a proposition category, RSP management of service standards and agreements as a key practice and organisational capabilities as a key parameter might be more complicated to implement/consider for effective consumer service in RL.

Finally, RSP management as a *proposition category* and organisational capabilities as a *key parameter* involve the *highest number of requirements,* which means that RSP management and organisational capabilities might be a too challenging to implement/consider successfully for service effectiveness in RL. Nevertheless, before online retailers choose to implement proposition categories and key practices/parameters based on the number of requirements, they must first identify the linked benefits, which will be identified in section 8.5.4. In the next section, the service profits (subtheme 3) that can be realised through the effective implementation of service propositions, will be analysed and discussed.

8.5.3 Service profits – Subtheme 3

As illustrated in Figure 8.12, and discussed in section 8.2.2., the service profits consist of the profit categories, including consumer and operational, organisational, SC and market, and other themes, profit subcategories and related profits, which can be realised through the implementation/consideration of service-orientated return (SOR) and return service performance (RSP) propositions and service parameters. Figure 8.**17** provides an overview of the service profits, including service profit categories, service profit subcategories and related profits that can be realised through the implementation/consideration of service propositions.

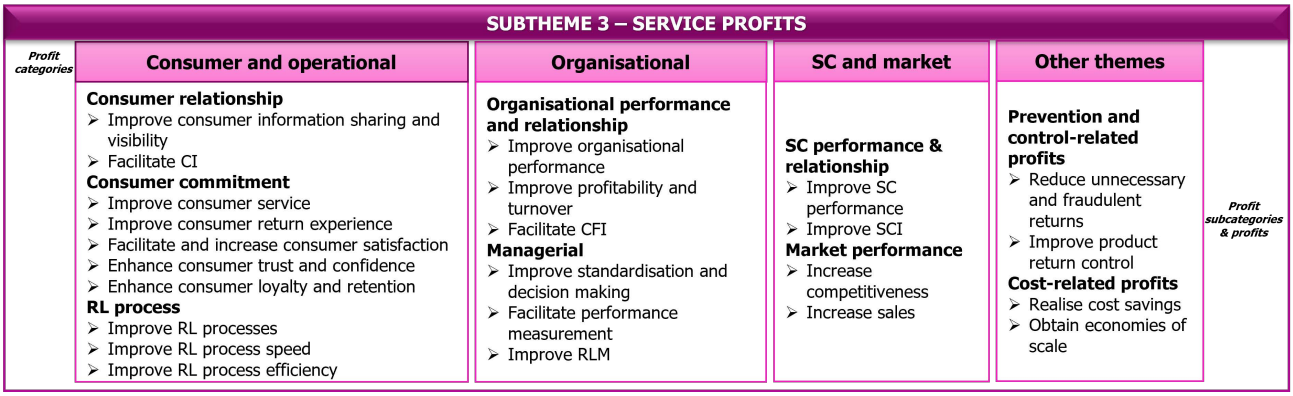


Figure 8.17 Overview of subtheme 3 - Service profits
Source: Compiled by the researcher

In the subsequent sections the main service profit categories, including consumer and operational, organisational, SC and market and other theme profits, with related profit subcategories and service profits will be discussed.

8.5.3.1 Consumer and operational service profits

Consumer and operational profits can be the most significant outcomes associated with the implementation/consideration of service propositions. As illustrated in Figure 8.**17,** consumer and operational service profits can be categorised as (1) *consumer relationship*, (2) *consumer commitment*, and (3) *RL process profits*, which will be discussed in the subsequent sections.

8.5.3.1.1 Consumer relationship profits

Consumer relationship profits involve consumer information sharing and visibility and consumer integration (CI), consumer service, consumer trust and confidence and consumer loyalty and retention, which can be realised through the implementation of various service propositions.

The participants indicated that online retailers could *improve consumer information sharing and visibility* through the implementation of key SOR communication, RSP improvement and RSP management practices and consideration of product, organisational and SC and market parameters. Specifically, consumer information sharing and visibility can be improved and facilitated by (1) implementing SOR communication platforms, streamlined SOR communication, personalised SOR communication, RSP improvement preparation and RSP management of service failures, and (2) considering organisational capabilities, SC integration and resource capabilities and consumer demographics. The following quotations support these findings:

> "So, a well-established technology platform that gives you not only the [return] status updates […] [but also] ticket logging. If you can imagine any call centre you phone in your life, you get a reference number and a ticket […] all the type of live updates. That's critical." (P5, general manager, online retailer)

> "So, if you [the consumer] purchased a television set from Retailer C, and the TV set breaks. So, now Retailer C is saying, we will come and collect it. But we're not going to give you the money, we need to get the money back

from the supplier first. And in that case, your supplier needs to act out the warranty. Now, from an integration point of view, it would be brilliant if you [as the online retailer] had access to the supplier system […] then also you can track what's happening on your supplier side, so that you can give accurate information to your customer […]." (P5, general manager, online retailer)

"We have couriers […] so the integration between the systems is very important to make sure that the customer have visibility of where their returns are." (P3, returns manager, online retailer)

"[RL manager is] one of the most underrated positions and functions currently, I believe in the online industry […] if I [the consumer] pick up a problem and I phone them [the online retailer] up, email them and they say, hang on, no problem, sir, go to this link onto this portal, give us a little bit more information and we'll take care of you." (P12, Head of logistics, online retailer)

"So, if there's been a […] collection failure that should also appear in your CRM, […] and [when] that customer calls in, [the online retailers] they're able to service their customers and are able to identify, "hey, listen, we are aware that there have been these problems, and this is what's being done to sort it […]." (P1, operations manager, 3PRL provider firm)

Moreover, the participants indicated that online retailers could *facilitate CI* by implementing key SOR communication, SOR process and RSP improvement practices and considering legal parameters. Particularly, CI can be facilitated by (1) implementing streamlined SOR communication, SOR request and RSP improvement execution, and (2) considering privacy legislation. The following quotations demonstrate this finding:

"The more visibility you give to the customer, the better experience that the customer will have. So, […] especially now with the POPI Act […], the customer has got a choice whether or not they want to stay subscribed to a certain online company or not […]. But it also allows you then that if the customer makes a purchase and that customer is fully integrated with a firm, that customer can track their own purchase order and […] the same applies for reverse logistics." (P12, Head of logistics, online retailer)

"[…] it shouldn't be a hassle for any person to log a return […] because then it will make them skittish to buy from you again. So, I think in any circumstances like that, a very good interface between the company and the customer is of the utmost importance to make it work." (P3, returns manager, online retailer)

Some studies from the reviewed literature identified profits related to consumer relationships through the implementation of practices related to service propositions. Specifically, (1) consumer information sharing can be enhanced through IT systems (Jalil, 2019:4) and contact centres (Mostert *et al.* (2017:10), (2) consumer visibility can be enhanced through integrated systems between SC partners (Meyer *et al*. 2017:13), and (3) CI can be facilitated through effective consumer information sharing and communication (Ahlén & Johansson, 2023:31; Mostert *et al.* 2017:13)

Subsequently, consumer relationship profits involving consumer information sharing, visibility and integrations, reemphasise that online retailers can address poor visibility, poor systems and poor external integration (information-related) service pitfalls, and consumer uncertainty (consumer) and poor return communication (online retailer) service problems through the implementation of service propositions for the effective RLM of consumer returns.

8.5.3.1.2 Consumer commitment profits

Consumer commitment profits involve consumer service, experience, satisfaction, trust and confidence, loyalty and retention profits, which can be realised through the implementation/consideration of various service propositions.

In terms of *consumer service*, participants emphasised that online retailers could *facilitate and improve consumer service* through key SOR process, RSP improvement and RSP management practices and key volume, product, organisational and legal parameters. Especially, consumer service can be improved through the (1) implementation of SOR process optimisation, SOR inspection and processing, RSP improvement execution and RSP management of service standards and agreements, and (2) consideration of return volume, product type, organisational capabilities and consumer protection legislation. These findings can be demonstrated by the following quotations:

> "[…] but it's worth thinking about the terms and conditions, policy and then customer proposition. What's your offer, because you could have terms and conditions that are by the book, straight down by the CPA. But your proposition could be better […] you could offer returns a lot longer than that." (P1, operations manager, 3PRL provider firm)

> "[…] a practical way of putting a team of people into the street and saying, you know, what returns is such a big thing in our world […] So, let's put a dedicated team in there that are our first line evaluators […] that can go to the customer and say, you know what, before I take this laptop from you, can we quickly do one, two, three and four, maybe solve them right there […] just to give them a better service […]." (P5, general manager, online retailer)

> "I would rather have control of it [reverse logistics] here in our fulfilment centre, within our company, within our own resources. So, that's effectively giving our customers a better service." (P9, regional & online DC manager, online retailer

> "[RL performance measurement is important for] giving our customer an efficient service that's one and […] also ensuring that our fulfilment centres and the returns process is carried out efficiently." (P9, regional & online DC manager, online retailer)

Online retailers can *improve consumer return experience* by implementing key SOR communication, SOR process, RSP evaluation and RSP improvement practices and considering key volume, product, organisational, SC, market and legal parameters. Particularly, the participants mentioned that online retailers could improve consumer return experience by implementing (1) streamlined SOR communication, (2) SOR process optimisation, SOR request and SOR collection, (3) RSP evaluation data sources, and (4) RSP improvement execution. Furthermore, online retailers can improve consumer return experience by considering return volume, type of product return, organisational (information management) capabilities, SC integration and resource capabilities and privacy legislation. These findings can be supported by the following quotations:

> "The more visibility you give to the customer, the better experience that the customer will have. So, […] especially now with the POPI Act […], the customer has got a choice whether or not they want to stay subscribed to a certain online company or not […]. But it also allows you then that if the customer makes a purchase and that the customer is fully integrated with a firm […]." (P12, Head of logistics, online retailer)

> "The starting point is that the customer is always right, but not malicious. And that changes the whole customer's experience of the reverse logistics process." (P1, operations manager, 3PRL provider firm)

> "[Staff training in RL is important for] efficiencies and it should enhance the customer experience, and [help] people [staff] to know what to do, but it's an efficiency and effectiveness issue [in the return process]." (P6, logistics manager, multichannel retailer)

> "Who is going on this whole customer journey? These experiences trying to have a system that is quick, easy to use, streamlined and gives them that unique, authentic customer experience, […] that is as quick as I can purchase a product online, I must be able to return that product online […]. I think that's critical." (P10, Head of Sales and Logistics, OEM/multichannel retailer

> "[…] cross-functional [integration] is imperative in providing the customer with a pleasant customer experience. If the guy gets the wrong thing and he wants it replaced […] they [online retailers] come up with two different deliveries […] so I thought to myself, if we could convince them that when you do a request for return and you [want to] replace […] you hook the two together. Those are the kind of cross-functional examples that I can think of." (P7, owner, 3PRL provider firm)

> "[…] the benefit [of RL outsourcing] lies in all the [return] data and the benefit can be reviewed as a customer experience benefit […]. So, I feel strongly that the benefit in having a company that specialises in reverse logistics is that they will get much more data that is relevant for your customer experience." (P12, Head of logistics, online retailer)

> "I believe outsourcing is an amazing opportunity to ensure that the customer gets the best experience possible, and the reason I say that is I don't have scale in returns." (P6, logistics manager, multichannel retailer)

Similarly, the participants indicated that online retailers could *facilitate* and *increase consumer satisfaction* through key SOR communication, SOR process, RSP evaluation, RSP improvement and RSP management practices and key product, organisational, cost versus benefit, SC and market parameters. Specifically, online retailers can facilitate and increase consumer satisfaction by implementing (1) streamlined SOR communication, (2) SOR process optimisation, SOR collection and SOR inspection and processing, (3) RSP improvement execution, and (4) RSP management formalisation and RSP management of service standards and agreements. Furthermore, considering the type of product return, organisational capabilities, costs versus benefits for SOR process and RSP propositions, SC integration and resource capabilities and SC agreements can facilitate consumer satisfaction. The impact of various service propositions on consumer satisfaction can be illustrated by the subsequent quotations:

> "[…] reverse logistics […] is keeping the customer in the know of what is going on. That's communication […] and the result is you have a happy customer […]." (P10, Head of Sales and Logistics, OEM/multichannel retailer)

> "[…] we tend to ensure that our customers are happy. It was the fundamental reasons why we are here, […] and in terms of strategy, it is under the umbrella of focusing on the customer. We try to ensure that the customer always has the advantage over the deal […] So, we try to focus on […] the customer […] from a strategic point of view, our customer is always right." (P9, regional & online DC manager, online retailer)

> "[RL outsourcing is important because] how do you attribute saving costs where your customers are getting that kind of service? That you [as the consumer] buy it [a clothing item] today, it doesn't fit. I [the 3PRL provider] pick it up tomorrow and that kind of thing is done very quickly, very efficiently. And you have a very happy customer […]." (P7, owner, 3PRL provider firm)

> "[…] a lot of the returns there's a replacement attached to it as well. For example, a customer orders an item which is blue, and they receive an item that is red. Now, you want the reverse logistics to kick in […]. So, what I do, I fulfil the correct item first […] and we ship it on an overnight delivery at our cost and then we wait for that [return] to come. So, this is where we announce trust to the customer […]. We know the customer has been satisfied." (P9, regional & online DC manager, online retailer)

> "I'm talking about both forward and reverse logistics […] making sure that you give him the best service in terms of quality […] and the end result is you have a happy customer […]." (P10, Head of Sales and Logistics, OEM/multichannel retailer)

> "[…] we have this IT interface that's channelling every activity or giving instruction to every stakeholder on what needs to be done. And we've got to make sure there's a lead time in place to make sure that it's governing, to

ensure that we meet the total standard lead time to achieve customer service [standards] […] and to make sure that customer is happy […].” (P10, Head of Sales and Logistics, OEM/multichannel retailer)

Regarding consumer trust and confidence, participants indicated that online retailers could *enhance consumer trust* and *confidence* through various key SOR communication, SOR process, RSP improvement practices and key organisational, cost versus benefit and SC and market parameters. For instance, initial SOR communication, streamlined SOR communication, SOR process optimisation, RSP evaluation data sources and RSP improvement preparation can be implemented to enhance consumer confidence and trust. Additionally, considering organisational (information management) capability, costs versus benefits for SOR process propositions and SC integration and resource capabilities can help online retailers increase consumer trust and confidence. The impact of service propositions on consumer trust and confidence can be supported by the following quotations:

“[…] as I say, it’s a very important issue to share the process with the consumers […] So, that the consumer trusts you, and the consumer understands that you’re open to take a product back if they’re not 100 percent satisfied with it […].” (P4, owner/CEO, 3PRL provider firm)

“[…] the customer […] have access to all the relevant information and trust is established through transparency, which means access to current information.” (P8, logistics manager, multichannel retailer)

“We certainly need to be able to show a customer that it’s on its way to a warehouse which will be inspected and […] tell them it’s been inspected and you’re going to get a refund […]. So, that visibility creates confidence in the buying cycle.” (P8, logistics manager, multichannel retailer)

“[…] there’s the [return] policy […] that generally rolls up to customer proposition. […] it’s also the service element and the trust element […]. So, you know what? We trust you. No problem, no charge returns […] an easy return, generates trust in a business.” (P1, operations manager, 3PRL provider firm

“[…] the benefit [of RL outsourcing] lies in all the [return] data and […] you instil credibility with the customer on a reverse logistics […] knowing that if the customer is going to have a problem, the customer feels it’s fine because they deal with any of their returns.” (P12, Head of logistics, online retailer)

“[External integration is important in RL for] […] listening to your external customer, which is your consumer, then you understand their wants and needs better, which […] harbours a lot of trust between retailer and consumer.” (P4, owner/CEO, 3PRL provider firm)

Finally, online retailers can *enhance consumer loyalty* and *retention* by implementing key SOR process, RSP improvement and RSP management practices as well as considering organisational, cost versus benefit, SC and market parameters. Particularly, online retailers can enhance consumer loyalty and retention through the (1) implementation of SOR process optimisation, SOR collection, RSP improvement execution and RSP management formalisation, and (2) consideration of organisational (RL process) capabilities, costs versus benefits for SOR process propositions and SC integration and resource capabilities. The following quotations illustrate these findings:

“No problem, no charge returns […] I [the consumer] will shop there because it’s easy to return.” (P1, operations manager, 3PRL provider firm)

“[RL outsourcing is important because] how do you attribute saving costs where your customers are getting that kind of service? That you [as the consumer] buy it [a clothing item] today, it doesn’t fit. I [the 3PRL provider] pick it up tomorrow and that kind of thing is done very quickly, very efficiently. And you have a very happy customer who buys again.” (P7, owner, 3PRL provider firm)

“I’m talking about both forward and reverse logistics […] making sure that you give him the best service in terms of quality, in terms of the product you’ve been providing […], and the end result is you have a happy customer that buys more from you.” (P10, Head of Sales and Logistics, OEM/multichannel retailer)

Some studies from the reviewed literature identified profits related to consumer commitment through the implementation of practices related to service propositions. Specifically, previous research found that (1) consumer service can be facilitated through lenient return policies (Hjort *et al.* 2019:782) and measuring service performance (Karlsson *et al.* 2023:9), (2) consumer experience can be enhanced through a consumer-centric approach (Karlsson *et al.* 2023:8), (3) consumer satisfaction can be facilitated and increased through outsourcing to 3PRL providers (Le, 2023:16), reduced RL process lead time (Ashan & Rahman, 2021:20; Nel & Badenhorst, 2020:128) and an efficient RL process (Ashan & Rahman, 2021:20; Ramana *et al.* 2023:6), (4) consumer trust can be enhanced through information sharing and transparency (Eriksson & Käck, 2023:25; Triani *et al.* 2019:471), (5) consumer trust and loyalty can be enhanced through lenient return policies (Oghazi *et al.* 2018:190), (6) consumer loyalty and confidence can be enhanced through a well-developed and easy return policy (Jalil, 2019:1), and (7) consumer loyalty can be enhanced through an effective RL process (Ramana *et al.* 2023:6).

Nevertheless, this study identified additional service propositions that could motivate online retailers to implement/consider SOR propositions, RSP propositions and service parameters for the effective RLM of consumer returns. Additionally, realising consumer commitment profits, reemphasises that online retailers can address the service (1) pitfalls of internal preservation (internal culture), poor visibility, poor systems and poor external integration (information-related), and (2) problems of poor return experience, unmet expectations and dissatisfaction, consumer frustration and anger (consumer problems), poor return communication, poor return processes, a loss of consumer confidence and trust, reputational damage and a loss of sales, market share and consumers (online retailer problems) through the implementation of service propositions.

8.5.3.1.3 RL process profits

RL process profits entail improving RL processes, RL process speed and RL process efficiency through the implementation/consideration of various service propositions.

The participants emphasised that online retailers could *improve RL processes* through the key (1) SOR process practices of SOR process optimisation and SOR request, (2) RSP evaluation practices of RSP evaluation metrics and tools (i.e. using a manager as an evaluation tool) and RSP evaluation data sources, (3) RSP improvement practices of RSP improvement preparation and RSP improvement execution, (4) volume parameter of complaints volume, (5) organisational parameter of organisational (resource and IT) capabilities, and (6) cost versus benefit parameters of costs versus benefits for SOR process propositions. The following quotations convey these findings:

> "[Investment in IT for RL is] crucial. If somebody could develop a platform that could plug into anyone's online portals to smoothen the reverse logistics that would be great. Because I tell you why, this is where online

companies lose business and, in the end, they lose the customer's trust […]." (P9, regional & online DC manager, online retailer)

"[…] if you have a system that can allow the customer or the consumer to initiate the request for a return by themselves on their own, it makes for a lot more smoother [sic] process." (P3, returns manager, online retailer)

"[…] the responsible party has to be the manager […] the customer always complained […] 90 percent related to returns. So, it just becomes so important for us […] we pull from that complaint's to iron out the creases in the [return] processes […]." (P9, regional & online DC manager, online retailer)

Additionally, the participants suggested that online retailers could *improve RL process speed* through key SOR process, RSP improvement and RSP management practices, including (1) SOR process optimisation, SOR collection and SOR inspection and process, (2) RSP improvement execution, and (3) RSP management of service standards and agreements. Moreover, online retailers can improve RL process speed by considering key volume, product, organisational, cost versus benefit and SC and market service parameters, including (1) return volume and complaints volume, (2) type of product return and type of product, (3) organisational size and organisational (resource and RL process) capabilities, (4) costs versus benefits for SOR process and RSP propositions, and (5) SC integration and capabilities. The subsequent quotations support these findings:

"[…] you should have the resources available to expedite a collection and return. Therefore, I believe that investing in information technology, that's going to […] streamline the [return] process." (P10, Head of Sales and Logistics, OEM/multichannel retailer)

"We don't annoy the customer by saying, well, the truck will be there in two weeks' time. We have […] a very specific logistics model that we've developed, and our turnaround time is maybe forty-eight hours at max to be able to go and pick up a product." (P7, owner, 3PRL provider firm)

"I would say the best thing is to have a centralised facility […] from a reverse logistics point of view, having a central unit makes a lot of sense. Specifically, because you've got the ability to employ bigger and better teams that can speed up [return] processes […]. So, I would go towards having a centralised reclaimed centre […] so that you've got that uniform approach in your [RL] activity." (P5, general manager, online retailer)

"I'd like to return this and exchange it for a different size. The two processes happen at the same time, trigger the return and trigger the outbound order for the replacement item. So, the courier going to fetch the returned item is also dropping off the replacement […] [that] truncates that wait period […]." (P1, operations manager, 3PRL provider firm)

"[…] a large firm that has got satellite branches in all your main CBDs, it will be […] a quicker cycle of […] returning an item […] having multiple hundreds of drop off points for returning items, like [the 3PL providers] Pargo, [and] DSV has got their own. So that's another option […]." (P12, Head of logistics, online retailer)

"But if you had a team of people that could evaluate at the point of taking it from the customer, you would salvage tons of money and time […] [by] putting a team of people into the street and saying, you know what, returns is such a big thing in our world […] So, let's put a dedicated team in there that are our first line evaluators […] that can go to the customer and say, you know what, before I take this laptop from you, can we quickly do one, two, three and four, maybe solve them right there […] just to give them a better service [and] save some time and traffic at the DC." (P5, general manager, online retailer)

"[…] they [the online retailer] had fewer reverse logistics complaints […] we've [the 3PRL provider] taken their credit timings from sort of a month or more to a couple of days. So, where they would wait a month to credit a customer, now they can do it in three days." (P4, owner/CEO, 3PRL provider firm)

Finally, online retailers can *improve RL process efficiency* by implementing key SOR process, RSP improvement and RSP management practices and considering key organisational and SC and market service parameters. Specifically, online retailers can improve the efficiency of the RL process through (1) SOR process optimisation and SOR collection, (2) RSP improvement execution, (3) RSP management formalisation and RSP management of service standards and agreements, (4)

organisational size (e.g. smaller firms using drop-off points) and organisational (RL process) capabilities, and (5) SC integration and resource capabilities. The impact of service propositions on RL process efficiency can be illustrated by the following quotations:

> "[Staff training in RL is important for] efficiencies and it should enhance the customer experience, and [help] people [staff] to know what to do, but it's an efficiency and effectiveness issue [in the return process]." (P6, logistics manager, multichannel retailer)

> "[RL outsourcing is important because] how do you attribute saving costs where your customers are getting that kind of service? That you [as the consumer] buy it [a clothing item] today, it doesn't fit. I [the 3PRL provider] pick it up tomorrow and that kind of thing is done […] very efficiently." (P7, owner, 3PRL provider firm)

> "[…] from an efficiency point of view […] if you can have a lot of drop off points for your consumers to return products, all the better […] they would be able to go to a Caltex garage and there's a drop point there." (P4, owner/CEO, 3PRL provider firm)

> "Because policy and guiding guides and principles that's agreed up front drives efficiency and compliance. You know, there's nothing worse than a consumer having an expectation of X but getting Y because somebody decided that the SOP wasn't the one, they wanted to follow today." (P6, logistics manager, multichannel retailer)

> "[RL performance measurement is important for] giving our customer an efficient service and […] also ensuring that our fulfilment centres and the returns process is carried out efficiently." (P9, regional & online DC manager, online retailer)

Several studies from the reviewed literature corresponded to the interview findings related to RL process profits. For instance, studies identified that online retailers could improve (1) RL process speed through a streamlined RL process (Nel & Badenhorst, 2020:127), decentralised facilities/locations (Bozzi *et al.* 2022:20; Karlsson *et al.* 2023:8) and dedicated skilled staff (Ahsan & Rahman, 2022:157; Mostert *et al.* 2017:13), (2) RL process efficiency through outsourcing to 3PRL providers (Wang, Dang *et al.* 2021:2), skilled staff (Ahsan & Rahman, 2022:157) and appropriate performance measures (Karlsson *et al.* 2023:9), and (3) RL processes through appropriate IT and SC information sharing (Ahlén & Johansson, 2023:31, 32), consumer return data and feedback (Ahlén & Johansson, 2023:31; Bozzi *et al.* 2022:15; Lamba, *et al.* 2020:388) and managers that analyse service performance (Sajjanit & Rompho, 2019:790).

Subsequently, realising RL process profits through the effective implementation/consideration of service propositions, reemphasise that online retailers can address the service (1) pitfalls of inattention to RLM, poor RL planning, a lack of resources (poor RLM) and poor external integration, and (2) problems of a poor return experience, unmet expectations and dissatisfaction (consumer problems), poor return processes, service failures, a loss of consumer confidence and trust, and a loss of market share and consumers (online retailer problems).

8.5.3.2 Organisational service profits

As illustrated in Figure 8.**17**, organisational service profits can be categorised as *organisational performance and relationship profits* and *managerial profits*, which will be discussed and analysed in subsequent sections.

8.5.3.2.1 Organisational performance and relationship profits

Organisational performance and relationship profits involve the improvement of organisational performance, profitability and turnover, and facilitation of cross-functional integration (CFI) which can be attained through various service propositions.

Specifically, online retailers can *improve organisational performance* through the key (1) RSP evaluation practices of RSP evaluation metrics and tools and RSP evaluation data sources, (2) RSP improvement practice of RSP improvement preparation, and (3) volume parameter of complaints volume. Subsequently, RSP propositions and volume parameters can be beneficial not only for service performance in RL but also for the overall performance of the online retailer. The following quotation illustrates this finding:

> "[…] the responsible party has to be the manager […] the customer always complained […] 90 percent related to returns. So, it just becomes so important for us because this is where we improve our business. […] we pull from that complaint's to iron out the creases in the [return] processes and to improve […] our offering to the customer." (P9, regional & online DC manager, online retailer)

Additionally, online retailers can *improve profitability* and *turnover* through key SOR process and RSP improvement practices and key cost versus benefit parameters. Particularly, online retailers can improve their profitability and turnover by (1) implementing SOR process optimisation (e.g. establishing a lenient return policy and "no questions asked" return acceptance) and RSP improvement preparation, and (2) considering costs versus benefits for SOR process propositions. The impact of service propositions on improved profitability and turnover can be demonstrated by the subsequent quotations:

> "I think you'll find that the online retailers who just accept and take back the product no matter what, no questions asked at the end of the day, have a better turnover and [are] more profitable than the online retailers who are very sticky about taking product back." (P4, owner/CEO, 3PRL provider firm)

> "[…] but in terms of your ability to attract new customers, if they're looking for recommendations, if they're looking for trust, and the general consensus is, this is a great place to shop because their return policies is very good. You know that translates into bottom line." (P1, operations manager, 3PRL provider firm)

> "And if you're listening to your external customer, which is your customer, you know, then you understand their wants and needs better, which ultimately increases profitability […]." (P4, owner/CEO, 3PRL provider firm)

Finally, online retailers can *facilitate CFI,* which involves internal collaboration, cooperation and information sharing between functions involved in RL. Participants indicated that online retailers could improve CFI through the key (1) SOR process practice of SOR collection (i.e. simultaneous return pickup and replacement drop-off), (2) RSP improvement practices of RSP improvement preparation and RSP improvement execution (e.g. improving return processes through internal integration), and (3) product-related parameter of type of product return (e.g. receiving the incorrect item requiring a replacement). The following quotations supports these findings:

> "[…] making sure that you have speed, and you expedite and execute [RL processes], making sure that […] you are nimble and you swift […] for the logistics part of things. So, integration between departments is critical because the people need to work together." (P10, Head of Sales and Logistics, OEM/multichannel retailer)

> "[…] cross-functional [integration] is imperative in providing the customer with a pleasant customer experience. If the guy gets the wrong thing and he wants it replaced […] they [online retailers] come up with two different deliveries […] so I thought to myself, if we [the 3PRL provider] could convince them that when you do a request for return and you [want to] replace […] you hook the two together. Those are the kind of cross-functional examples that I can think of." (P7, owner, 3PRL provider firm)

> "[…] we have different departments, you have the service division, and you have the logistics division. And you have the reverse logistics division that falls under service. Everyone was not singing from the same hymn sheet, and there was no [cross-functional] alignment. OK, we would believe that it should be done this way. They believe it should be done the other way. Therefore, when the customer calls, the call centre realise, wow, OK, we're looking terrible here. Guys let's have a caucus. Let's have a workshop that's a brainstorming session. Let us document the processes." (P10, Head of Sales and Logistics, OEM/multichannel retailer)

The interview findings on organisational performance profits aligned with limited studies from the reviewed literature. Nevertheless, Bozzi *et al.* (2022:15) indicated that analysing product return data can improve organisational performance. Similarly, Sajjanit and Rompho (2019:790) indicated that online retailers could improve their organisational performance by using managers to analyse service performance in RL. Additionally, Davidavičienė and Al Majzoub (2021:4) and Nel and Badenhorst (2020:127) mentioned that clear and well-designed return policies could enhance profitability. Moreover, Bozzi *et al.* (2022:19) claimed that simultaneous return pickup and exchange delivery associates with high levels of integration. Consequently, this study identified additional organisational performance and relationship profits associated with the implementation of the key SOR process, RSP evaluation and RSP improvement practices and the consideration of various service parameters.

Essentially, realising organisational performance and relationship profits, reemphasise that online retailers can address the service (1) pitfalls of functional autonomy and preservation (internal culture), inattention to RLM, poor RL planning (poor RLM), and (2) problems of a poor return experience, unmet expectations and dissatisfaction, consumer uncertainty (consumer problems), poor return process and service failures, and a loss of sales, market share and consumers (online retailer problems) through the implementation of service propositions for the effective RLM of consumer returns.

8.5.3.2.2 Managerial profits

Managerial profits involve improving standardisation and decision-making, facilitating performance measurement (PM) and improving RLM, which can be attained through various service propositions.

Specifically, some participants indicated that online retailers could *improve standardisation* and *decision-making* through the key (1) SOR process practice of SOR process optimisation, (2) RSP evaluation practice of RSP evaluation preparation (i.e. using staff training), and (3) RSP management practice of RSP management of service standards and agreements. The following quotations expand on these findings:

> "I would say the best thing is to have a centralised facility. […] from a reverse logistics point of view, having a central unit makes a lot of sense. Specifically, because you've got the ability to employ bigger and better teams that can speed up processes, make better decisions, and very importantly, you have got the same method of thinking in one facility […] you do not want six or seven reclaim centres where the six or seven people that

handled electronics all have a different view of what is used. Because that creates uncertainty with the consumer […]. So, I would go towards having a centralised reclaimed centre […] so that you've got that uniform approach in your activity." (P5, general manager, online retailer)

"[Staff training in RL is important] because it ensures consistency of approach and clear measurement of processes." (P8, logistics manager, multichannel retailer)

Additionally, online retailers can *facilitate PM* through key RSP evaluation and RSP management practices and key organisational and SC and market parameters. Particularly, PM can be facilitated through the (1) implementation of RSP evaluation preparation, RSP evaluation metrics and tools and RSP management of service standards and agreements, and (2) consideration of organisational (IT and information management) capabilities and SC integration and resource capabilities and agreements. These findings can be supported by the following quotations:

"And we have to have all employees follow the same guidelines, it's standardised […] it is part of the customer service offering and […] it also affects our KPIs, our measures, because if you don't have a standardised formula of the process, you will never be able to measure it." (P9, regional & online DC manager, online retailer)

"[…] you've got internal/external kind of system integrations, people do it in different ways, whether they do it in their CRM or their WMS […]. And then those key events are and then [monitored], like we call it timestamping. So, when you do SLA management, [systems integration helps] to understand the time when each event took place. So, you need that data somewhere in the data table, so you can measure how long it's taking, [and] are they meeting service level requirements […]." (P13, supply chain manager, multichannel retailer)

Finally, some participants identified that online retailers could *improve RLM* by implementing key SOR process and RSP management practices and considering key organisational, cost versus benefit and SC and market parameters. Specifically, online retailers can improve RLM by implementing SOR process optimisation (e.g. using 3PRL providers) and RSP management of service standards and agreements (e.g. allocating dedicated resources to RL), and considering organisational (RL process) capabilities, costs versus benefits for RSP propositions and SC integration and resource capabilities These findings can be validated by the subsequent quotations:

"We don't annoy the customer by saying, well, the truck will be there in two weeks' time. We have people out there in the field on a very specific logistics model that we've developed, and our turnaround time is maybe forty-eight hours at max to be able to go and pick up a product. Our facilities are adopted for the management of reverse logistics." (P7, owner, 3PRL provider firm)

"I think it's quite an important part of the customer journey, […] you would have to invest in some sort of resources, whether it be IT integration, investing money, putting heads where it counts towards that process and managing it." (P13, supply chain manager, multichannel retailer

No studies from the reviewed literature identified improved standardisation and RL decision making as profits related centralised facilities and staff training. Therefore, this study provides additional profits that can be realised through centralised facilities and staff training in RL for improved standardisation and decision making. Although no study mentioned that SCI can facilitate PM, Karlsson *et al*. (2023:9) found that appropriate RL information systems and internal integration can be important for effective PM in RL. Moreover, Ahlén and Johansson (2023:31) suggested that implementing IT and streamlining the return process can improve RLM. Lastly, Wang, Dang *et al.* (2021:2) agreed that RL outsourcing to 3PRL providers can improve RLM.

Essentially, improving standardisation and decision-making, facilitating PM and improving RLM through the implementation and consideration of service propositions, reemphasise that online retailers can mitigate the service (1) pitfalls of function autonomy (internal culture), inattention to RLM, poor RL planning, a lack of resources (poor RLM) and poor external integration (information-related), and (2) problems of poor return experience, unmet expectations and dissatisfaction, consumer uncertainty (consumer problems), poor return processes and service failures (online retailer problems).

8.5.3.3 SC and market service profits

SC and market service profits can be categorised as *SC performance and relationship profits* and *market performance profits* (see Figure 8.**17**), which will be discussed and analysed in subsequent sections.

8.5.3.3.1 SC performance and relationship profits

SC performance and relationship profits involve the improvement of SC performance and improvement of SC relationships through SC integration (SCI), which can be attained through several service propositions.

Specifically, participants suggested that online retailers could *improve SC performance* and *SCI* through the key (1) RSP evaluation practices of RSP evaluation preparation and RSP evaluation metrics and tools, (2) RSP management practices of RSP management of service standards and agreements and RSP management of service failures, (3) organisational parameter of organisational (IT and information management) capabilities, and (4) SC and market parameter of SC integration and resource capabilities and agreements. Evidently, measuring and monitoring the performance of SC partners can help improve SC performance and SCI. These findings can be substantiated through the subsequent quotations:

> "[…] you've got internal/external kind of system integrations, people do in different ways, whether they do it in their CRM or their WMS […] you're always going to need some internal/external integration. And then those key events are and then [monitored], like we call it timestamping. So, when you do SLA management, [systems integration helps] to understand the time when each event took place. So, you need that data somewhere in the data table, so you can measure how long it's taking, are they meeting service level requirements […]." (P13, supply chain manager, multichannel retailer)

> "[…] the more integrated, the less likelihood of collection failures, return failures, service failures. So, whether your logistics provider is external courier or an internal provider, you know that integration from a systems perspective is important." (P1, operations manager, 3PRL provider firm)

Additionally, online retailers can *improve SCI* by (1) implementing streamlined SOR communication (key SOR communication practice) and RSP management formalisation (key RSP management practice), and (2) considering type of product return and product type (key product parameters). The following quotations convey these findings:

> "So, if you [the consumer] purchased a television set from Retailer C, and the TV set breaks. So, now Retailer C is saying, we will come and collect it. But we're not going to give you the money, we need to get the money back from the supplier first. And in that case, your supplier needs to act out the warranty. Now, from an integration point of view, it would be brilliant if you [as the online retailer] had access to the supplier system, where they could say to you, you know what, we've got a list of barcodes […], I'm looking up this barcode and the barcode tells you, no problem, this is still under warranty […]. But then also you can track what's happening on your supplier side, so that you can give accurate information to your customer […]." (P5, general manager, online retailer) (P5, general manager, online retailer)

> "[…] have with the logistics company that's just doing some of your […] reverse logistics. And there's also agreements in place on our system [that] automatically integrates with their system." (P11, Demand and sales manager, FMCG distributor)

While limited studies from the reviewed literature identified SC performance as an outcome of RLM, Wang *et al.* (2020:67) found that RL information sharing across the SC and sharing of return delivery information can enhance SC performance. Moreover, a few studies identified that SCI can be improved through (1) SC information sharing (Ahlén & Johansson, 2023:32), (2) coordinated RL processes (Mostert *et al.* 2017:1), (3) SC contracts/agreements (Mostert *et al.* 2017:10) and (4) integrated IT (Frei *et al.* 2020:1618) or accessible IT systems (databases) (Mostert *et al.* 2017:10, 13).

Evidently, realising SC performance and relationship service profits, reemphasise that online retailers can address poor visibility, poor systems and poor external integration (information-related pitfalls) poor return communication and service failures (online retailer problems) through the implementation of service propositions for the effective RLM of consumer returns.

8.5.3.3.2 Market performance profits

Linking with organisational performance profits, market performance profits involve increase in competitiveness and sales, which can be attained through a few SOR propositions and service parameters.

Specifically, participants indicated that online retailers could *increase competitiveness* through SOR process optimisation (i.e. lenient SOR process) as a key SOR process practice and considering consumer protection legislation as a key legal parameter, as proven in the following quotation:

> "[…] but it's worth thinking about the terms and conditions, policy and then customer proposition. What's your offer, because you could have terms and conditions that are by the book, straight down by the CPA. But your proposition could be better. And that you could offer returns a lot longer than that […] it becomes a [competitive] differentiator in your offering […]." (P1, operations manager, 3PRL provider firm)

Additionally, online retailers can *increase sales* through key SOR communication and process practices and key cost versus benefit and SC and market parameters. Specifically, online retailers can expect an increase in sales by implementing (1) initial SOR communication (i.e. clearly communicating return processes and conditions on the website), (2) SOR process optimisation (i.e. lenient return process) and (3) SOR inspection and processing (i.e. instant refunds). Moreover, considering costs versus benefits

for SOR process propositions and consumer demographics/characteristics can help increase sales. The subsequent quotations expand on these findings:

> "[…] it's a very important issue to share the process with the consumers […] So, that the consumer […] understands that you're open to take a product back if they're not 100 percent satisfied with it, and then they understand that you're trying to make it as easy as possible for them to return a product. I think that increases your sales too, because they may come back onto your platform or your site […]." (P4, owner/CEO, 3PRL provider firm)

> "[…] the instant refund […] But it's all designed to keep you [the consumer] shopping on the site […] So, instead of looking at it as the returns are a fact of life, how do we make this work to our advantage instead of trying to protect ourselves from them?" (P1, operations manager, 3PRL provider firm)

Surprisingly, limited studies identified competitiveness as an outcome of return leniency, however, Jalil (2019:1) claimed that online retailers could use return policies to gain a competitive advantage. Likewise, no study from the reviewed literature mentioned that sharing information with consumers on the website and offering fast refunds could increase sales. Nevertheless, Andresen and Istad (2019:7) and Dapiran and Kam (2017:835) emphasised that lenient return policies can increase sales. Evidently, this study identified additional profits related to lenient RL processes, information sharing on the website and quick processing of refunds, which might motivate online retailers to implement these practices.

Essentially, the market performance profits, reemphasise that online retailers can address (1) internal preservation (internal culture), poor RL planning (poor RLM) as service pitfalls, and (2) unmet expectations, dissatisfaction, consumer uncertainty (consumer) and a loss of sales, market share and consumers (online retailer) as service problems through the implementation of service propositions for the effective RLM of consumer returns. In the next section, the service profits related to the prevention and control and cost themes will be analysed and discussed.

8.5.3.4 Other themes service profits

As illustrated in Figure 8.**17**, the other themes service profits include profits related to return *prevention and control* (theme 1) and *costs* (theme 3). In the subsequent sections, prevention and control-related and cost-related service profits will be discussed.

8.5.3.4.1 Prevention and control-related service profits

The prevention and control-related service profits involve reduction of unnecessary and fraudulent returns and improvement of product return control, which online retailers can realise through a few service propositions.

Specifically, online retailers can *reduce unnecessary* and *fraudulent returns* by implementing the key SOR process practice of SOR process optimisation (i.e. lenient return process) and the key RSP

improvement practice of RSP improvement execution (i.e. through strategic planning) as well as considering the key organisational parameter of organisational (staff) capabilities. The following quotations illustrate these findings:

> "So, you need to have a discerning employee managing that [return authorisation], because if the customers […] wanted to return the product [legitimately] and you say, no, I [as a consumer] will never go back and buy from those people [online retailers] again. But then you're also have the other side of it where people [consumers] are trying to commit fraud." (P4, owner/CEO, 3PRL provider firm)

> "[…] you can have it [reverse logistics] as part of a strategic plan to reduce [returns and] optimise, building efficiencies [in return processes]." (P6, logistics manager, multichannel retailer)

Additionally, online retailers can *improve product return control* through the key (1) SOR communication practices of SOR communication platforms and streamlined SOR communication, (2) SOR process practice of SOR collection, (3) RSP improvement practice of RSP improvement execution, (4) organisational parameter of organisational (RL process and IT) capabilities, and (5) SC and market parameter of SC integration and capabilities. The following quotations demonstrate the importance of service propositions for improving product return control:

> "So, a solid technology system that gives you the ability to change status, update status and communicate the new status to the customer […] So, you need to keep accurate track of where that product is in the system […] [because] you need to manage the customer's expectation in terms of progress, you also need to make sure that you don't lose that product […]." (P5, general manager, online retailer)

> "[RL outsourcing is important because] the control […] of the stock that it doesn't get left for six months before […] somebody says, we've got to get this nonsense out of here, and […] I [the 3PRL provider] pick it [the product] up tomorrow and that kind of thing is done very quickly, very efficiently. And you have a very happy customer who buys again." (P7, owner, 3PRL provider firm)

The interview findings related to the reduction of unnecessary and fraudulent returns align with the studies of Dapiran and Kam (2017:832) and Zhang *et al.* (2023:10, 16), claiming that trained staff can help reduce unnecessary and fraudulent returns. Moreover, Nel and Badenhorst (2020:128) and Solati *et al.* (2023:2) suggested that a streamlined and efficient RL process can reduce unnecessary returns. However, no studies found improved product return control as a profit that could be realised through practices related to SOR communication, RSP improvement and service parameters. Evidently, this study provides further motivation for online retailers to implement SOR communication and RSP improvement propositions and consider organisational and SC and market parameters.

Subsequently, reducing unnecessary and fraudulent product returns and improving product control as service profits, reemphasise that online retailers can address the service (1) pitfalls of internal preservation (internal culture), poor RL planning (poor RLM), poor visibility, poor systems and poor external integration (information-related), and (2) problems of unmet expectations and dissatisfaction (consumer problems), poor return communication, poor return processes and a loss of sales (online retailer problems) through the implementation of service propositions for the effective RLM of consumer returns.

8.5.3.4.2 Cost-related service profits

The cost-related service profits involve cost savings and economies of scale that can be realised through various service propositions.

The participants indicated that online retailers could realise *cost savings* in RL by implementing key SOR process and RSP improvement practices and considering key volume, product, organisational and SC and market parameters. Specifically, cost savings can be realised through the (1) implementation of SOR process optimisation, SOR collection, SOR inspection and processing and RSP improvement execution, and (2) consideration of return volume, type of product return, type of product, organisational (RL process) capabilities and SC integration and resource capabilities. The following quotations demonstrate these findings:

> "[RL outsourcing is important because] there are significant costs, maybe not directly as a comparison line for line in the income statement, but there are costs that can be saved elsewhere […] how do you attribute saving costs where your customers are getting that kind of service? That you [as the consumer] buy it [a clothing item] today, it doesn't fit. I [the 3PRL provider] pick it up tomorrow and that kind of thing is done very quickly, very efficiently. And you have a very happy customer who buys again." (P7, owner, 3PRL provider firm)

> "[…] cross-functional [integration] is imperative in providing the customer with a pleasant customer experience. If the guy gets the wrong thing and he wants it replaced […]. I think we could save […] a fortune […] when you do a request for return and you [want to] replace […] you hook the two together." (P7, owner, 3PRL provider firm)

> "But if you had a team of people that could evaluate at the point of taking it from the customer, you would salvage tons of money […] [by] putting a team of people into the street and saying, you know what, returns is such a big thing in our world […]. So, let's put a dedicated team in there that are our first line evaluators […] that can go to the customer and say, you know what, before I take this laptop from you, can we quickly do one, two, three and four, maybe solve them right there? […] So, they can sell them the correct device […] just to give them a better service […]." (P5, general manager, online retailer)

Finally, online retailers can obtain *economies of scale* through the key RSP improvement practice of RSP improvement execution, the key volume parameter of return volume and the key SC and market parameter of SC integration and resources capabilities. The following quotation demonstrates economies of scale as a cost-related service profit:

> "I believe outsourcing is an amazing opportunity to ensure that the customer gets the best experience possible, and the reason I say that is I don't have scale in returns. […] it becomes part of the courier is greater scale." (P6, logistics manager, multichannel retailer)

No studies in the reviewed literature identified that cost savings can be realised through outsourcing to 3PRL providers, pre-return inspection and CFI. However, Bozzi *et al.* (2022:19) mentioned that simultaneous collection and delivery avoid vehicle idleness and emptiness, which implies that transportation costs could be saved. Additionally, Gu *et al.* (2019:160) agreed that outsourcing RL can enhance economies of scale, emphasising the importance of considering return volume for the effective RLM of consumer returns.

Evidently, cost-related service profits, reemphasise that online retailers can address functional autonomy (internal culture), inattention to RLM and poor RL planning (poor RLM) service pitfalls, and

a poor return experience, unmet expectations and dissatisfaction (consumer), poor return process, service failures, and a loss of sales and consumers (online retailer) service problems through the implementation of service propositions for the effective RLM of consumer returns.

Essentially, online retailers can realise various consumer, operational, organisational, SC, market, prevention and control-related and cost-related profits through the implementation/consideration of various service propositions, reemphasising that service propositions can be important for the effective RLM of consumer returns. In the next section, the service theme will be concluded with a framework and summary of findings.

8.5.4 Framework, summary and analysis of findings for Theme 2 - Service for the effective RLM of consumer returns

In section 8.2.2, the application of the overall framework, summary and analysis of findings for each theme were described. Accordingly, based on the interview findings presented in section 8.5, Figure 8.**18** shows a broad framework and overview of the links between service pitfalls/problems, propositions and profits.

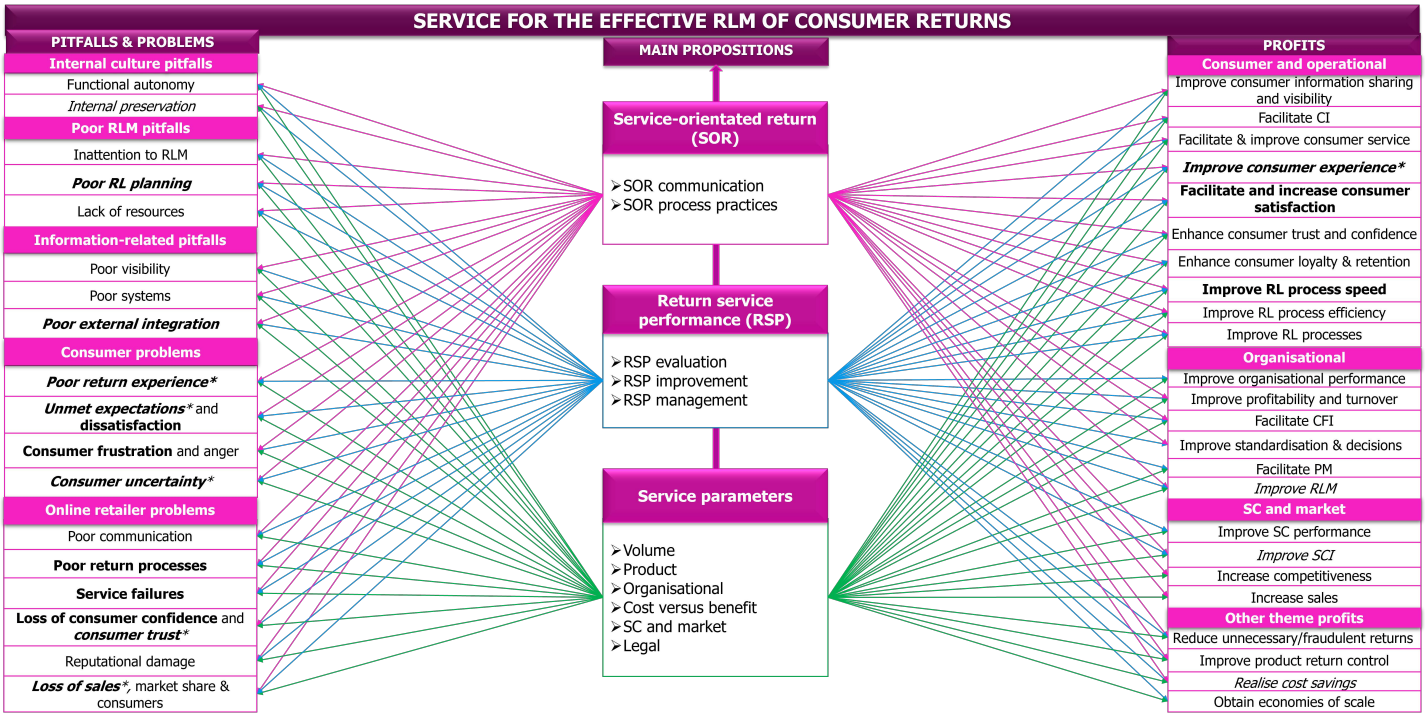


Figure 8.18 Framework for Theme 2 – Service for the effective RLM of consumer returns
Source: Compiled by the researcher

The most significant service pitfalls, problems and profits illustrated in Figure 8.**18** were emphasised in several ways. Particularly, per service pitfall, problem and profit category, the most significant pitfall, problem and profit (associated with the most service proposition categories) was emphasised through *italics*, the top two service pitfalls and problems (associated with ten or more proposition categories)

and service profits (associated with eight or more proposition categories) were emphasised in **bold**, and the highest and most significant service pitfall/problem (associated with eleven proposition categories) and service profit (associated with nine proposition categories) was emphasised through an asterisk*.

Figure 8.**18** shows that all the main *service pitfall/problem* categories associate with all the main propositions, which means that online retailers can address any service pitfall/problem category through the implementation of any service propositions. Likewise, all service pitfalls/problems associate with all service propositions, indicating that any service proposition can be implemented to address service pitfalls and problems. Nevertheless, *per service pitfall/problem category*, the framework shows that the *most significant service pitfalls/problems* (presented in *italics*) that can be addressed by service proposition categories (listed under the main propositions) include (1) internal preservation (internal culture pitfall), (2) poor RL planning (poor RLM pitfall), (3) poor external integration (information-related pitfall), (4) poor return experience, unmet expectations and consumer uncertainty (consumer problems), and (5) loss of consumer trust and a loss of sales (online retailer problems).

Additionally, the *top two most significant service pitfalls/problems* (presented in **bold**) that can be addressed by the implementation of (ten or more out of 11) service proposition categories include, poor return experience, unmet expectations, consumer uncertainty, loss of consumer trust and a loss of sales (11 each), poor external integration, poor RL planning, dissatisfaction, consumer frustration, poor return processes, service failures, and a loss of consumer confidence (ten each). Subsequently, the *highest* and *most significant service pitfalls/problems* (presented with an asterisk*) that can be addressed by service proposition categories include poor return experience, unmet expectations, consumer uncertainty, loss of consumer trust and a loss of sales. Evidently, online retailers can implement any service proposition category to address poor return experience, unmet expectations, consumer uncertainty, a loss of consumer trust and a loss of sales.

In terms of the *service propositions*, the framework shows that all service propositions can be significant in terms of addressing various service pitfalls/problems, reemphasising that online retailers can prioritise the implementation/consideration of service propositions to address service pitfalls/problems. However, the framework demonstrates that RSP propositions and service parameters can be the most significant propositions in terms of realising various service profits, indicating that online retailers can prioritise the implementation of RSP propositions and consideration of service parameters to realise various service profits.

For the *service profits*, the framework shows that all service profit categories associate with all main service propositions, which means that online retailers can realise any service profit category through

the implementation of any service proposition. Furthermore, the service propositions associate with (1) all consumer and operational profits, (2) most organisational profits (except organisational performance and PM), (3) the SC and market profit of improving SCI, and (4) most other service profits (except obtaining economies of scale). Therefore, online retailers can implement any service proposition to realise various consumer and operational profits, organisational profits, improved SCI (SC and market) profit and other theme profits.

Additionally, *per service profit category* the framework shows that the *most significant service profits* (presented in *italics*) that can be realised through the implementation of various service proposition categories, include (1) improving consumer experience (consumer and operational profit), (2) improving RLM (organisational profit), (3) improving SCI (SC and market profit), and (4) realising cost savings (other theme profit). Moreover, the *top two most significant service profits* (presented in **bold**) that can be realised through the implementation of (eight or more out of 11) service proposition categories include improving consumer return experience (nine), facilitating and improving consumer satisfaction and improving RL process speed (eight each). Subsequently, the *highest* and *most significant service profit* (presented with an asterisk*) that can be realised through various service proposition categories includes improving consumer return experience. Evidently, online retailers can implement any service proposition category to improve consumer return experience for the effective RLM of consumer returns.

Table 8.**20** provides a summary of the main findings for the service theme, focussing on the service proposition categories, key practices/parameters and related service pitfalls, problems and profits. Additionally, the table provides columns giving an overview of the costs (total requirements as identified in Table 8.**19**) versus the benefits (total benefits in terms of number of addressed pitfalls and problems and realised profits) per key practice/parameter and proposition category.

Table 8.20 Summary of findings for theme 2 - Service for the effective RLM of consumer returns

Proposition categories	Key practices /parameters	Addressed pitfalls	Addressed problems	Realised profits	Cost/benefit key practice/ parameter	Cost/benefit proposition category
SOR communication	**Initial SOR communication**	***Poor RLM*** • Poor RL planning ***Information-related*** • Poor external integration	***Consumer*** • Poor return experience • Unmet expectations • Consumer frustration & uncertainty ***Online retailer*** • Poor return communication • Loss of consumer trust	***Consumer and operational*** • Enhance consumer trust & confidence ***SC and market*** • Increase sales	• Costs – 4 • Benefits – 11 • +7	• ***Costs – 27*** • ***Benefits – 74*** • ***+47***
	SOR communication platforms	***Poor RLM*** • RL planning • Lack of resources ***Information-related*** • Poor visibility • Poor systems • Poor external integration	***Consumer*** • Poor return experience • Consumer frustration and anger • Consumer uncertainty ***Online retailer*** • Poor return communication • Poor return processes • Service failures • Loss of consumer confidence & trust • Reputational damage • Loss of sales	***Consumer and operational*** • Improve consumer information sharing and visibility ***Other themes*** • Improve product return control	• Costs – 8 • Benefits – 19 • +11	
	Streamlined	***Poor RLM***	***Consumer***	***Consumer and operational***	• Costs – 10	

Proposition categories	Key practices /parameters	Addressed pitfalls	Addressed problems	Realised profits	Cost/benefit key practice/ parameter	Cost/benefit proposition category
	SOR communication	• Poor RL planning ***Information-related*** • Poor visibility • Poor systems • Poor external integration	• Poor return experience • Unmet expectations & dissatisfaction • Consumer frustration and anger • Consumer uncertainty ***Online retailer*** • Poor return communication • Poor return processes • Service failures • Loss of consumer confidence & trust • Loss of sales	• Improve consumer information sharing and visibility • Facilitate CI • Improve consumer return experience • Facilitate/increase consumer satisfaction • Enhance consumer trust & confidence ***SC and market*** • Improve SCI ***Other themes*** • Improve product return control	• Benefits – 25 • +15	
	Personalised SOR communication	***Internal culture*** • Internal preservation ***Poor RLM*** • Inattention to RLM • Lack of resources ***Information-related*** • Poor external integration	***Consumer*** • Poor return experience • Unmet expectations & dissatisfaction • Consumer frustration and anger • Consumer uncertainty ***Online retailer*** • Poor return communication • Service failures • Loss of consumer confidence & trust • Reputational damage • Loss of sales and consumers	***Consumer and operational*** • Improve consumer information sharing and visibility	• Costs – 5 • Benefits – 19 • +14	
SOR process	**SOR process optimisation**	***Internal culture*** • Functional autonomy • Internal preservation ***Poor RLM*** • Poor RL planning • Lack of resources ***Information-related*** • Poor systems • Poor external integration	***Consumer*** • Poor return experience • Unmet expectations & dissatisfaction • Consumer frustration • Consumer uncertainty ***Online retailer*** • Poor return processes • Service failures • Loss of consumer confidence & trust • Loss of sales, market share and consumers	***Consumer and operational*** • Facilitate/improve consumer service and satisfaction • Improve consumer return experience • Enhance consumer trust, confidence, loyalty and retention • Improve RL process speed • Improve RL process efficiency • Improve RL processes ***Organisational*** • Improve profitability and turnover • Improve standardisation and decision making • Improve RLM ***SC and market*** • Increase competitiveness & sales ***Other themes*** • Reduce unnecessary and fraudulent returns • Realise cost savings	• Costs – 10 • Benefits – 38 • +28	• ***Costs – 28*** • ***Benefits – 93*** • ***+65***
	SOR request	***Internal culture*** • Internal preservation ***Information-related*** • Poor systems • Poor external integration	***Consumer*** • Poor return experience • Consumer frustration & uncertainty ***Online retailer*** • Poor return communication • Poor return processes • Service failures • Loss of consumer confidence & trust • Loss of sales, market share and consumers	***Consumer and operational*** • Facilitate CI • Improve consumer return experience • Improve RL processes	• Costs – 5 • Benefits – 17 • +12	
	SOR collection	***Internal culture*** • Functional autonomy ***Poor RLM*** • Poor RL planning ***Information-related*** • Poor external integration	***Consumer*** • Poor return experience • Unmet expectations & dissatisfaction • Consumer uncertainty ***Online retailer*** • Poor return processes • Service failures • Loss of sales and consumers	***Consumer and operational*** • Improve consumer return experience • Facilitate/increase consumer satisfaction • Enhance consumer loyalty & retention • Improve RL process speed • Improve RL process efficiency ***Organisational*** • Facilitate CFI ***Other themes*** • Improve product return control • Realise cost savings	• Costs – 7 • Benefits – 20 • +13	
	SOR inspection and processing	***Internal culture*** • Internal preservation ***Poor RLM*** • Lack of resources ***Information-related*** • Poor external integration	***Consumer*** • Poor return experience • Unmet expectations & dissatisfaction • Consumer frustration & uncertainty ***Online retailer*** • Poor return communication • Poor return processes • Service failures • Loss of consumer trust • Loss of sales	***Consumer and operational*** • Facilitate/improve consumer service and satisfaction • Improve RL process speed ***SC and market*** • Increase sales ***Other themes*** • Realise cost savings	• Costs – 6 • Benefits – 18 • +12	
RSP evaluation	**RSP evaluation preparation**	***Internal culture*** • Functional autonomy	***Consumer*** • Poor return experience • Unmet expectations & dissatisfaction	***Organisational*** • Improve standardisation and decision making	• Costs – 8 • Benefits – 19	• ***Costs – 22*** • ***Benefits –***

Proposition categories	Key practices /parameters	Addressed pitfalls	Addressed problems	Realised profits	Cost/benefit key practice/ parameter	Cost/benefit proposition category
		Poor RLM •Poor RL planning ***Information-related*** •Poor visibility, systems & external integration	•Consumer frustration •Consumer uncertainty ***Online retailer*** •Poor return processes •Service failures •Loss of consumer confidence & trust	•Facilitate PM ***SC and market*** •Improve SC performance & SCI	•+11	***61*** • ***+39***
	RSP evaluation metrics and tools	***Poor RLM*** •Inattention to RLM ***Information-related*** •Poor external integration	***Consumer*** •Poor return experience •Unmet expectations & dissatisfaction •Consumer frustration and anger •Consumer uncertainty ***Online retailer*** •Poor return processes •Service failures •Loss of consumer confidence & trust •Reputational damage •Loss of market share and consumers	***Consumer and operational*** •Improve RL processes ***Organisational*** •Improve organisational performance •Facilitate PM ***SC and market*** •Improve SC performance & SCI	•Costs – 7 •Benefits – 20 •+13	
	RSP evaluation data sources	***Poor RLM*** •Poor RL planning •Lack of resources ***Information-related*** •Poor external integration	***Consumer*** •Poor return experience •Unmet expectations & dissatisfaction •Consumer frustration and anger •Consumer uncertainty ***Online retailer*** •Poor return processes •Service failures •Loss of consumer confidence & trust •Reputational damage •Loss of sales, market share and consumers	***Consumer and operational*** •Improve consumer return experience •Enhance consumer trust & confidence •Improve RL processes ***Organisational*** •Improve organisational performance	•Costs – 7 •Benefits – 22 •+15	
RSP improvement	**RSP improvement preparation**	***Internal culture*** •Functional autonomy ***Poor RLM*** •Inattention to RLM •Poor RL planning ***Information-related*** •Poor systems •Poor external integration	***Consumer*** •Poor return experience •Unmet expectations & dissatisfaction •Consumer frustration & uncertainty •Consumer dissatisfaction and anger ***Online retailer*** •Poor return communication •Poor return processes •Service failures •Loss of consumer confidence & trust •Reputational damage •Loss of sales, market share and consumers	***Consumer and operational*** •Improve consumer information sharing and visibility •Enhance consumer trust & confidence •Improve RL processes ***Organisational*** •Improve organisational performance •Improve profitability and turnover •Facilitate CFI	•Costs – 11 •Benefits – 30 •+19	• ***Costs – 24*** • ***Benefits – 67*** • ***+43***
	RSP improvement execution	***Internal culture*** •Functional autonomy •Internal preservation ***Poor RLM*** •Poor RL planning •Lack of resources ***Information-related*** •Poor visibility •Poor systems •Poor external integration	***Consumer*** •Poor return experience •Unmet expectations & dissatisfaction •Consumer frustration and anger •Consumer uncertainty ***Online retailer*** •Poor return communication •Poor return processes •Service failures •Loss of consumer confidence & trust •Reputational damage •Loss of sales, market share and consumers	***Consumer and operational*** •Facilitate CI •Facilitate/improve consumer service and satisfaction •Improve consumer return experience •Enhance consumer loyalty & retention •Improve RL process speed •Improve RL process efficiency •Improve RL processes ***Organisational*** •Facilitate CFI ***Other themes*** •Reduce unnecessary and fraudulent returns •Improve product return control •Realise cost savings •Obtain economies of scale	•Costs – 13 •Benefits – 37 •+24	
RSP management	**RSP management formalisation**	***Poor RLM*** •Poor RL planning ***Information-related*** •Poor visibility •Poor external integration	***Consumer*** •Poor return experience •Unmet expectations & dissatisfaction •Consumer frustration ***Online retailer*** •Poor return communication •Poor return processes •Service failures •Loss of consumer confidence & trust •Loss of sales and consumers	***Consumer and operational*** •Facilitate/increase consumer satisfaction •Enhance consumer loyalty & retention •Improve RL process efficiency ***SC and market*** •Improve SCI	•Costs – 9 •Benefits – 20 •+11	• ***Costs – 32*** • ***Benefits – 73*** • ***+41***
	RSP management of standards and agreements	***Internal culture*** •Functional autonomy ***Poor RLM*** •Inattention to RLM •Poor RL planning •Lack of resources ***Information-related***	***Consumer*** •Poor return experience •Unmet expectations & dissatisfaction •Consumer frustration and anger •Consumer uncertainty ***Online retailer*** •Poor return processes •Service failures	***Consumer and operational*** •Facilitate/improve consumer service and satisfaction •Improve RL process speed •Improve RL process efficiency ***Organisational*** •Improve standardisation and decision making	•Costs – 14 •Benefits – 29 •+15	

Proposition categories	Key practices /parameters	Addressed pitfalls	Addressed problems	Realised profits	Cost/benefit key practice/ parameter	Cost/benefit proposition category
		• Poor systems • Poor external integration	• Loss of consumer confidence & trust • Reputational damage • Loss of market share and consumers	• Facilitate PM • Improve RLM ***SC and market*** • Improve SC performance & SCI		
	RSP management of service failures	***Poor RLM*** • Inattention to RLM • Poor RL planning ***Information-related*** • Poor visibility • Poor systems • Poor external integration	***Consumer*** • Poor return experience • Unmet expectations & dissatisfaction • Consumer frustration and anger • Consumer uncertainty ***Online retailer*** • Poor return communication • Poor return processes • Service failures • Loss of consumer confidence & trust • Reputational damage • Loss of sales, market share and consumers	***Consumer and operational*** • Improve consumer information sharing and visibility ***SC and market*** • Improve SC performance & SCI	• Costs – 9 • Benefits – 24 • +15	
Volume parameters	**Return volume**	***Internal culture*** • Internal preservation ***Poor RLM*** • Poor RL planning • Lack of resources ***Information-related*** • Poor external integration	***Consumer*** • Poor return experience • Unmet expectations & dissatisfaction • Consumer frustration & uncertainty ***Online retailer*** • Poor return communication • Poor return processes • Service failures • Reputational damage • Loss of sales	***Consumer and operational*** • Facilitate/improve consumer service • Improve consumer return experience • Improve RL process speed ***Other themes*** • Realise cost savings • Obtain economies of scale	• Costs – 5 • Benefits – 19 • +14	• ***Costs – 9*** • ***Benefits – 35*** • ***+26***
	Complaints volume	***Poor RLM*** • Poor RL planning ***Information-related*** • Poor external integration	***Consumer*** • Poor return experience • Unmet expectations & dissatisfaction • Consumer frustration and anger • Consumer uncertainty ***Online retailer*** • Poor return processes • Service failures • Reputational damage • Loss of consumer trust & sales	***Consumer and operational*** • Improve RL process speed • Improve RL processes ***Organisational*** • Improve organisational performance	• Costs – 4 • Benefits – 16 • +12	
Product parameters	**Type of product return**	***Internal culture*** • Functional autonomy • Internal preservation ***Information-related*** • Poor visibility • Poor external integration	***Consumer*** • Poor return experience • Unmet expectations & dissatisfaction • Consumer frustration & uncertainty ***Online retailer*** • Poor return communication • Poor return processes • Service failures • Loss of consumer confidence & trust • Loss of sales	***Consumer and operational*** • Improve consumer information sharing and visibility • Improve consumer return experience • Facilitate/increase consumer satisfaction • Improve RL process speed ***Organisational*** • Facilitate CFI ***SC and market*** • Improve SCI ***Other themes*** • Realise cost savings	• Costs – 5 • Benefits – 23 • +18	• ***Costs – 11*** • ***Benefits – 44*** • ***+33***
	Product type	***Internal culture*** • Internal preservation ***Poor RLM*** • Lack of resources ***Information-related*** • Poor visibility • Poor external integration	***Consumer*** • Poor return experience • Unmet expectations & dissatisfaction • Consumer frustration & uncertainty ***Online retailer*** • Poor return communication • Poor return processes • Service failures • Loss of consumer confidence & trust • Loss of sales	***Consumer and operational*** • Improve consumer information sharing and visibility • Facilitate/improve consumer service • Improve RL process speed ***SC and market*** • Improve SCI ***Other themes*** • Realise cost savings	• Costs – 6 • Benefits – 21 • +15	
Organisation parameters	**Organisation size**	***Poor RLM*** • Inattention to RLM • Poor RL planning	***Consumer*** • Poor return experience ***Online retailer*** • Poor return processes • Service failures • Reputational damage • Loss of market share and consumers	***Consumer and operational*** • Improve RL process speed • Improve RL process efficiency	• Costs – 4 • Benefits – 10 • +6	• ***Costs – 19*** • ***Benefits – 52*** • ***+33***
	Organisational capabilities	***Internal culture*** • Functional autonomy • Internal preservation ***Poor RLM*** • Poor RL planning • Lack of resources ***Information-related*** • Poor visibility	***Consumer*** • Poor return experience • Unmet expectations & dissatisfaction • Consumer frustration and anger • Consumer uncertainty ***Online retailer*** • Poor return communication • Poor return processes • Service failures • Loss of consumer confidence & trust	***Consumer and operational*** • Improve consumer information sharing and visibility • Facilitate/improve consumer service and satisfaction • Improve consumer return experience • Enhance consumer trust, confidence, loyalty and retention • Improve RL process speed • Improve RL process efficiency	• Costs – 15 • Benefits – 42 • +27	

Proposition categories	Key practices /parameters	Addressed pitfalls	Addressed problems	Realised profits	Cost/benefit key practice/ parameter	Cost/benefit proposition category
		• Poor systems • Poor external integration	• Reputational damage • Loss of sales, market share and consumers	• Improve RL processes ***Organisational*** • Facilitate PM • Improve RLM ***SC and market*** • Improve SC performance & SCI ***Other themes*** • Reduce unnecessary and fraudulent returns • Improve product return control • Realise cost savings		
Cost versus benefit parameters	**Cost versus benefits for SOR process propositions**	***Internal culture*** • Internal preservation ***Poor RLM*** • Poor RL planning • Lack of resources	***Consumer*** • Poor return experience • Unmet expectations & dissatisfaction • Consumer uncertainty ***Online retailer*** • Poor return processes • Loss of consumer confidence & trust • Loss of sales, market share and consumers	***Consumer and operational*** • Facilitate/increase consumer satisfaction • Enhance consumer trust, confidence, loyalty and retention • Improve RL process speed • Improve RL processes ***Organisational*** • Improve profitability and turnover • ***SC and market*** • Increase sales	• Costs – 4 • Benefits – 23 • +19	• ***Costs – 7*** • ***Benefits – 37*** • ***+30***
	Costs versus benefits for RSP propositions	***Poor RLM*** Lack of resources	***Consumer*** • Poor return experience • Unmet expectations & dissatisfaction ***Online retailer*** • Poor return processes • Service failures • Loss of consumer confidence & trust • Loss of market share and consumers	***Consumer and operational*** • Facilitate/increase consumer satisfaction • Improve RL process speed • Improve RL processes ***Organisational*** • Improve RLM	• Costs – 3 • Benefits – 14 • +11	
SC and market parameters	**SC integration and resource capabilities**	***Poor RLM*** • Poor RL planning ***Information-related*** • Poor visibility • Poor external integration	***Consumer*** • Poor return experience • Unmet expectations & dissatisfaction • Consumer frustration and anger • Consumer uncertainty ***Online retailer*** • Poor return communication • Poor return processes • Service failures • Loss of consumer confidence & trust • Reputational damage • Loss of sales	***Consumer and operational*** • Improve consumer information sharing and visibility • Improve consumer return experience • Facilitate/increase consumer satisfaction • Enhance consumer trust, confidence, loyalty and retention • Improve RL process speed • Improve RL process efficiency ***Organisational*** • Facilitate PM • Improve RLM ***SC and market*** • Improve SC performance & SCI ***Other themes*** • Improve product return control • Realise cost savings • Economies of scale	• Costs – 4 • Benefits – 33 • +29	• ***Costs – 10*** • ***Benefits – 65*** • ***+55***
	SC agreements	***Poor RLM*** • Poor RL planning ***Information-related*** • Poor external integration	***Consumer*** • Poor return experience • Unmet expectations & dissatisfaction • Consumer frustration ***Online retailer*** • Poor return communication • Poor return processes • Service failures • Reputational damage	***Consumer and operational*** • Facilitate/increase consumer satisfaction ***Organisational*** • Facilitate PM ***SC and market*** • Improve SC performance &SCI	• Costs – 4 • Benefits – 14 • +10	
	Consumer demographics/ characteristics	***Internal culture*** • Internal preservation ***Information-related*** • Poor external integration	***Consumer*** • Poor return experience • Unmet expectations & dissatisfaction • Consumer frustration and anger • Consumer uncertainty ***Online retailer*** • Poor return communication • Service failures • Loss of consumer confidence & trust • Loss of sales, market share and consumers	***Consumer and operational*** • Improve consumer information sharing and visibility ***SC and market*** • Increase sales	• Costs – 2 • Benefits – 18 • +16	
Legal parameters	**Privacy legislation**	***Information-related*** • Poor visibility • Poor external integration	***Consumer*** • Poor return experience • Consumer frustration and anger • Consumer uncertainty ***Online retailer*** • Poor return communication • Loss of consumer confidence & trust • Loss of sales	***Consumer and operational*** • Facilitate CI • Improve consumer return experience	• Costs – 2 • Benefits – 12 • +10	• ***Costs – 4*** • ***Benefits – 22*** • ***+18***

Proposition categories	Key practices /parameters	Addressed pitfalls	Addressed problems	Realised profits	Cost/benefit key practice/ parameter	Cost/benefit proposition category
	Consumer protection legislation	***Internal culture*** • Internal preservation ***Poor RLM*** • Poor RL planning	***Consumer*** • Poor return experience • Unmet expectations • Consumer frustration and anger • Consumer uncertainty ***Online retailer*** Loss of market share	***Consumer and operational*** • Facilitate/improve consumer service ***Organisational*** • Increase competitiveness	• Costs – 2 • Benefits – 10 • +8	

Source: Compiled by the researcher

Table 8.**20** provides a detailed summary of the service propositions, problems, pitfalls and profits and the cost versus benefit per key practice/parameter and proposition category. Online retailers can use this framework in several ways for the effective RLM of consumer returns. Specifically, online retailers can identify the (1) benefits for specific service propositions categories and key practices/parameters (representing the propositions), (2) propositions for specific service pitfalls, (3) propositions for specific service problems, (4) propositions for specific service profits, (5) most significant propositions for addressing service pitfalls, (6) most significant propositions for addressing service problems, (7) most significant propositions for realising service profits, and (8) most and least beneficial propositions in terms of the costs versus the benefits. Examples of applying Table 8.**20** for the effective RLM of consumer returns will be given in the subsequent paragraphs.

For the *benefits associated with specific propositions*, an online retailer can see that implementing, for example, RSP management propositions can help them (1) address functional autonomy, inattention to RLM, poor RL planning, lack of resources and poor external integration pitfalls, (2) address poor return experience, unmet expectations, dissatisfaction, consumer frustration, anger and uncertainty, poor return processes, service failures, loss of consumer confidence and trust, reputational damage, and a loss of sales, market share and consumers problems, and (3) improve consumer return experience, enhance consumer trust and confidence, improve RL processes, organisational performance, standardisation and decision-making, facilitate PM and improve SC performance and integration. Additionally, an online retailer interested in implementing, for example, the key SOR communication practice of initial SOR communication can identify that (1) poor RL planning and poor external integration pitfalls can be addressed, (2) poor return experience, unmet expectations, consumer frustration and uncertainty, poor return communication and loss of consumer trust problems can be addressed, and (3) consumer trust and confidence and an increase in sales profits can be realised.

In terms of the *propositions for specific service pitfalls*, an online retailer that identified, for example, functional autonomy, as a significant service pitfall can implement/consider the key (1) SOR process practices of SOR process optimisation and SOR collection, (2) RSP evaluation practice of RSP evaluation preparation, (3) RSP improvement practices of RSP improvement preparation and RSP improvement execution, (4) RSP management practice of RSP management of service standards and

agreements, (5) product parameter of type of product return, and (6) organisational parameter of organisational capabilities as mitigating propositions for the effective RLM of consumer returns.

Regarding the *propositions for specific service problems*, an online retailer that identified, for example, reputational damage as a service problem can implement/consider the key (1) SOR communication practices of SOR communication platform and personalised SOR communication, (2) RSP evaluation practices of RSP evaluation metrics and tools and RSP evaluation data sources, (3) RSP improvement practices of RSP improvement preparation and RSP improvement execution, (4) RSP management practices of RSP management of service standards and agreements and RSP management service failures, (5) volume parameters of return volume and complaints volume, (6) organisational parameters of organisational size and capabilities, and (7) SC and market parameters of SC integration and resource capabilities and SC agreements as mitigating propositions for the effective RLM of consumer returns. In terms of the *propositions for specific service profits,* an online retailer seeking, for example, to improve profitability and turnover can implement/consider the key (1) SOR process practice of SOR process optimisation, (2) RSP improvement practice of RSP improvement preparation, and (3) cost versus benefit parameters of cost versus benefits for implementing SOR process propositions.

Concerning the *most significant propositions for addressing service pitfalls*, online retailers that experience various service pitfalls in RL can prioritise the implementation of SOR (communication and process) propositions and consideration of organisational parameters as the most beneficial service proposition categories. Additionally, online retailers that experience various service pitfalls in RL can prioritise the implementation of the key RSP improvement practice of RSP improvement execution and consideration of the key organisational parameter of organisational capabilities as the most beneficial key practice and parameter.

Pertaining to the *most significant propositions for addressing service problems,* online retailers that experience various service problems in RL can prioritise the implementation of SOR process propositions and consideration of SC and market parameters as the most beneficial service proposition categories. Additionally, online retailers that experience various service problems can prioritise the implementation of the key RSP improvement practice of RSP improvement preparation and consideration of the key organisational parameter of organisational capabilities as the most beneficial key practice and parameter. Relating to the *most significant propositions for realising service profits*, online retailers that seek various service profits in RL can prioritise the implementation of SOR process propositions and consideration of SC and market parameters as the most beneficial service proposition categories. Additionally, online retailers that seek various service profits can prioritise the implementation of the key SOR process practice of SOR process optimisation and consideration of the

key organisational parameter of organisational capabilities as the most beneficial key practice and parameter.

Finally, for the *costs versus benefits*, **Error! Reference source not found.** shows that the *most beneficial proposition categories* include SOR process propositions in terms of the costs (28) versus benefits (93), and SC and market parameters in terms of costs (10) versus benefits (65). Consequently, online retailers can prioritise the implementation of SOR process propositions and consideration of SC and market parameters for the effective RLM of consumer returns. Additionally, the *most beneficial key practice* and *parameter* include SOR process optimisation in terms of the costs (10) versus benefits (38) and SC integration and resource capabilities in terms of the costs (4) versus benefits (33). Subsequently, online retailers can prioritise the implementation of SOR process optimisation as a key practice and consideration of SC integration and resource capabilities as a key parameter for the effective RLM of consumer returns.

In contrast, the *least beneficial proposition categories* include RSP evaluation in terms of the costs (22) versus benefits (62), and legal parameters in terms of the costs (4) versus benefits (22), which means that online retailers can implement RSP evaluation propositions and consider legal parameters as last priorities. Additionally, the *least beneficial key practice* and *parameter* include initial SOR communication in terms of the costs (4) versus benefits (11) and organisation size in terms of the costs (4) and benefits (10), indicating that online retailers may implement/consider initial SOR communication as a key practice and organisation size as a key parameter as last priorities.

Nevertheless, all service propositions can be beneficial, and online retailers experiencing specific service pitfalls/problems or seeking specific service profits can identify the most suitable service propositions to implement and consider for the effective RLM of consumer returns. Essentially, "service for the effective RLM of consumer returns" can be regarded as a critical factor for the effective RLM of consumer returns in online retailing. Therefore, online retailers must focus on identifying service pitfalls and problems in RL for the effective implementation/consideration of mitigating service propositions (practices/parameters) and realisation of service profits to manage consumer returns effectively. In the next section, the findings related to theme 3 will be presented and analysed.

8.6 THEME 3: COST FOR THE EFFECTIVE RLM OF CONSUMER RETURNS

Theme 3 involves cost reduction and management initiatives for the effective RLM of consumer returns in online retailing. According to Das *et al.* (2020:48), the motivation for online retailers to implement RLM centres around financial gains. Consequently, online retailers can use RLM to gain

savings and take advantage of opportunities to recover value from consumer returns (Ahsan & Rahman, 2021:21). Accordingly, all participants mentioned throughout their discussions the importance of costs for the RLM of consumer returns in online retailing. Therefore, "cost" was identified as a RLM factor, which means that online retailers must pay attention to costs for the effective RLM of consumer returns. The following quotation illustrates the significance of costs for RLM:

> "You know, as I said at the outset, I got involved because I think people treat reverse logistics with contempt. They don't treat it with the importance that it deserves. And I think it is an area where huge, huge, huge amounts of money could be saved […]." (P7, owner, 3PRL provider firm)

Figure 8.3, in section 8.2.2, provides an overview of theme 3, including the subthemes and related categories. Figure 8.19 provides a snapshot derived from Figure 8.3, showing an overview of Theme 3 – *Cost for the effective RLM of consumer returns*.

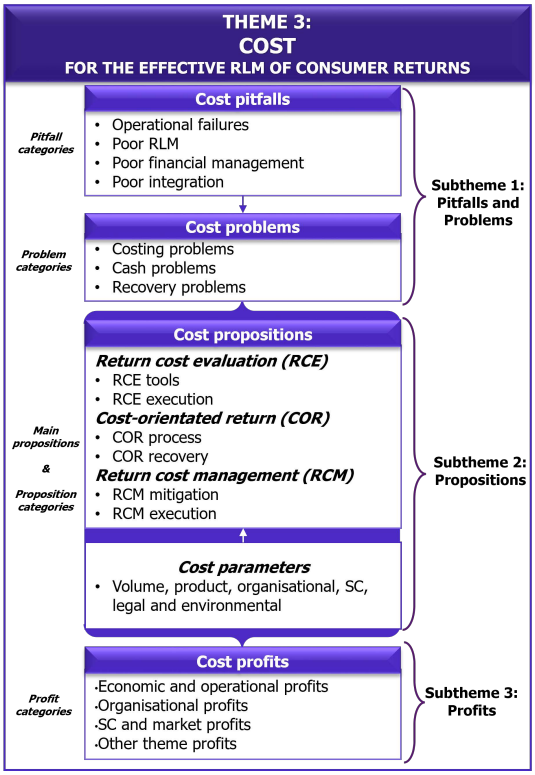


Figure 8.19 Overview of Theme 3 – Cost for the effective RLM of consumer returns
Source: Compiled by the researcher

In the subsequent sections, a detailed overview, analysis and discussion of the interview findings for each subtheme, including cost pitfalls and problems (subtheme 1), cost propositions (subtheme 2) and cost profits[24] (subtheme 3) will be given. The section concludes with a framework, summary and overall analysis of the cost findings for the effective RLM of consumer returns.

[24] Since the term "profit" (subtheme 3) is used to describe the benefits or outcomes of the propositions of all themes, referencing "cost profits" means cost benefits or outcomes, and not revenue or financial gains.

8.6.1 Cost pitfalls and problems – Subtheme 1

As illustrated in Figure 8.19, and discussed in section 8.2.2, the cost pitfall categories include operational failure, poor RLM, poor financial management (FM) and poor integration, and the cost problem categories include costing, cash and recovery problems. Figure 8.**20** provides a detailed overview of the cost pitfalls and problems in RL that will be discussed in this section.

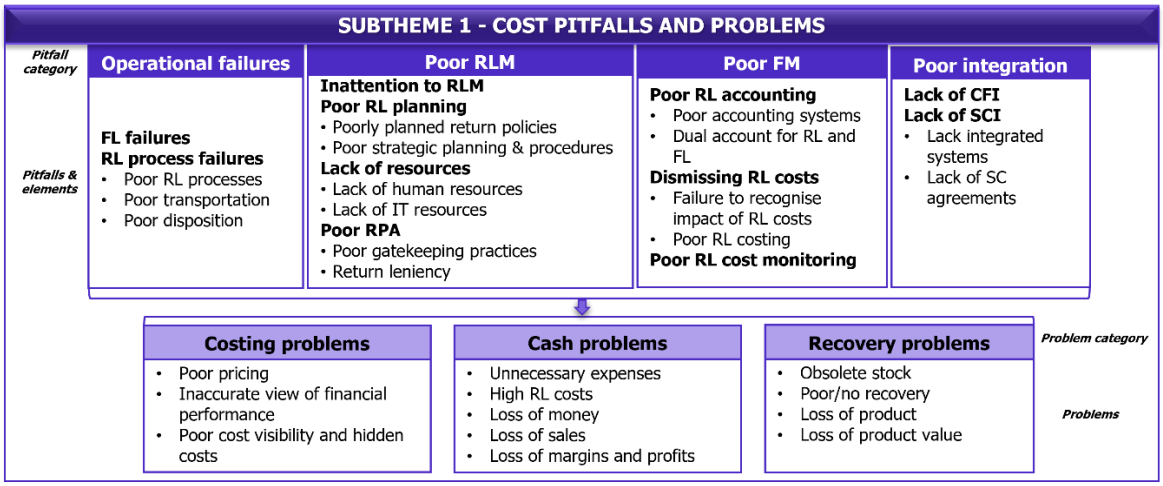


Figure 8.20 Detailed overview of cost pitfalls and problems
Source: Compiled by the researcher

Based on the interview findings, Figure 8.**20** shows the *cost pitfall* categories with related pitfalls and pitfall elements (if applicable), and the *cost problem* categories with related problems, which can hamper the effective RLM of consumer returns in online retailing. Section 8.2.2 provides details regarding the presentation and format of the pitfalls and problems applicable to each theme. In the subsequent sections, the cost pitfall categories of operational failures, poor RLM, poor financial management (FM) and poor integration and associated pitfalls, pitfall elements and costing, cash and recovery problems will be discussed. The section concludes with a framework and summary of findings to demonstrate the relationship between specific cost pitfalls and problems.

8.6.1.1 Operational failures pitfalls and related cost problems

Operational failures as a cost pitfall category involves the cost pitfalls of *FL failures* and *RL process failures* (see **Figure 8.20**), which can result in various costing, cash and recovery problems.

Specifically, *FL failures* as a cost pitfall involves problematic FL practices that lead to high product returns, resulting in poor pricing (costing problem). For example, if poor picking and delivery practices result in wrong order deliveries, online retailers may overinflate product prices, adding unnecessary return transportation costs to the product price. The following quotation demonstrates the impact of FL failures on the costing problem of poor pricing in RL:

> "I can use that percentage of cost to accurately gauge my transport component onto my selling price, but importantly not overinflated because of my own wastage […]. So, my own waste and my own inefficiencies, I'm

> going to load into my price […]. It's just, you know, it's an inaccurate way of doing it […] because of your inefficiencies." (P5, general manager, online retailer)

Although FL failures can lead to costing problems, *RL process failures* as a cost pitfall can be more problematic for online retailers. The participants indicated that RL process failures involve poor RL processes, poor transportation and poor disposition (pitfall elements), which can result in various costing, cash and recovery problems for online retailers. Particularly, if online retailers execute RL processes poorly, they may damage their brand, resulting in hidden costs (i.e. brand costs) (costing problem) and unnecessary expenses (cash problem), as emphasised in the following quotation:

> "[…] there is a brand cost to it, you know, if you did badly, it's going to impact your brand so that, you know, it might be that kind of a hidden cost. And obviously, financial cost in terms of refunding for sales." (P13, supply chain manager, multichannel retailer)

Moreover, poor transportation (i.e. poor handling and packaging of returned products) can result in products being damaged or becoming defective during transportation from the consumer location to the online retailer location. This can be highly problematic for the online retailer since the product may no longer be resaleable and recoverable, involving the cash problems of high RL costs, and a loss of money and sales and the recovery problem of no recovery and a loss of product. The following quotations illuminate these findings:

> "And often when the product is returned, there could be a quality defect that arises in the returns process, not necessarily in the delivery process. And that means that the product now is not salvageable and not saleable when it has been returned. So, it's a double whammy, it is a lost sale plus there's no recovery. Plus, the cost of the initial delivery and the cost of the return collection delivery portion. So, they will pay for that product four times minimum." (P2, owner, supply chain consultancy firm)

> "[…] this customer has returned you your Jimmy Choo stilettos, saying that as an unwanted item. But when they arrive, they've come through the courier network and the head of the heels, snapped off. Now, you could try to hold the customer liable for that, but I think you would get short shifted. So, you actually going to refund the customer, but you're going to dispose of those that items. It's not going to get restocked." (P1, operations manager, 3PRL provider firm)

Finally, poor disposition can cause several cost problems for online retailers, including recovery problems and cash problems. For instance, not making fast and accurate disposition decisions and leaving returned products to accumulate in the warehouse can lead to obsolete products and products losing value with poor/no recovery (recovery problems), unnecessary expenses, high RL costs and a loss of money and margins (cash problems). These findings can be supported by the subsequent quotations:

> "The fact that it becomes obsolete very quickly and that it's difficult to assess and prepare means that at the end of the day, you will actually offload it for a lot less […]. The other problem is what do you do before you dispose [or] before you get rid of it. Where do you stick it? [Retailer A] would generate at peak about 15 pallets a day stacked. So, you're talking a cubic meter of product. Now, that's valuable warehouse space. So, you start to accumulate cost. It's losing value." (P1, operations manager, 3PRL provider firm)

> "[…] if I don't turn my stock in twenty-seven days, it's costing me money to have that stock on the floor." (P12, Head of logistics, online retailer)

> "So, by the time you've worked through all the garbage that […] obsolete stock and affected the repairs, those items are now less desirable for. So, the margin that you can make in it, gets less a lot quicker. The longer it's out of the market, the less money you're making, it becomes less desirable. But it literally is given away for parts or, you know, things like metal salvage kind of stuff." (P1, operations manager, 3PRL provider firm)

A few studies from the reviewed literature identified cost pitfalls and problems in line with the interview findings. Specifically, RL process failures can result in hidden costs related to brand value (Bozzi *et al.* 2022:12), poor handling of product returns causes a loss of product value (Prajapati *et al.* 2021:15) and products returned in damaged condition causes a loss of resale value (Bozzi *et al.* 2022:22). Nevertheless, this study uniquely identifies that FL failures can cause pricing (costing) problems and slow disposition processes can cause various cash and recovery problems. Subsequently, online retailers need to identify practices to mitigate the operational failure pitfalls and related costing, cash and recovery problems for the effective RLM of consumer returns.

8.6.1.2 Poor RLM pitfalls and related cost problems

As illustrated in **Figure 8.20**, Poor RLM as a cost pitfall category involves the cost pitfalls of *inattention to RLM*, *poor RL planning*, *lack of resources* and *poor return prevention and avoidance* (RPA), which will be discussed in subsequent sections with related costs problems.

8.6.1.2.1 Inattention to RLM pitfall and related cost problems

Inattention to RLM as a cost pitfall means that online retailers treat RL as an "afterthought", not paying attention to the effective management of consumer returns. Inattention to RLM mostly stem from the failure of understanding the cost implications of poor RL processes and practices. The participants indicated that inattention to RLM can lead to poor cost visibility (costing problem), high RL costs and a loss of money (cash problems). The consequences of inattention to RLM as a poor RLM pitfall can be demonstrated by the following quotations:

> "The problem is that companies are not paying attention to reverse logistics, and it actually costs a lot of money […] if you just, like, not give attention to it, you don't even know how much it costs […]." (P6, logistics manager, multichannel retailer)
>
> "[…] return logistics needs to be managed because it can grow into a loss for the company in the wink of our eyes." (P11, Demand and sales manager, FMCG distributor)
>
> "[…] reverse logistics was sort of an afterthought for the company. And therefore, when they actually started to do the reverse logistics and the returns, we found a lot of issues. And obviously the company lost a lot of money by doing that." (P3, returns manager, online retailer)

These interview findings related to inattention to RLM as a cost pitfall coincide with the findings of Ahlén and Johansson (2023:31), which identified that a lack of management attention can cause inefficiencies and contribute to high RL costs. Therefore, online retailers need to implement practices to address inattention to RLM for greater cost efficiencies in RL.

8.6.1.2.2 Poor RL planning pitfalls and related cost problems

Poor RL planning as a poor RLM cost pitfall involves the pitfall categories of poorly planned return policies and poor strategic planning and procedures, which can result in various costing, cash and recovery problems.

Specifically, the participants mentioned that *poorly planned return policies* can result in various cash problems, including unnecessary expenses (e.g. expenses related to changing return policies), high RL costs (e.g. high investment costs implement new policies) and a loss of profits. Additionally, online retailers that fail to develop *strategic plans* and *standardise RL procedures* can experience the cash problems of unnecessary expenses and a loss of money. Moreover, online retailers that fail to include disposition decisions in their strategic planning can experience poor cost visibility (costing problem), high RL costs, a loss of money, sales and profits (cash problems), and a loss of product (recovery problem). The following quotations expand on these findings:

> "If you don't have your returns, processes and strategy laid out as part of your total business plan, it's going to cost you money because you won't be ready for the wave of things that's going to hit you, and then you're going to have to throw good money at a bad problem." (P5, general manager, online retailer)

> "[…] you are suffering profitability issues, you then start looking at your returns policy. And then often you've got, hamstrung by legacy systems. So, that's now a good policy. That's great. But how do we go and implement that now without all the wiring at the back or incur huge amounts of expense and building something? And I think that's why they take a long time to change, because, you know, the investment is huge. By the time you get around it […] the cost of investing at that point is very high." (P1, operations manager, 3PRL provider firm)

> "[…] [disposition decision in your strategic planning is important because] if you do not manage your that area of your reverse logistics, it is a pit where your money and all your profits will just fall into." (P3, returns manager, online retailer)

> "They need to have [disposition decisions in their strategic planning] […] otherwise they will not know what's the cost going to be […] it's a lost sale and the loss of the product […] and the cost involved to recover that product or to take it up into the supply chain again safely." (P2, owner, supply chain consultancy firm)

Limited studies from the reviewed literature identified the impact of poor RL planning on the financial performance of online retailers. Nevertheless, Ahlén and Johansson (2023:31) noted that poor return policies can increase RL costs and Robertson *et al.* (2020:174) found that return policies can significantly impact the profitability of online retailers. Additionally, Karlsson *et al.* (2023:8) mentioned that failure to add RL in the strategic planning of the organisation can increase RL costs. However, this study added to the literature by emphasising the cash and recovery problems related to the exclusion of disposition in the overall strategic plan of the online retailer. Consequently, this study emphasises that poor RL planning can cause various costing, cash and recovery problems, which can hamper the effective RLM of consumer returns.

8.6.1.2.3 Lack of resources pitfalls and related cost problems

A *lack of resources* as a cost pitfall involves the failure of online retailers to invest in or commit appropriate human and IT resources (pitfall elements) for effective RLM.

Particularly, online retailers who fail to invest in *human resources* and appoint dedicated and skilled staff (i.e. RL manager and RL staff) for return inspection and disposition activities can experience high RL costs and a loss of money (cash problems) and poor/no recovery (recovery problem). Moreover, failure to commit or *invest in IT resources* (e.g. appropriate online systems) can lead to inefficient FL practices (e.g. incorrect order information), leading to unnecessary product returns and subsequent unnecessary expenses and high RL costs (cash problems).Therefore, a lack of resources can contribute to the operational failure pitfalls of FL failures and RL process failures (section 8.6.1.1). The following quotations illustrate these findings:

> "[Resource commitment for RL is important] because you've spent all this money investing in your outbound [forward logistics], in your sales, in your marketing […], in building your warehouse, building a lovely fulfilment operation, your courier operation to get to the customer. But when they want to return it, if you haven't invested in that process and those people, you know, who's going to be making the assessment decisions […]? How are we going to maximise the disposition return? And if you haven't invested in all of that, how can we offset some of the disposition in some of the cost of servicing with the recovery and disposition […]?" (P1, operations manager, 3PRL provider firm)

> "[…] you don't want an uneducated person dealing with a return claim on a forty- or fifty-thousand-rand electronics item. If you think about telephones these days, iPhones and Samsungs cost you anything between 20 and 40 thousand rand. So, if you employ the incorrect person into the team, they'll make the wrong decision and they'll cost you thousands." (P5, general manager, online retailer)

> "[Investment in IT is important] because it's one of the largest areas of costs now in their businesses. Again, because most online retailers offer free delivery and free returns of that product. So, if they don't invest in it […], they will pay the cost for the product being returned." (P2, owner, supply chain consultancy firm)

While studies from the reviewed literature identified various problems with a lack of resources on the management of RL, limited studies identified the cash and recovery-related consequences of a lack of resources. However, Zailani *et al.* (2017:35) found that a lack of resources hampers the adoption of product disposition management. Likewise, Andresen and Istad (2019:15) indicated that a lack of financial support hampers the ability of online retailers to implement appropriate IT and recovery options for product returns. Nevertheless, no studies identified the financial implications of using untrained/uneducated inspection staff. Evidently, this study identified additional problems associated with a lack of resources, reemphasising the detrimental impact of a lack of resources to effectively manage consumer returns.

8.6.1.2.4 Poor return prevention and avoidance (RPA) pitfalls and related cost problems

Closely related to the prevention and control pitfalls of poor RPA (section 8.4.1.3), poor RPA as a cost pitfall involves the pitfall elements of *poor gatekeeping* and *return leniency*, which can lead high product returns.

Regarding *poor gatekeeping*, online retailers that use human gatekeepers to authorise returns can run the risk of invalid and outdated product returns being accepted, resulting in the cost problems of high RL costs (cash problem), obsolete products and poor/no recovery (recovery problems). Additionally, *return leniency* (e.g. offering free product returns) can increase product returns, resulting in the cash

problems of unnecessary expenses, high RL costs, and a loss of sales, margins and profits. The subsequent quotations emphasise the cost problems related to poor RPA practices:

> So, often what happens is [the consumer says] 'I would like to return this laptop'. So, I [as the consumer] phone the contact centre and I spin them a whole story […], and [as the contact centre agent] my heart goes out to this person. And so, I authorise the return. The fact of the matter [is], this person [the consumer] bought the item two years ago and it's out of warranty and it is not returnable. OK, now, once you've agreed to pick it up, there's an expectation in the customer's mind that there's going to be an outcome. But there is also, what are you going to do with this two-year old computer that's now potentially broken? It's nothing. It's old, it's obsolete, and so it's only a cost driver." (P1, operations manager, 3PRL provider firm)

> "[…] the free opportunity to send goods back is, in my opinion, an unsustainable cost for businesses to be able to sustain indefinitely." (P7, owner, 3PRL provider firm)

> "Any return is a profit which is diminished […]. There's no fancy side to returns […] it's a loss because you've got your margin that you have on it doesn't allow for that type of money." (P6, logistics manager, multichannel retailer)

The interview findings related to poor RPA as poor RLM cost pitfalls align with several studies from the reviewed literature. Specifically, studies identified that (1) return leniency causes high RL costs (Ashan & Raham, 2021:158; Robertson *et al.* 2020:174), (2) free returns cause significant cost implications (Biswas & Abdul-Kader, 2018:1016), (3) fraudulent returns cause significant financial losses (Shi *et al.* 2021:2172; Zhang *et al.* 2023:1), and (4) product returns cause profit losses, high costs and price erosions (Bozzi *et al.* 2022:3, 30). Nevertheless, no studies identified the impact of poor RPA on the ability to recover value from returned products. Therefore, this study not only reemphasises the impact of poor RPA on the financial performance of the online retailer but also shows additional problems related to poor recovery.

Essentially, poor RLM involves the cost pitfalls of inattention to RLM, poor RL planning, lack of resources and poor RPA, which can lead to various costing, cash and recovery problems. Subsequently, the financial impact of poor RLM emphasise the importance of implementing appropriate RLM practices for the effective RLM of consumer returns in online retailing.

8.6.1.3 Poor financial management (FM) pitfalls and related cost problems

Poor FM as a cost pitfall category involves *poor RL accounting*, *dismissing RL costs* and *poor RL cost monitoring pitfalls* (see **Figure 8.20**), which will be discussed in subsequent sections with related costs problems.

8.6.1.3.1 Poor RL accounting and related cost problems

Poor RL accounting as a poor FM pitfall involves the use of poor accounting systems for RL and a dual account for FL and RL activities, which can lead to costing and cash problems.

Poor accounting systems means that online retailers use traditional, general or ineffective accounting systems/software for RL. Some participants mentioned that traditional/general accounting systems can

fail to accurately capture and reflect RL costs and associated expenses, leading to an inaccurate view of financial performance, poor return cost visibility and hidden cost (costing problems), as suggested in the following quotations:

> "But traditional accounting systems can't process the additional cost associated with the return, or the credit […] they only see the credit cost and not the other costs of the logistics costs of the return." (P2, owner, supply chain consultancy firm)

> "And I feel, no, most general accounting systems do not take full account of the reverse logistics processes because they are they are different. It's not debtors, creditors or this or that. Reverse logistics process is a facet of logistics that I don't think I have seen any big, big accounting or not even accounting in any software that caters for it adequately." (P7, owner, 3PRL provider firm)

> "[…] you'll get add-ons that can handle the parts of the process, but they don't do the accounting. They feedback to various extents. They'll feed back into your existing system. But they don't do the accounting per say […] So, it's often just a single line, you know, and maybe it gets lost in that […] that number is not rolled up into your returns line." (P1, operations manager, 3PRL provider firm)

Poor accounting systems may also contribute to the practice of using the same account for FL and RL. The participants indicated that using a *dual account for FL and RL* can lead to incorrect absorption of return costs into the selling price (i.e. poor pricing), an inaccurate view of overall financial performance, poor cost visibility, hidden costs (costing problems) and loss of money (i.e. incorrect payment of claims) (cash problem). The following quotations support these findings:

> "It needs to be a completely different dual account. It needs to be completely independent from any other thing you do. The reason for that is if you just calculate that back into transport, then you're going to get an incorrect reflection of what your transport component of your delivery is […] to accurately gauge my transport component onto my selling price […]." (P5, general manager, online retailer)

> […] it extends back into finance because one of the biggest problems in our industry is pick up the goods, no problem. But then when the account from the accounts payable teams of the retailers come and there are claims on there that's an area where we get involved in and to help our customers reconcile their accounts at the end of the month because sometimes there are claims that are illegitimate." (P7, owner, 3PRL provider firm)

> "So, what is the reverse logistics actually costing us? So, it's not just running a truck from point B to point A, it's all the processing and admin around it and repackaging, if necessary, and reselling and liquidating and destruction. That's all put into different categories of income statement, which gets hidden and washed away." (P4, owner/CEO, 3PRL provider firm)

No studies from the reviewed literature identified poor RL accounting, including poor accounting systems and using a dual account for RL and FL, as cost pitfalls to the RLM of consumer returns in online retailing. While studies identified various cost-related problems, no studies identified accounting practices either as problems or as solutions for RLM. Subsequently, this study contributes to the literature by adding additional cost pitfalls and problems that online retailers need to address or avoid for the effective RLM of consumer returns.

8.6.1.3.2 Dismissing RL costs and related cost problems

The poor FM pitfall of dismissing RL costs involves a *failure to recognise the impact of RL costs* and *poor RL costing practices*.

The participants mentioned that online retailers often fail to recognise the high costs of RL processes and activities, contributing to the poor RLM pitfall of inattention to RLM (section 8.4.1.2.1).

Consequently, the *failure to recognise the importance and impact of RL costs* contributes to the costing problems of poor cost visibility and hidden costs and cash problem of high RL costs. Moreover, dismissing RL costs associate with *poor RL costing practices*, which involves the failure of absorbing return costs into the selling price, resulting in the cash problems of high RL costs, a loss of money, margins and profits. The following quotations expand on these findings:

> "It's not cheap reverse logistics. The other day this week with the op's director at one of our clients where he compared the reverse logistics cost to normal distribution costs so that they don't understand that there is a very different cost there. The product that comes back is in a very different state, 90 percent of the time. And more and more, there's much more handling of a reverse product than a normal distribution product. […] a lot of clients seem to think that they don't have a problem with their reverse logistics, because they can't see the cost effect of it. So, if you actually scroll down and identify all the costs in the entire process, that's when they sit up and give some more attention to it." (P4, owner/CEO, 3PRL provider firm)

> "And then you're going to also work in what is your margin that you're making for the firm. […] most companies do not work backwards to say that if you want to return an item, what would that cost be for return?" (P12, Head of logistics, online retailer)

> "Transport, obviously, it's a dead leg, you drive back to a customer that you've already sunk cost into. I mean, you only recover your transport costs on the selling price the first time. The second time you drive to that customer it's an absolute loss." (P5, general manager, online retailer)

> "[…] you don't have profit to pay for it. So, it's an absolute margin sacrifice. You only costed your transport to the customer when you did the selling price calculation. You never provided for a cost to go and recollect it […] it is a sunken cost, which you can't recover." (P5, general manager, online retailer)

While no studies from the reviewed literature noted pitfalls and problems related to dismissing RL costs, Bozzi *et al.* (2022:22) mentioned that product returns involve duplication of operational expenses, increasing total logistics costs and additional losses of returned product value. Nevertheless, this study highlights that ignoring RL costs can hamper the financial performance of online retailers, emphasising the importance of understanding costs for the effective management of consumer returns.

8.6.1.3.3 Poor RL cost monitoring and related cost problems

Poor RL cost monitoring means that online retailer fail to keep track of return cost increases or fluctuations. For instance, failure to monitor higher RL outsourcing costs due to an increase in return volume means that online retailers can miss the opportunity to insource RL at a lower cost (due to economies of scale), leading to the costing problem of hidden costs and cash problems of unnecessary expenses and a loss of money, margins and profits. Additionally, online retailers can contribute to the expensiveness of RL by failing to monitor fluctuations in return transportation charges of 3PL providers/couriers. As one expert indicated that some 3PLs subcontract return collection to other third parties in outlying areas, which can result in hidden costs (costing problem), unnecessary expenses, high RL costs and loss of margins (cash problems). The following quotations denote these findings:

> "[…] to track the cost […]. I've recently seen some studies about online retail in Europe where the returns volume is bigger than the sales volume […]. They think they've sold something, but actually they've not sold it, [products are] returned with such high rates that is no longer feasible." (P2, owner, supply chain consultancy firm)

> "[…] but when your outsource component becomes such a big component of the outsourced company, well, now it becomes a problem because now it's really just a margin depleter [sic] almost because you should be able to do it yourself if there's that much volume that somebody else can run a complete business just on you." (P6, logistics manager, multichannel retailer)

> "However, what the couriers don't tell you is that all the outlying areas, they subcontract to a third courier company that lives in that Koekenaap little dorpie [town], and they will tell that guy, please go fetch that parcel from Mrs. van der Merwe in Koekenaap and keep it at your depot. Our truck comes around maybe once a week and then we will come and collect it. Now, so now you pay the cost for that third agent in Koekenaap, plus you're going to pay on top of that another delivery cost for them sending out their truck to that depot once or twice a week to collect it and bring it back […]. But it all comes back, and it hits you on your margin." (P12, Head of logistics, online retailer)

Limited studies from the reviewed literature mentioned problems related to poor RL cost monitoring. However, Ermes and Niemann (2023:7) indicated that the RL process consists of various hidden expenses that can cause a loss of profits and margins. Additionally, Frei *et al.* (2020:1613) noted that failure to collect, monitor and report consumer return data can cause financial losses. Lastly, Senthil *et al.* (2018:718) mentioned that outsourcing risks to 3PL or 3PRL providers can include hidden outsourcing costs. Subsequently, failure to monitor RL costs can hamper the financial performance of the online retailer, which means online retailers should monitor RL costs for the effective RLM of consumer returns.

Essentially, poor FM in RL involves poor RL accounting, dismissing RL costs and poor RL cost monitoring pitfalls, which can lead to various costing, cash and recovery problems. Therefore, online retailers need to implement appropriate practices to address the cost pitfalls and problems related to poor FM to manage consumer returns cost effectively.

8.6.1.4 Poor integration pitfalls and related cost problems

As illustrated in **Figure 8.20**, poor integration involves the cost pitfalls of a lack of *cross-functional integration* (CFI) and *lack of supply chain integration* (SCI), which can result in costing, cash and recovery problems.

Specifically, a *lack of CFI* as a poor integration cost pitfall involves a lack of collaboration and integration between functional departments, which can hamper effective RL costing. Particularly, a lack of integration between functional departments can result in lack of understanding the true costs associated with RL processes, contributing to the costing problem of an inaccurate view of overall financial performance and poor cost visibility. For example, a lack of collaboration between the sales function and the RL or logistics/operations functions can result in the sales function chasing the sales numbers without understanding or considering RL costs, which can skew the actual financial performance of the online retailer. Therefore, a lack of CFI can contribute to the poor FM pitfall of dismissing RL costs (section 8.6.1.3.2). The subsequent quotations support these findings:

> "[…] sharing of information between different departments and if they can start understanding the cost of these returns […] From a sales point of view, they are chasing the sales numbers without the understanding of what the true returns percentage is and what the true cost of the returns are within the business." (P2, owner, supply chain consultancy firm)

> "And that area of visibility of costs and how it affects the overall sales. So, sales seem to think just of sales and that they don't look at sales at net of returns or net of the cost of returns, not just the cost of the delivery or the

> cost of the item. It's the logistics processing cost is where the money is." (P2, owner, supply chain consultancy firm)
>
> "So, obviously, if you just focus on your sales and you don't look at what's coming back, you're going to have a very distorted view of how your company is actually doing." (P3, returns manager, online retailer)

While a lack of CFI can lead to costing problems, a *lack of SCI,* involving a lack of integrated systems and SC agreements (pitfall elements), can be more problematic for online retailers. The participants provided several examples of the cost implications of poor SCI in RL, mostly relating to RL processes. For instance, *a lack of systems integration* between the online retailer and courier means that online retailers must phone couriers to book a collection, incurring unnecessary telephonic costs (unnecessary expenses) and increasing return collection costs (high RL costs) (cash problems). Additionally, *a lack of agreements* with suppliers/manufacturers means that online retailers must keep defective product returns, resulting in a loss of money (for refunds) (cash problem) or loss of product (for replacements) and poor recovery for the defective returned product (recovery problems). Moreover, a lack of agreements with third-party buyers (e.g. brokers or auctioneers) can result in the unnecessary expenses (cash problem) of shipping the unwanted product returns to the third-party buyer. Consequently, a lack of SCI can be detrimental to the financial performance of online retailers, as emphasised in the subsequent quotations:

> "So, you're going to have your courier fees, they are going to be around R50 to R65 a delivery […] or contacting or phoning a courier to book a collection because you're not integrated." (P1, operations manager, 3PRL provider firm)
>
> "[…] because if they don't collaborate, it makes that every single delivery a lot more expensive." (P2, owner, supply chain consultancy firm)
>
> "[…] agreement with a firm whereby any item that's delivered that's malfunctioning, you can have it directly exchanged with that supplier or manufacturer […] If you don't have such an agreement, then that will be that item you will take into your own stock as a stock loss item […] and then after you've now confirmed with the customer or an action has been taken place to either refund or replace the item, then obviously your financial implications will come into place." (P12, Head of logistics, online retailer)
>
> "[…] if that agreement was not in place, you would then have another cost of shipping those items off to either job lot buyers or auctioneers because they will not come and fetch it." (P12, Head of logistics, online retailer)

While limited studies identified the financial implication of poor internal integration, Frei *et al*. (2020:1619) mentioned that poor internal information sharing means that different departments capture different sets of data that cannot be reconciled, indicating that this also applies to financial information sharing. Regarding a lack of SCI, Hjort *et al.* (2019:774) found that poor integration with 3PLs and manual operations can increase RL costs since pickups must be scheduled manually, which often lead to multiple collections and deliveries. Nevertheless, this study uniquely identified that a lack of SCI with suppliers and third-party buyers can cause several cash and recovery problems, adding to the problems associated with a lack of SCI in RL. Subsequently, online retailers need to address poor integration in RL and related problems for the cost-effective RLM of consumer returns.

The next section summarises the interview findings for the cost pitfalls and problems that can hamper the effective RLM of consumer returns.

8.6.1.5 Framework and summary of findings for cost pitfalls and problems in RLM

The interview findings presented in section 8.6.1 shows that various cost pitfalls and problems can hamper the effective RLM of consumer returns in online retailing. Online retailers should identify the cost pitfalls and problems and understand the cause-and-effect relationship between the cost pitfalls and problems, which can guide them with the implementation of appropriate practices to mitigate specific pitfalls and problems. Figure 8.**21** provides a broad overview demonstrating the links between the cost pitfalls and problems in RLM.

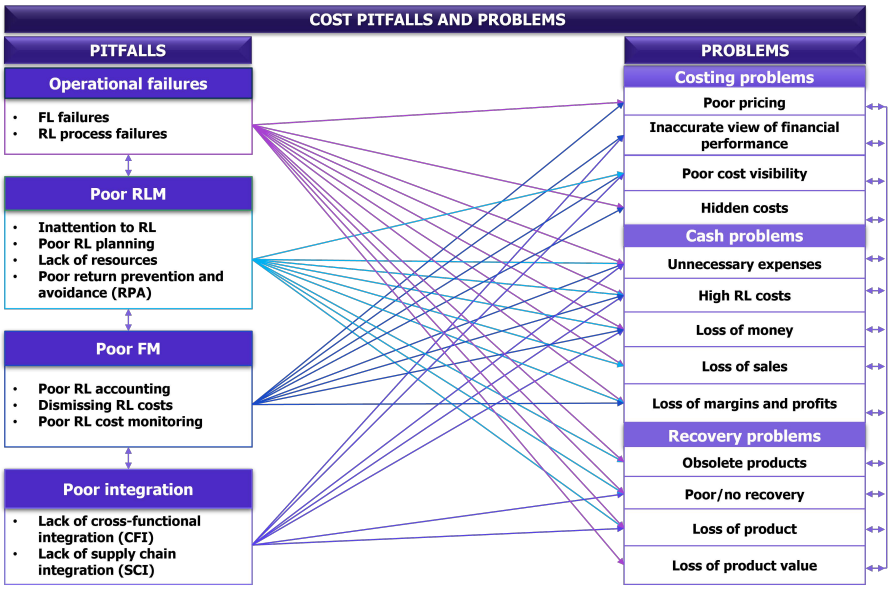


Figure 8.21 Relationship between cost pitfalls and problems in RLM
Compiled by the researcher

Figure 8.**21** provides an overview of the relationship between costs pitfalls and specific cost problems that can hamper the effective RLM of consumer returns. The links between the cost pitfalls and problems in RL can demonstrate the most problematic factors in RL, which should be first addressed by online retailers who experience problems related to cost in RL. Additionally, the framework illustrates links between the cost pitfalls, as well as the links between the cost problems, which can be important considerations in identifying the most significant pitfalls and problems.

Specifically, the framework demonstrates that operational failures can be the most significant cost pitfall category, resulting in various costing, cash and recovery problems. Consequently, online retailers that experience cost pitfalls related to operational failures, including FL failures and RL process failures, can expect a few costing problems and all cash and recovery problems. Therefore, online retailers can address operational failure (especially RL process failures) pitfalls first for cost effectiveness in RL. Additionally, the framework shows that the biggest consequences of the cost pitfall categories can be the unnecessary expenses, high RL costs and a loss of money. Subsequently, online retailers with operational failure, poor RLM, poor FM and poor integration pitfalls can expect

unnecessary expenses, high RL costs and a loss of money, which can hamper the effective RLM of consumer returns.

From the findings presented in section 8.6.1, examples of links between the cost include the links between (1) lack of resources (poor RLM) and FL failures and RL process failures (operational failures), (2) dismissing RL cost (poor FM) and inattention to RLM (poor RLM) and (3) a lack of CFI (poor RLM) and dismissing RL cost (poor FM). Subsequently, addressing a lack of resources can help address FL failures and RL process failures, addressing dismissing of RL costs can help address inattention to RLM and addressing a lack of CFI can help address dismissing RL costs. Therefore, online retailers can identify and address the cost pitfalls that contribute to other cost pitfalls first.

Similarly, examples of links between cost problems include the links between (1) poor pricing (costing problem) and unnecessary expenses (cash problem), (2) hidden costs (costing problem) and high RL cost (cash problem), and (3) poor/no recovery (recovery problem) and loss of sales (cash problem), Consequently, addressing poor pricing can help address unnecessary expenses, addressing hidden costs can help address high RL costs and addressing poor/no recovery can help address a loss of sales. Evidently, online retailers can identify and address the cost problems that contribute to other cost problems first.

Nevertheless, online retailers may experience specific cost pitfalls and related cost problems that requires identification for the effective RLM of consumer returns. Subsequently, Table 8.21, provides a detailed summary of the interview findings, demonstrating links between the cost pitfalls, cost pitfall elements (if applicable), and the specific cost problems that online retailers can encounter.

Table 8.21 Cost pitfalls and related cost problems

Pitfall category	Pitfalls	Pitfall elements	Costing problems	Cash problems	Recovery problems
Operational failures	***FL failures***	-	•Poor pricing	-	-
	RL process failures	Poor RL processes	•Hidden costs	•Unnecessary expenses	•
		Poor transportation	-	•High RL costs •Loss of money •Loss of sales	•No recovery •Loss of product
		Poor disposition	-	•Unnecessary expenses •High RL costs •Loss of money & margins	•Obsolete stock •Poor/no recovery •Loss of product value
Poor RLM	***Inattention to RLM***	-	•Poor cost visibility	•High RL costs •Loss of money	-
	Poor RL planning	Poorly planned return policies	-	•Unnecessary expenses •High RL costs •Loss of profits	-
		Poor strategic planning and procedures	•Poor cost visibility	•Unnecessary expenses •High RL costs •Loss of money •Loss of sales and profits	•Loss of product
	Lack of resources	Lack of human resources	-	•High RL costs •Loss of money	•Poor/no recovery
		Lack of IT resources	-	•Unnecessary expenses •High RL costs	-
	Poor RPA	Poor gatekeeping	-	•High RL costs	•Obsolete stock •Poor/no recovery

Pitfall category	Pitfalls	Pitfall elements	Costing problems	Cash problems	Recovery problems
		Return leniency	-	•Unnecessary expenses •High RL costs •Loss of sales •Loss of margins & profits	-
Poor FM	***Poor RL accounting***	Poor accounting systems	•Inaccurate view of financial performance •Poor cost visibility •Hidden costs	-	-
		Dual account for RL and FL	•Poor pricing •Inaccurate view of financial performance •Poor cost visibility •Hidden costs	•Loss of money	-
	Dismissing RL costs	Failure to recognise impact of RL costs	•Poor cost visibility •Hidden costs	•High RL costs	-
		Poor RL costing	-	•High RL costs •Loss of money •Loss of margins & profits	-
	Poor RL cost monitoring	-	•Hidden costs	•Unnecessary expenses •High RL costs •Loss of money •Loss of margins & profits	-
Poor integration	***Lack of CFI***	-	•Inaccurate view of financial performance •Poor cost visibility	-	-
	Lack of SCI	Lack of integrated systems	-	•Unnecessary expenses •High RL costs	-
		Lack of SC agreements	-	•Unnecessary expenses •Loss of money	•Poor recovery •Loss of product

Table 8.21 summarises the findings for subtheme 3, linking the cost pitfalls, pitfall elements and resulting problems. Online retailers can use the table to identify cost pitfalls and related elements with corresponding cost problems, which can help them to address specific cost pitfalls and problems in RL. For example, online retailers that lack SC agreements with SC parties can identify the resulting cash problems of unnecessary expenses and loss of money, and recovery problems of poor recovery and a loss of product, which might motivate them to obtain SC agreements.

Additionally, online retailers that experience, for example, poor cost visibility as costing problem can investigate the possible causes, namely inattention to RLM, poor strategic planning and procedures, poor accounting systems, dual account for RL and FL, failure to recognise the impact of RL costs and a lack of CFI. Subsequently, online retailers with poor cost visibility can identify that they need to prioritise addressing the poor RLM pitfalls of inattention to RLM and poor RL planning, poor FM pitfalls of poor RL accounting and dismissing RL costs and poor integration pitfall of a lack of CFI.

Moreover, online retailers can use the table to identify the most problematic cost pitfalls and/or cost pitfall elements and the most significant cost problems in RL that they should address or avoid for RLM. For instance, the most problematic cost pitfall elements include poor disposition (RL process failure) and poor strategic planning and procedures (poor RL planning), associating with seven cost problems, which means that online retailers should focus on addressing poor disposition and strategic planning and procedures in RL for the cost-effective management of consumer returns. Additionally, online retailers can identify that high RL costs (linked to 13 cost pitfall elements), followed by

unnecessary expenses (linked to nine cost pitfall elements) can be the most significant cost problems in RL, which may motivate them to implement various RLM practices for improved financial and cost performance.

Although online retailers can focus on addressing specific cost pitfalls and related cost problems to improve their cost performance in RL, they can gain even more advantages by identifying and implementing appropriate cost propositions in RL. Subsequently, the next section will focus on the cost propositions in RL that online retailers can implement to address cost pitfalls and problems in RL as well as realise cost profits for the effective RLM of consumer returns.

8.6.2 Cost propositions – Subtheme 2

As illustrated in Figure 8.19, and discussed in section 8.2.2., the main costs propositions, including *return cost evaluation* (RCE) (section 8.6.2.1), *cost-orientated return* (COR) (section 8.6.2.2), *return cost management* (RCM) (section 8.6.2.3) and *cost parameters* (section 8.6.2.4), consist of proposition categories, key practices/parameters and support practices, which can be implemented and considered for the effective RLM of consumer returns. Based on the interview findings, Figure 8.**22** provides a detailed overview of the cost propositions for RLM.

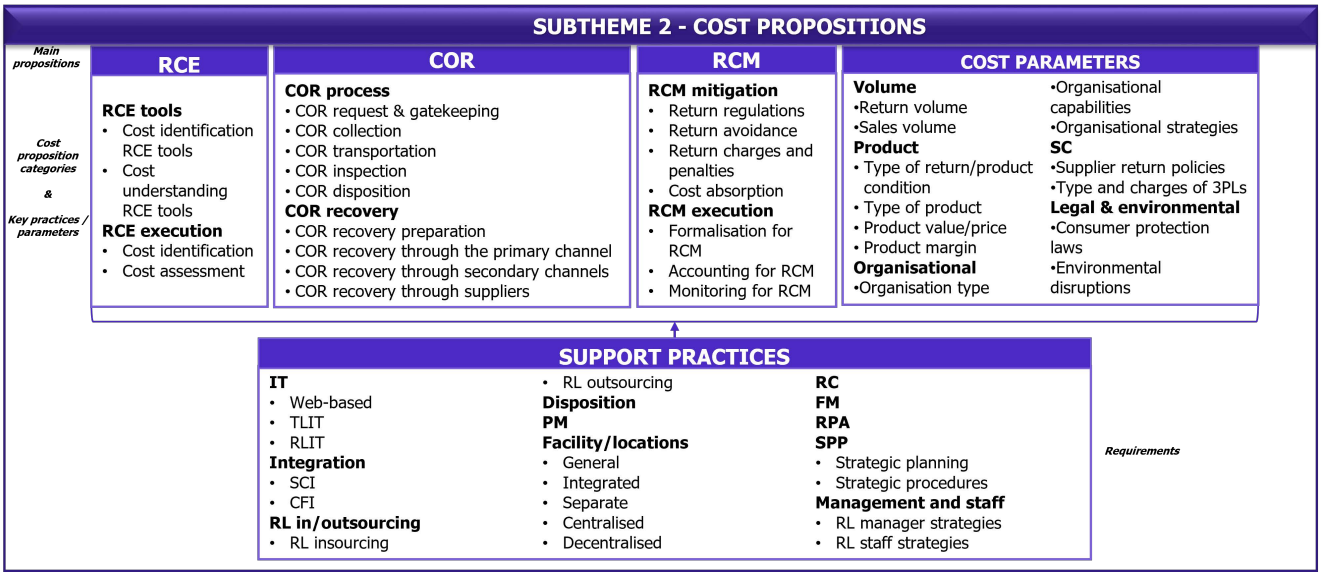


Figure 8.22 Detailed overview of cost propositions for RLM
Source: Compiled by the researcher

Particularly, Figure 8.**22** shows the main cost propositions, proposition categories, key practices/parameters and support RL practices. Section 8.2.2 provides details regarding the presentation and format of the propositions applicable to each theme, including key practice/parameter elements (not listed in **Figure 8.15** but emphasised in the discussion). Based on **Figure 8.15**, the main cost propositions, including proposition categories, key practices/parameters, key practice/parameter elements (if applicable) and support RL practices, will be discussed in the subsequent sections. This

section concludes with a cost proposition framework and a summary of the findings, demonstrating the links between the cost propositions.

8.6.2.1 Return cost evaluation (RCE) propositions

RCE as a main cost proposition involves the understanding, identification and assessment of RL costs, which can help online retailers to effectively implement the subsequent cost propositions of cost-oriented returns (COR) and return cost management (RCM). RCE consist of the proposition categories of *RCE tools* and *RCE execution*, which will be discussed in the subsequent sections.

8.6.2.1.1 Return cost evaluation (RCE) tools

As illustrated in **Figure 8.15**, RCE tools as a RCE proposition category involves the key practices of RCE tools for cost determination and RCE tools for cost understanding, which can help online retailers identify and understand RL costs for effective RCE. The RCE tools for cost determination and understanding will be identified in the subsequent paragraphs.

- *Cost determination RCE tools*

Cost determination RCE tools involve the use of various measures/tools to help online retailers accurately determine RL costs. As key practice elements, online retailers can use appropriate metrics and planning and accounting separation and systems as cost determination tools for RCE.

In terms of *using appropriate measures and planning*, the participants indicated that online retailers should develop appropriate cost metrics and include product disposition in their strategic plans for effective RL cost determination. Specifically, online retailers can use cost metrics to determine RL handling costs per product return, like return cost per unit processing or the RL costs of a single return. Moreover, online retailers can determine RL disposition and redistribution costs by including disposition decisions in their strategic planning. The following quotations demonstrate appropriate measures and planning as tools for RL cost determination:

> "Cost per unit processing, [is] critical, you got to know that your cost per units are [sic] all managed and understood [to identify] what it is costing you to build returns." **(**P6, logistics manager, multichannel retailer)
>
> "[Financial measures] like […] what does it really cost to handle a single customer return […]." (P1, operations manager, 3PRL provider firm)
>
> "They need to have [disposition decisions in their strategic planning] […] to know upfront […] what the cost of that return will be further down the supply chain. So, mostly it's a lost sale and the loss of the product […] because of the [product return] issues and the cost involved to recover that product or to take it up into the supply chain again safely." (P2, owner, supply chain consultancy firm)

Concerning *accounting separation and systems,* the participants indicated that online retailers can either ring-fence return costs or use accounting software with separate return modules as cost

determination tools. As discussed in the cost pitfalls of poor FM, using traditional accounting systems can be problematic for identifying true RL costs (section 8.6.1.3). However, participants indicated that online retailers could use normal accounting systems or protocols but need to ring-fence RL costs to accurately determine RL costs. Examples of ring-fencing return costs can be the separation of return collection and forward delivery costs, inbound receiving and return receiving costs, order processing and return processing costs, and distribution and redistribution costs. Alternatively, online retailers can use sophisticated accounting systems (like SAP) with a separate product return module to record the financial transactions of RL activities, which can help determine RL costs. The following quotations show accounting separation and systems as cost determination tools for RCE:

> "[You can use normal accounting systems for RL] as long as you can ring-fence it. As long as you can identify cost by cost category […]. So, we've got identifiers that says, you know what? This is a returns cart or returns transaction code and those transaction codes are measured separately […]." (P6, logistics manager, multichannel retailer)

> "It needs to be a completely different dual account. It needs to be completely independent from any other thing you do […] you want to do a proper case rate analysis […] to see how much money I spent on positive sales." (P5, general manager, online retailer)

> "[…] they [online retailers] should ring fence it for reverse logistics, […] accounting is [a] pretty standard protocol and just ring fence the cost into reverse logistics elements. And so don't put your reverse logistics warehousing costs into warehousing or rentals, and don't put your reverse logistics transport costs into your transport distribution element […]." (P4, owner/CEO, 3PRL provider firm)

> "Within the system, like an SAP ERP that's quite sophisticated or the bespoke systems that I've dealt with, they have a specific module to deal with returns and to deal with the logistics around the returns, as well as the financial transactions, the credit side of the return and the cost side of the return […]." (P2, owner, supply chain consultancy firm)

As support RL practices for cost determination RCE tools, online retailers can implement (as supported by literature) the (1) disposition strategy of linking disposition strategies to RL strategies (section 6.6), (2) performance measurement (PM) strategy of establishing appropriate metrics (section 6.7), (3) financial management (FM) strategies of using appropriate accounting techniques and systems for RL, identifying RL costs and implementing cost measures (section 6.9.2), and (4) strategic planning strategy of integrating strategic plans for RL with organisational strategic plans (section 6.9.4).

No studies in the reviewed literature focussed on cost determination tools and accounting practices as part of the RLM of consumer returns in online retailing. Resultingly, this study provides new insights into the importance of using tools to determine RL costs for RCE. Additionally, this study shows that cost determination RCE tools can help online retailers address the cost (1) pitfalls of poor RL planning (poor RLM), poor RL accounting, dismissing RL costs, poor return cost monitoring (poor FM) and (2) problems of poor pricing, inaccurate view of financial performance, poor cost visibility and hidden costs (costing problems).

- *Cost understanding RCE tools*

Cost understanding RCE tools involve the use of various measures/tools to help online retailers accurately understand the financial impact of RL costs. The participants indicated that developing appropriate cost metrics, internal information sharing and using capable third parties (key practice elements) can be used as tools for understanding RL costs.

For the *development of appropriate metrics,* the participants mentioned that online retailers can develop cost metrics that helps with understanding RL costs and identifying the impact of RL costs on the bottom line and margins of the online retailer. The participants suggested that cost metrics of return rate versus sales percentage and return costs as percentage of turnover can help online retailers identify RL cost drivers, which enable understanding the financial impact of RL costs. The following quotations demonstrate these findings:

> "[The most important performance metrics for RL must help] understanding what the cost of reverse logistics is to your business and how that [cost] impacts [the] bottom line and margins." (P13, supply chain manager, multichannel retailer)

> "So, your ability to measure […] your financial impact, […] you want to be able to identify what is your return rate as a portion of sales. So, it's about understanding what's driving reverse logistics [costs]." (P1, operations manager, 3PRL provider firm)

> "I think that's […] returns as a percentage of turnover and cost as a percentage of turnover as well." (P7, owner, 3PRL provider firm)

Furthermore, online retailers should encourage *internal information sharing* to enhance RL cost visibility, which can help online retailers understand RL costs. Specifically, the participants suggested that online retailers implement appropriate IT systems, which can facilitate internal information sharing. Additionally, appointing a dedicated RL manager can enhance RL cost visibility and facilitate internal information sharing about RL costs, which can help online retailers understand RL costs. These findings can be supported by the following quotations:

> "[…] if they have more [cost] visibility and sharing of information between different departments, they can start understanding the cost of these returns […]." (P2, owner, supply chain consultancy firm)

> "And that's what for us we have done successfully through many different IT platforms, that this information becomes available to the sales force […] integration is an imperative." (P7, owner, 3PRL provider firm)

> "[…] you need sales, marketing, finance […]. You definitely need someone to account for it. You definitely need someone […] to communicate the whole [return] process […]." (P4, owner/CEO, 3PRL provider firm)

Finally, online retailers can *use capable third parties* to understand RL costs needed for effective RCE. Specifically, online retailers can use 3PRL providers with appropriate RL software, which captures the financial information of product returns and provides cost visibility to understand the cost implications of RL processes and activities. The value of using a capable third party to understand RL cost can be identified from the subsequent quotation:

> "I developed an app that actually does all those processes in the form of physical inspection, photographs of the goods, routing, capturing of the […] financial information […] to know what's coming back […] and […] the [cost] implications thereof." (P7, owner, 3PRL provider firm)

As support RL practices for cost understanding RCE tools, online retailers can implement (as supported by literature) the (1) general IT strategy of using integrative IT and IT with information management capabilities (section 6.3.1), (2) RL information technology (RLIT) strategy of using special return software (section 6.3.5), (3) cross-functional integration (CFI) strategies of information sharing and communication between functions (section 6.4.3), (4) RL outsourcing strategies of deciding on the types of 3Ps for RL outsourcing, and selecting a 3PRL provider (section 6.5.1), (5) PM strategy of establishing appropriate metrics (section 6.7.1), (6) FM strategy of understanding RL costs and implementing cost measures (section 6.9.2), and (7) RL manager strategy of assigning a RL expert manager (section 6.9.5).

Limited studies from the reviewed literature identified practices that can be used to understand RL costs for RCE. However, Karlsson *et al.* (2023:9) found that online retailers need to develop appropriate KPIs to understand the financial implications of RL processes and practices, which confirms that the development of cost metrics can help with understanding return costs. Additionally, Bozzi *et al.* (2022:30) mentioned that online retailers require more internal integration since the parties directly involved in RL understand the financial impact of returns on the organisation. Evidently, internal integration can be important to increase awareness and understanding of RL costs across the organisation. However, no study identified that using 3PRL providers and special return software can facilitate online retailers to understand the cost implications of RL processes and activities. Therefore, this study contributes to the literature by demonstrating additional value of using 3PRL providers and appropriate return software for RLM.

Essentially, cost understanding tools for RCE can help online retailers address the cost (1) pitfalls of inattention to RLM, a lack of resources (poor RLM), poor RL accounting, dismissing RL costs, poor cost monitoring (poor FM) and a lack of CFI (poor integration), and (2) problems of poor pricing, inaccurate view of financial performance, poor cost visibility, hidden costs (costing problems), and a loss of money, margins and profits (cash problems).

8.6.2.1.2 Return cost evaluation (RCE) execution

RCE execution as a RCE proposition category involves the key practices of cost identification for RCE execution and cost assessment for RCE execution (see **Figure 8.15**), which will be discussed in the subsequent paragraphs.

- *Cost identification for RCE execution*

Cost identification for RCE execution focusses on the identification of standard RL costs and hidden RL costs (key practice elements) by using the RCE tools (section 8.6.2.1.1) to effectively evaluate RL

costs. Since RL costs depend on the RL processes and practices of online retailers, only examples from the interview findings can be provided for the potential RL costs that online retailers can identify for RCE.

Regarding *identification of standard RL cost*, the participants provided several examples of standard RL costs that online retailers may incur in the product return process. For instance, administration costs (e.g. helping consumers to log a return), collection costs (e.g. arranging for collection), transportation costs (to and from consumers), unloading and receiving cost, verification costs, inspection costs, sorting costs, processing costs, handling costs, labour costs (e.g. salaries), warehousing costs (e.g. storage, security and inventory costs), packaging costs, disposition costs (e.g. cost of repair or disposal), redistribution costs (e.g. shipping of replacement product to the consumer or shipping to secondary markets) and IT costs. The following quotations identify the standard RL costs associated with product returns:

> "And it's the administrative cost of supporting the logging of the return on some system […]. Then it's the cost of arranging the collection, then it's the cost of the actual transportation, then it's the cost of offloading that vehicle at the site, it's being returned to. It's the cost of inspecting those goods, the cost of processing it onto a system. It's the cost of the put-away or the cost of the destruction with the double handling out again. And it's the cost of the physical space and the systems associated [with it]." (P2, owner, supply chain consultancy firm)

> "So, there's verification cost. There is a transport cost […] There is handling costs because those products are handled at least one, at least up to five or six times. There are the warehousing costs. There is the staffing cost, the sorting process costs, […] and the administration and reporting costs behind all of that." (P4, owner/CEO, 3PRL provider firm)

> "[…] it is a cost of warehouse space and […] you would then have another cost of shipping those items off to either job lot buyers or auctioneers because they will not come and fetch it." (P12, Head of logistics, online retailer)

> "[…] I think the first of all costs of disposal, the logistics costs of getting them back, the cost of storage […] the cost of insuring that they [the products] come comeback properly, we spend a lot of money on bags and tags to bring product back […] So, its packaging, its logistics, its transport, its disposal, recycling and obviously security as well, because at the end of the day, that product is not in a box anymore […] And technology […]." (P7, owner, 3PRL provider firm)

Apart from identifying standard RL costs, *identification of hidden RL costs* can be important for identifying the true costs of RL. The participants mentioned several types of hidden return costs that online retailers can identify, including bank charges, brand and product devaluation costs, consumer experience costs, and hidden collection and transportation charges (subcontracting by third parties). Additionally, online retailers can identify hidden RL expenses related to hiring additional warehouse and customer service staff that handle both forward and RL activities. For example, in the absence of product returns, the online retailer may use ten customer service staff to manage delivery queries, but with product returns, the online retailer might need thirteen customer service staff to manage both delivery and product return queries The following quotations support these findings:

> "[…] potential costs around, your banks, if you start getting chargebacks, you have got to consider what that does in terms of your charge-back rates, the banks often penalise retailers for that." (P1, operations manager, 3PRL provider firm)

> "[…] because now you return the product and, probably, the box is damaged, and you've got to degrade or devalue this product to a certain amount. Let us call it devaluation cost that comes into play […]." (P10, Head of Sales and Logistics, OEM/multichannel retailer)
>
> "And then another cost is the cost in terms of the brand value that is lost when a product is returned. So, when the specific product of an upstanding brand, that's returned because of a quality issue, then you devalue your brand. So, it's an intangible that people don't always consider." (P2, owner, supply chain consultancy firm)
>
> "[…] potentially consumer costs […] If the sales experience did go south." (P6, logistics manager, multichannel retailer)
>
> "And often those numbers are obscured because I've got one customer service team where they handle both sales and returns and you can't really see who's doing what to get that split between sales and returns […]." (P2, owner, supply chain consultancy firm)
>
> "[…] but instead of looking at it as its contribution to business costs, how many extra contact centre agents did I employ, how many extra warehouse staff did I employ? You know that number is not rolled up into your returns line." (P1, operations manager, 3PRL provider firm)

As a supporting practice for cost identification as a key RCE execution practice, online retailers can implement (as supported by literature in section 6.9.2) the FM strategies of considering factors that can influence RL costs, identifying RL costs and identifying hidden RL costs.

A few studies from the reviewed literature identified the costs associated with RL, corresponding to the interview findings. Specifically, standard RL costs can include receiving costs, restocking costs, inventory costs (Gustafsson *et al.* 2021:877), handling costs (Das *et al.* 2020:59), inspection costs, transportation costs (Ahsan & Rahman, 2021:16; Das *et al.* 2020:59; Gustafsson *et al.* 2021:877; Wang *et al.* 2017:681), gatekeeping costs, disposition costs, redistribution costs (Ahsan & Rahman, 2021:16; Wang *et al.* 2017:681), IT costs and staff training and development costs (Zailani *et al.* 2017:35). Additionally, some hidden RL costs can include brand/reputation costs due to poor consumer service (Ahsan & Rahman, 2021:21; Bozzi *et al.* 2022:12), costs associated with a loss of resale value (Bozzi *et al.* 2022:22), hidden outsourcing costs (Senthil *et al.* 2018:718) and additional staff recruitment costs (Zailani *et al.* 2017:35).

Evidently, RL involve various costs, which emphasises the importance of implementing appropriate practices for cost efficiencies and savings. Essentially, cost identification as a key RCE execution practice can help online retailers to address the cost pitfalls of dismissing RL costs and poor RL cost monitoring (poor FM) and the cost problems of poor pricing, inaccurate view of financial performance, poor cost visibility and hidden costs (costing problem).

- *Cost assessment for RCE execution*

Following cost identification for RCE execution, cost assessment for RCE focuses on assessing the cost implications of RL practices, which can help online retailers identify cost inefficiencies. As key practice elements, online retailers can perform costs assessments for return leniency, return acceptance and disposition options.

In terms of *cost assessment for return leniency*, the participants suggested that online retailers assess the costs of free returns versus fee returns through return cost tracking and appropriate cost metrics. For example, online retailers can use return rate/cost per sales percentage, which may help them assess the difference between free returns and fee returns. Moreover, appropriate cost tracking and metrics can help an online retailer curb potential losses associated with return leniency, preventing large financial losses. Evidently, online retailers can use RCE tools (section 8.6.2.1.1) for effective cost assessment of return leniency. These findings can be supported by the following quotations:

> "I think that's important to track the cost […] to perhaps distinguish between products that are returned for free and product where there is a cost in returning it […]. I've recently seen some studies about online retail in Europe where the returns volume is bigger than the sales volume, because of the effect of free returns that these companies start running at a loss. They think they've sold something, but actually they've not sold it, [products are] returned with such high rates that is no longer feasible. So, to look at those kinds of KPI's are important" (P2, owner, supply chain consultancy firm)

> "[…] identify what is your return rate as a portion of sales […]. I think those are the metrics you want to identify and what the cost of that is." (P1, operations manager, 3PRL provider firm)

Concerning *cost assessment for return acceptance*, the participants indicated that online retailers should assess the cost implications of accepting returns of inexpensive products. For example, assessing the cost implications of accepting a return of an unopened CD worth R50 against the cost of issuing a R50 refund without return collection. Therefore, based on the cost identification for RCE, online retailers can effectively assess the cost implications of return acceptance. The following quotations demonstrate this finding:

> "[…] really have a good look at whether or not you want to accept a return in terms of cost. Example, I would if it's under a certain chargeable mass and if it's under a certain product price, I would actually tell the customer not to even return it. I would tell the customer to keep it. And I will refund that customer or give the customer a credit." (P12, Head of logistics, online retailer)

> "[…] you look at the product type and you look at the chargeable mass of that product type, and you also look at the sales or the cost of that product. But it does not warrant to bring an item which is under one kilo and it's costed R100 from an outlaying area back […]." (P12, Head of logistics, online retailer)

Finally, online retailers can perform a *cost assessment for disposition options*, which entails assessing the feasibility of performing recovery activities. For example, assessing the cost implications of repairing a defective device, which can involve handling costs, communication costs, collection costs, transportation costs, repair costs and redistribution costs. The participants indicated that online retailers need to regard disposition decisions as strategic to accurately assess the cost implications of disposition options, linking with the cost determination RCE tool of disposition decisions in strategic plans (section 8.6.2.1.1). The following quotations identify the importance of performing cost assessment for disposition options:

> "[…] to repair can be quite expensive in terms of the lead times, because now the product could be handled into your facility, then it has to be booked up to a repair agent or to repairer on site, and it has to be booked back into your site. […] and then it goes back to stock and then it can be dispatched again. So, that is also quite expensive. And unless you've got very high value goods, the costs of those repairs are not feasible for you to correct that product." (P2, owner, supply chain consultancy firm)

> "[…] because it's also got a cost implication, so [disposition decisions] got to be strategic, so it's got to be worked out […] what it's going to cost you [...]." (P12, Head of logistics, online retailer)

As supporting practices for cost assessment as a key RCE execution practice, online retailers can implement (as supported by literature) the (1) disposition strategies of understanding economic factors for disposition decisions and assessing disposition options (section 6.6.1), (2) PM strategy of establishing appropriate metrics for RL (section 6.7), and (3) FM strategies of performing RL cost estimations, performing cost/benefit analyses and considering factors that can influence RL costs (section 6.9.2).

While no study from the reviewed literature mentioned that online retailers need to perform cost assessments for return leniency, Ashan and Raham (2021:158) and Robertson *et al.* (2020:174) warned that return leniency can contribute to the financial risk of high RL costs, emphasising the importance of assessing the financial impact of return leniency. Furthermore, Hjort *et al.* (2019: 775) identified that some online retailers request consumers to keep and dispose of products, providing consumers with credit to avoid unnecessary expenses. Subsequently, no studies mentioned cost assessments for return leniency, return acceptance and disposition options. Therefore, this study provides additional practices that online retailers can adopt to mitigate the cost (1) pitfalls of poor RL planning, poor return prevention and avoidance (RPA) (poor RLM), dismissing RL costs and poor cost monitoring (poor FM), and (2) problems of inaccurate view of financial performance, poor cost visibility (costing problems), unnecessary expenses, high RL costs, and a loss of sales, money, margins and profits (cash problems).

Essentially, RCE propositions, including RCE tools and RCE execution, can help online retailers to effectively identify, understand and assess RL costs, which not only facilitate the implementation of COR and RCM propositions but also the mitigation of cost pitfalls and problems. Therefore, online retailers can implement RCE propositions for the effective RLM of consumer returns.

In the next section, COR propositions as a main cost proposition will be analysed and discussed.

8.6.2.2 Cost-orientated return (COR) propositions

COR as a main cost proposition involves the proposition categories of *COR processes* and *COR recovery*, which focusses on cost efficiencies and savings in the RL process and cost recovery from consumer product returns. Consequently, based on the RCE (return cost evaluation) propositions, online retailers can identify appropriate practices for cost savings and recovery in RL. In the subsequent sections COR processes and COR recovery propositions will be described and analysed.

8.6.2.2.1 Cost-orientated return (COR) processes

As illustrated in **Figure 8.15**, COR processes as a COR proposition category involves the key practices of (1) COR request and gatekeeping, (2) COR collection, (3) COR transportation, (4) COR inspection, and (5) COR disposition process, which will be discussed in the subsequent paragraphs.

- *COR request and gatekeeping*

COR request and gatekeeping as a key COR process practice involves the key practice elements of self-service return request, online authorisation and using third parties. Particularly, the participants suggested that online retailers implement *self-service return request* procedures and *online return authorisation* to save RL costs and eliminate the hidden expenses of employing extra staff for manual return logging and authorisation. This finding shows the importance of identifying hidden RL costs as an element of cost identification for RCE execution (section 8.6.2.1.2). The following quotations support these findings:

> "I think it saves a lot of costs, […] you don't need to employ as many people when a consumer […] can log a return for themselves, whereas some other companies obviously you need to phone the company or send an email to initiate the return. So, I think in that case, if you have a system that can allow the customer or the consumer to initiate the request for a return by themselves on their own, it makes for a lot more smoother [sic] process." (P3, returns manager, online retailer)

> "So, the whole authorisation was done on online […] the cost saving was disproportionately big because we didn't have the customer interactions […]." (P1, operations manager, 3PRL provider firm)

Alternatively, online retailers can *use third parties*, like a third-party contact centre or 3PRL providers, for COR request and gatekeeping. For instance, online retailers can use contact centres for return logging and authorisation to save administration and labour RL costs. Moreover, online retailers can outsource RL to a 3PRL provider with appropriate return software, which provides immediate authorisation of return requests for cost efficiency. Consequently, the same return software that can be used as a cost understanding RCE tool (see section 8.6.2.1.2) can help online retailers with COR request and gatekeeping. The following quotations show the key COR request and gatekeeping practice of using third parties:

> "[…] like outsourcing a contact centre, the only reason you do it is to gain actual financial savings." (P1, operations manager, 3PRL provider firm)

> "And I developed an app […] to give immediate authorisation […] I could put it into one-word, reverse logistics is immediate." (P7, owner, 3PRL provider firm)

As support RL practices for COR request and gatekeeping, online retailers can implement (as supported by literature) the (1) Internet and web-based IT strategies of developing online return capabilities and using the Internet and website for RL (section 6.3.2), (2) RL information technology (RLIT) strategy of using special return software (section 6.3.5), and (3) RL outsourcing strategies of deciding on the types of 3Ps for RL outsourcing, and selecting a 3PRL provider (section 6.5.1).

Some studies from the reviewed literature coincided with the interview findings related to COR request and gatekeeping. Specifically, several studies identified that dedicated return software and information systems aimed at automating returns can streamline return processes (Ahlén & Johansson, 2023:31; Bozzi *et al.* 2022:21; Hjort *et al.* 2019:788). Additionally, Ashan and Rahman (2021:20) found that providing consumers with a hassle-free and efficient return process can result in cost savings. Lastly, Wang, Dang *et al.* (2021:2) mentioned that outsourcing RL to 3PRL providers can result in cost efficiencies. Evidently, COR request and gatekeeping can help online retailers address the cost pitfalls of RL process failures (operational failure), a lack of resources and poor RPA (poor RLM), and cost problems of hidden RL costs (costing problem), unnecessary expenses, high RL costs and a loss of money (cash problems).

- *COR collection*

COR collection involves the key practice elements of simultaneous return pickup and replacement delivery, using drop-off collection and using third parties, which can enhance cost efficiency in the RL process.

The participants mentioned that performing *simultaneous return pickup* and *replacement delivery* can help online retailers save unnecessary collection and transportation costs. The participants indicated that online retailers could use internal integration between the RL and FL functions, enabling synchronised return collection and replacement delivery. The following quotation illustrates the value of simultaneous return pickup and replacement delivery for a COR collection process:

> "[…] cross-functional [integration] is imperative […] If the guy gets the wrong thing and he wants it replaced […] I think we could save [Retailer C] a fortune, because if you return something and you order a replacement, they come up with two different deliveries […]. So, I thought to myself, if we [as the 3PRL provider] could convince them [Retailer C] that when you [the consumer] do a request for return and you [want to] replace […] you hook the two together." (P7, owner, 3PRL provider firm)

Furthermore, *using drop-off collection* can help online retailers enhance cost efficiency by saving RL collection and transportation cost. For online-only retailers, the participants mentioned that online retailers can adopt a decentralisation location strategy using drop-off locations, like convenience stores for COR collection. Alternatively, multichannel retailers can encourage online consumers to drop returns off at their stores, reducing various RL costs and expenses associated with collection and transportation. These findings can be supported by the subsequent quotations:

> "I think decentralised is better from a cost point of view, [and] an efficiency point of view […] that they would be able to go to a Caltex garage and there's a drop point there." (P4, owner/CEO, 3PRL provider firm)

> "[…] go to a store […] it's still a return but you are actually not paying a return logistics costs […]." (P13, supply chain manager, multichannel retailer)

Finally, the participants indicated that online retailers could *use third parties*, like 3PL providers and 3PRL providers, for COR collection. For instance, using 3PL providers for product return collection

can help online retailers save collection costs by reducing human and infrastructural resources. Additionally, using 3PRL providers can improve return collection speed, which can result in non-attributable or indirect cost savings related to improved consumer service and satisfaction. The following quotations demonstrate the value of using third parties for COR collection in RL:

> "[…] because there is so many 3PL services out there that you can just at the drop of a hat, send somebody to go and collect your returns […]. If you still have to focus on getting a driver to going to pick up a certain item at a certain time of the day, you will tend to use more resources and end up spending more money than actually just outsourcing it to somebody else." (P3, returns manager, online retailer)

> "So, whilst there is a saving [through RL outsourcing], the saving may not come in direct costs, […] but there are costs that can be saved elsewhere and some non-attributable costs in the form of customer service [….] I [as the 3PRL provider] pick it up [the product return] tomorrow and that […] is done very quickly, very efficiently." (P7, owner, 3PRL provider firm)

Implementing COR collection, shows the importance of identifying standard and hidden costs through the key RCE execution practice of cost identification (section 8.6.2.1.2), which can help online retailers implement appropriate RL process and practices for a COR process. As support RL practices for COR collection, online retailers can implement (as supported by literature) the (1) CFI strategies of establishing cross-functional teams, developing functional relationships and collaborating, cooperating, coordinating and information sharing between functions (section 6.4.3), (2) RL outsourcing strategies of deciding on the type of RL service and third party for RL outsourcing, and (3) decentralised facility/location strategies of using retail locations and multiple/flexible locations for RL (section 6.8.4).

The interview findings related to COR collection matches the findings of few studies from the reviewed literature. Specifically, Bozzi *et al.* (2022:19) identified that online retailers with a highly integrated system can perform simultaneous return pickup and delivery of an exchange. Additionally, Bozzi *et al.* (2022:20) indicated that multi/omnichannel retailers should motivate consumers to return to stores to reduce RL costs. De Borba *et al.* (2021:131) mentioned that convenience collection points can be valuable for online-only online retailers and Nel and Badenhorst (2020:123) suggested that online retailers use 3PL providers or couriers to collect products either at consumers or drop-off locations, enhancing efficiency in the collection process. Essentially, COR collection can help online retailers address the cost (1) pitfalls of RL process failures (operational failures), a lack of resources (poor RLM) and a lack of CFI (poor integration), and (2) problems of poor RL cost visibility, hidden RL costs (costing problems), unnecessary expenses, high RL costs, and a loss of money and margins (cash problems).

- *COR transportation*

COR transportation involves the key practice elements of using bulk transportation and appropriate network designs, which can bring economies of scale and return transportation cost savings.

Regarding *bulk transportation*, online retailers can use 3PLs/couriers to capitalise on return quantities and achieve economies of scale. The participants indicated that online retailers could integrate with 3PL providers through a Transportation Management System (TMS) for COR transportation. Therefore, online retailers can identify 3PLs with the appropriate systems that perform bulk return collections for multiple online retailers, which can significantly reduce the cost of RL transportation. Alternatively, online retailers can outsource the RL process to 3PRL providers with the ability to achieve economies of scale by transporting consolidated returned products in bulk to a centralised facility for processing and disposition. These findings can be illustrated by the following quotations:

> "I believe outsourcing is an amazing opportunity […] the reason I say that is, I don't have scale in returns […] it becomes part of the courier's greater scale." (P6, logistics manager, multichannel retailer)

> "[…] there needs to be like a secondary network of delivery agents and delivery services that can capitalise on the quantity of deliveries that need to take place for […] the returning part […], which are making [return] deliveries very expensive for the retailer […] they need more integration and vertical integration with transportation companies and transportation management systems, which is in the same way that you can broke the loads for normal bigger loads, that you can do a brokering kind of service for the [return] delivery." (P2, owner, supply chain consultancy firm)

> "I [the 3PRL provider] do have centralised facilities, […] I then bring all that stock back up to centralised hubs, where it is all processed, but I don't bring it up parcel-for-parcel. I bring it up truckload-for-truckload." (P7, owner, 3PRL provider firm)

Using appropriate network design can help online retailers reduce return transportation costs for a COR transportation process. The participants identified several network design possibilities for COR transportation. For instance, online retailers can reduce high transportation costs by using a decentralised network design since decentralised facilities reduce travel distances. Similarly, online retailers with a separate return facility can reduce transportation costs by locating the return facility close to their main facilities. Alternatively, online retailers can use centralised facilities to eliminate multiple return transportation trips to various locations, which can duplicate return costs and impact economies of scale. The following quotations demonstrate the use of appropriate network design for COR transportation:

> "[…] decentralised is better from a cost point of view its more cost effective […]. It's a hell of a cost to transport something within 48 hours across the country. But whereas if you decentralise, it takes that waiting period and that associated cost away […]." (P4, owner/CEO, 3PRL provider firm)

> "I think decentralised is better, and the reason being is cost […]. You've got to bring that product back and you've got to bring that [back] cost effectively. I personally think that decentralised operations are far more […] cost effective […] The fact that it gets back to the reclamation centre a little time later than that, that to me is in the ability to save costs […]." (P7, owner, 3PRL provider firm)

> "So, in terms of location, it needs to be, if not inside the DC, very close to the main DC hubs because you want to eliminate any excessive transport […] if you can't fit it in the very same facility […] then the next best option would be to have a centralised unit closest to your main hub […] just to save transport cost." (P5, general manager, online retailer)

> "I believe with it being centralised is that you collect that unit and deliver directly to your warehouse […] because less activities[are] involved, [for a] reduction in costs […]." (P10, Head of Sales and Logistics, OEM/multichannel retailer)

Online retailers can implement various support RL practices for COR transportation, including (as supported by literature) the (1) traditional logistics (TLIT) strategy of using TMS for RL (section

6.3.3), (2) SC integration (SCI) strategies of integration and sharing of information and IT (section 6.4.1), (3) RL outsourcing strategies of deciding on the type of RL service and third party for RL outsourcing (section 6.5.1), (4) separate facility/location strategy of using separate facilities at a single location (section 6.8.2), (5) centralised facility/location strategy of using a central facility/location for RL (section 6.8.4), and (6) decentralised facility/location strategies of establishing a decentralised network, using decentralised facilities for RL and decentralising specific RL processes (section 6.8.5).

A few studies from the reviewed literature identified similar practices that can be used for cost savings in the transportation process. Specifically, studies identified that (1) economies of scales can be realised by outsourcing to 3PL/3PRL (Gu *et al.* 2019:160; Wang, Wang *et al.* 2021:67), (2) economies of scales and cost savings can be realised by transporting returned products to centralised facilities (Hjort *et al.* 2019:781), (3) transportation costs can be reduced by travelling shorter routes and distances, associated with a decentralised network (Bozzi *et al.* 2022:20, 30), and (4) a coordinated RL network can facilitate cost-effective return transportation (Misni & Lee, 2017:91). However, this study added that integration of information systems and the use of TMS can help online retailers with the implementation of COR transportation, providing additional opportunities for return transportation cost savings.

Essentially, COR transportation can help online retailers mitigate the cost (1) pitfalls of RL process failures (operational failures) and a lack of SCI (poor integration), and (2) problems of unnecessary expenses, high RL costs, a loss of money and margins (cash problems).

- *COR inspection*

COR inspection as a key COR process practice involves cost savings through the key practice elements of pre-return COR inspection and post-return COR inspection.

Like service-orientated return (SOR) inspection (section 8.5.2.1.2), *pre-return COR inspection* entails the use of dedicated staff to perform inspection at consumer locations. Specifically, the dedicated staff can inspect products to assess the true condition of product, which may eliminate unnecessary return transportation, receiving, processing and disposition costs for false failure and fraudulent product returns. Additionally, the staff can perform a resell for false failure returns related to incompatible devices, which helps eliminate a loss of sales. Furthermore, online retailers can train collection staff to perform quick visual inspections at the consumer's location, which can mitigate the cost pitfall of RL process failures related to poor transportation (section 8.6.1.1). Consequently, using visual inspection before transportation can help online retailers avoid accepting ineligible product returns (i.e. consumer claims an unwanted product but returns a damaged product), mitigating cash problems (e.g. a loss of money) and recovery problems (e.g. loss of product). Moreover, pre-return inspection can reduce the

need for additional inspection staff (human resources) in the facilities, which reduce handling costs. The following quotations show the importance of pre-return COR inspection:

> "But if you had a team of people that could evaluate at the point of taking it from the customer, you would salvage tons of money […] If you were able to put a dedicated returns team, […] our first line evaluators,[…] that can go to the customer and say, you know what, before I take this laptop from you, can we quickly do one, two, three and four, maybe solve them right there […]. Or you know what? I can see that you've got the incorrect phone. It's not compatible with this device. No problems, no questions asked. I'll update the return right here now and do a resell. So, they can sell them the correct device." (P5, general manager, online retailer)

> "The staff that's physically going to handle the product from the first time, the guy with the motorbike comes back with that jacket or whatever it is to be able to inspect and do the right thing at that point in time. Too often those processes are separated from each other. One person offloads then it gets moved on. Another person inspects or another person makes a final decision, and you just postpone the handling side. Where if you can train your people up at the right point to say this is good stock or its bad stock, then the decision can be made much sooner in the process without incurring double handling costs." (P2, owner, supply chain consultancy firm)

Regarding *post-return COR inspection*, online retailers can save costs in the long-term by appointing educated inspectors to perform product return inspections accurately and make appropriate processing and disposition decisions. Therefore, post-return COR inspection can help mitigate the cost pitfall of RL process failures related to poor disposition. The following quotation demonstrates the value of post-return COR inspection:

> "[…] employing the right people. It will save you money in the long run because you don't want to be an uneducated person dealing with a return claim on a forty- or fifty-thousand-rand electronics item […]." (P5, general manager, online retailer)

Subsequently, as support RL practices for COR inspection, online retailers can implement (as supported by literature) the (1) RC strategy of human RC in RL (section 6.9.1) and (2) RL staff strategies of providing formal training and skills development opportunities and producing well-trained and skilled staff (section 6.9.5). The findings related to pre-return inspection corresponds with the findings of Hjort *et al.* (2019:775), who observed that online retailers can use of pre-return inspection at consumer locations to ensure that the product condition matches the return claim. However, this study adds that cost savings and reduced human resources requirements can be realised through pre-return inspection.

Essentially, COR inspection can help online retailer address various cost pitfalls and problems, including the cost (1) pitfalls of RL process failures (operational failures), a lack of resources and poor RPA (poor RLM), and (2) problems of unnecessary costs, high RL costs, a loss of money and sales (cash problems), obsolete stock, poor/no recovery and a loss of products (recovery problems).

- *COR disposition*

COR disposition as a key COR process practice focuses on speedy disposition to save costs on transportation, product handling and warehousing (inventory and space). The participants mentioned that online retailers can use decentralisation for speedy disposition of perishable products, avoiding unnecessary transportation expenses to a central point for disposal. Furthermore, online retailers can

outsource RL to 3PRL providers with the capabilities of efficient disposition, avoiding inventory and storage costs as well as preventing obsolete stock, poor/no recovery, a loss of product/product value and a loss of sales. The following quotations demonstrate these findings:

> "I'm going to dispose of something regardless, then you want to do it as quickly as possible without incurring additional transportation or other costs. And then you might want to say, well, I've decentralised points in different cities, and I'll just dispose." (P2, owner, supply chain consultancy firm)

> "So whilst there is a saving [through RL outsourcing], the saving may not come in direct costs, but it will become in the recoverability of the product, the control, the discipline and the turnaround of the stock that it doesn't get left for six months before somebody, when it's starting to encroach on warehouse space, and somebody says, we've got to get this nonsense out of here […]." (P7, owner, 3PRL provider firm)

As support RL practices, online retailers can implement (as supported by literature) the (1) RL outsourcing strategies of deciding on the type third party for RL outsourcing and selecting a 3PRL provider (section 6.5.1), (2) disposition strategy of benefit-driven disposition options (section 6.6.1), and (3) decentralised facility/location strategy of decentralising specific RL processes (section 6.8.5). While no study from the reviewed literature indicated the use of decentralised facilities for speedy disposition and cost savings, Le (2023:15) mentioned that outsourcing RL can help online retailers with product recovery and savings of costs associated with disposition activities.

Therefore, online retailers can benefit from using 3PRL providers for COR disposition, which with other suggested COR disposition practices can help them address the cost (1) pitfalls of RL process failures (operational failure) and poor RL planning (poor RLM) and (2) problems of unnecessary expenses, high RL costs, a loss of money and sales (cash problems), obsolete stock, poor recovery, a loss of product and loss of product value (recovery problems). Relating to COR disposition, the next section explores COR recovery as the final COR proposition category.

8.6.2.2.2 Cost-orientated return (COR) recovery

While COR process propositions focused on cost efficiencies and savings through various RL processes, COR recovery as a COR proposition category focuses on disposition recovery activities to maximise cost recovery from returned products. Therefore, COR recovery extends COR processes ensuring that online retailers not only save RL costs but also recover costs through return disposition. As illustrated in **Figure 8.15**, COR recovery involves the key practices of (1) *COR recovery preparation*, (2) *COR recovery through the primary channel*, (3) *COR recovery through secondary channels* and (4) *COR recovery through suppliers*, which will be discussed in the subsequent paragraphs.

- *COR recovery preparation*

COR recovery preparation involves the key practice elements of developing a COR recovery strategy, establishing a COR recovery department and establishing COR recovery agreements.

A *COR recovery strategy* involves the development of a recovery strategy with the aim of recovering as much value as possible from consumer returns. Consequently, online retailers must pay attention to RL and identify recovery options related time, resource and cost requirements in advance for effective COR recovery preparation. The following quotation demonstrate the importance of developing a COR recovery strategy:

> "So, I think it's very important as part of your strategy. […] what do you do with that product when it's coming back and it's not resalable? You know, do you just try and mark it down and send it to outlets stores, sell it to third parties, can you maybe do something with it, do you fix it? So, I think it's because there is resources, cost and time. All that stuff is involved with what happens with the product after it's been returned. So, I think you have to take that into account in your strategy." (P13, supply chain manager, multichannel retailer)

Additionally, some participants advised that online retailers establish a *COR recovery department*, consisting of dedicated recovery staff with various roles and responsibilities for COR recovery. Particularly, recovery staff can be involved in product assessment, sorting, repackaging, engagement with third-party buyers from secondary markets and engagement with suppliers. Additionally, online retailers can either appoint a RL manager to manage recovery efforts or use a general manager (dual FL and RL roles) for disposition decision making and engagement with suppliers, enabling maximum cost recovery from product returns. Subsequently, online retailers need to dedicate sufficient human resources for the establishment of a COR recovery department. The following quotations portray these findings:

> "So, we also have a recovery department, in our warehouse, which then will assess the heights and either repackage it or they will put it aside for either Cash Crusaders or Cash Converters, whichever people sell used goods, to come and collect it to actually get some form of profit […]." (P3, returns manager, online retailer)

> "We have a category department. […] So, our category department takes care of all the suppliers on based on the different categories […] we have to establish whether we can send it back or not." (P9, regional & online DC manager, online retailer)

> "[…] the reverse logistics manager is actually managing the inventory component. What are we going to do with the stock? How are we going to handle it? How are we going to disposition it?" (P1, operations manager, 3PRL provider firm)

> "[…] the manager of the fulfilment centre and I have to decide whether which route it should take. So, from there on, we decide whether the packaging is damaged. If the packaging is damaged, then we will contact our supplier […] and let them know that this item has come back. We are returning it to supplier." (P9, regional & online DC manager, online retailer)

> "But when they want to return it, if you haven't invested in that process and those people […] How are we going to maximise the disposition return? And if you haven't invested in all of that, can we offset some of the disposition in some of the cost of servicing with the [cost] recovery and disposition […]." (P1, operations manager, 3PRL provider firm)

Lastly, COR recovery preparation requires the establishment of *COR recovery agreements* with suppliers and third-party buyers. Particularly, online retailers can establish COR recovery agreements with suppliers that aim to maximise COR recovery from consumer returns. Additionally, online retailers can establish agreements with third-party buyers (i.e. jobbers and brokers) operating in secondary markets to maximise COR recovery from unwanted/used product returns. The following quotations emphasise the importance of establishing COR recovery agreements with SC parties:

> "And obviously, I know the service level agreements based on that supplier […] we have an agreement with these guys so that we can send it back […]." (P9, regional & online DC manager, online retailer)

> "[…] there is a cost for that space […] needs to also be sent back to the supplier or the manufacturer. I've had agreements in place that my supplier or manufacturer would come once a month and collect all the items if that agreement was in place, if that agreement was not in place, you would then have another cost of shipping those items off to either job lot buyers or auctioneers because they will not come and fetch it." (P12, Head of logistics, online retailer)

> "So that's what they'll go into agreement with one or two parties at most and say, you know what, every other day we'll call you, you'll come, you'll come and view the stuff in the racks. You'll see what it is. You'll get a fair price, and you'll say, fine, bang, I'll pay you R400 K. I'll take everything. Because it's just a way of salvaging cost." (P5, general manager, online retailer)

Consequently, COR recovery preparation demonstrates the importance of RCE (return cost evaluation) propositions, involving the inclusion of disposition decisions in strategic planning (cost determination RCE tool), identification of standard RL costs (cost identification for RCE execution) and cost assessments for disposition options (cost assessment for RCE execution) (section 8.6.2.1). Additionally, online retailers can implement various support RL practices for COR recovery preparation, including (as supported by literature) the (1) *SCI strategies* of negotiations, developing contracts, SC collaboration, coordination, communication and information sharing and establishing SC agreements (section 6.4.1), (2) *disposition strategies* of preparing for disposition strategy implementation, establishing disposition rules and policies, developing reuse, product recovery and secondary market strategies and implementing a formal disposition strategy (section 6.6.1), (3) *RC strategy* of human RC in RL (section 6.9.1), (4) *RL manager strategies* of creating a full-time RL manager portfolio and assigning experienced managers to RL, and (5) *RL staff strategy* of establishing a RL function (section 6.9.5).

The interview findings related to COR recovery preparation resembles the literature, including (1) the development of a disposition strategy can be essential to recover value from consumer returns (Andresen & Istad, 2019:23), (2) appropriate and skilled staff can be important for product recovery management (Zailani *et al.* 2017:35), (3) collaborative SC partnerships can enhance product reuse (Pal, 2017:883), and (4) agreements with suppliers maximises cost recovery from consumer returns (Biswas & Abdul-Kader, 2018:1019). Subsequently, COR recovery preparation can help online retailers mitigate various cost pitfalls and problems, including the cost (1) pitfalls of RL process failures (operational failures), inattention to RLM, poor RL planning, a lack of resources (poor RLM) and a lack of SCI (poor integration), and (2) problems of unnecessary expenses, high RL costs, a loss of money, sales, margins and profits (cash problems), obsolete stock, poor/no recovery and a loss of product and product value (recovery problems).

- *COR recovery through the primary channel*

Following COR recovery preparation, COR recovery through the primary channel involves the key practice elements of reselling at full value and reselling at a discount through the primary channel to recover as much value as possible from consumer returns.

Concerning *reselling at full value*, participants indicated that online retailers could prioritise the resale of consumer returns on their online shop as new and at full price, which enables maximum COR recovery. Furthermore, the participants advised that online retailers either use a distribution centre (DC) or a separate returns facility next to the DC for fast restocking and reselling, linking with the key COR process practices (section 8.6.2.2.1) of COR transportation and COR disposition (i.e. speedy disposition). The following quotations convey these findings:

> "[…] your first priority would be to put it [returned products] back for resale […] So, that decision of resale is driven by cost recovery." (P5, general manager, online retailer)

> "[…] recovery on that cost. So, if you're going to resell products, you're able to resell at full value […]." (P4, owner/CEO, 3PRL provider firm)

> "[…] fit it in the very same facility […] which is the best plan, because ultimately you want to put some of that stock back to resell. So, if you can't do that, then the next best option would be to have a centralised unit closest to your main hub." (P5, general manager, online retailer)

Following reselling as new, the participants indicated that online retailers could implement initiatives for *reselling* returned products at a *discount* through the primary channel. Several participants referred to the initiative of "unbox deals", which was implemented by a South African online retailer, as an example to recover costs from reselling at a discount on the primary market. Particularly, this initiative involves products that consumers opened, breaking the seals or damaging the original packaging, and returned as unwanted (e.g. not as expected, size too big/small, dislike the colour/version or incompatible), which cannot be resold at full value through the primary channel. Subsequently, this online retailer created the initiative of unbox deals, informing the consumers on their website that unbox deals involve new but opened products that they can buy at a discount. The following quotations expand on these findings:

> "[…] you could make decisions about trying to move it back into your business. So, in other words, unboxed deals or something like that." (P1, operations manager, 3PRL provider firm)

> "[…] you need to try and salvage whatever you can. […] the unbox deals, which is a pretty good initiative to sell kind of new but unboxed goods to regain some of the profit." (P5, general manager, online retailer)

> "[…] unbox deals […] they'll tell you that it's an unbox deal, that the computer has been unboxed. It is still under warranty […] They have checked it. It is perfect, they still give an internal warranty. The manufacturer warranty is still in-check. The only thing is that it's slightly less expensive because the box may have been opened […]." (P5, general manager, online retailer)

As support RL practices for COR recovery through the primary channel, online retailers can implement (as supported by literature) the (1) disposition strategies of benefit-driven disposition options and developing reuse strategies and practices (section 6.6.1), (2) separate facility/location strategy of using separate facilities at a single location for RL (section 6.8.2), and (3) integrated facility/location strategy of using a standard facility/location for RL (section 6.8.3). A few studies in the literature review indicated that direct reuse of product returns can generate profits (Ahsan & Rahman, 2021:21; Nel & Badenhorst, 2020:128) and result in cost savings (Le, 2023:15; Meyer *et al.* 2017:12), reemphasising the importance of reselling product returns through the primary channel. Additionally, the interview findings related to the use of a separate facility close to the main facility for fast restocking and

reselling of product returns echoes the findings of Meyer *et al.* (2017:13). Nevertheless, no study identified initiatives, like creating unbox deals, as a possibility for online retailers to reclaim value from opened returned products. Consequently, this study contributes to the literature, providing additional avenues for online retailers to reclaim maximum value from reselling unboxed products through the primary channel.

Essentially, COR recovery through the primary channel can help online retailers to address the cost (1) pitfalls of RL process failures (operational failures) and poor RL planning (poor RLM), and (2) problems of unnecessary expenses, a loss of money, sales, margins and profits (cash problems), obsolete stock, poor recovery and a loss of product and product value (recovery problems).

- *COR recovery through secondary channels*

COR recovery through secondary channels involves reselling of product returns to third-party buyers or through liquidation channels at discounted prices. Consequently, COR recovery through secondary channels associates with used returned products that cannot be resold either at full value or at a discount through the primary channel (online shopping site).

Therefore, online retailers can use COR recovery agreements (key practice element of COR recovery preparation) to partner with third-party buyers to resell used product returns in bulk for a discounted lump sum. Alternatively, online retailers can resell used product returns through secondary channels, like factory outlet stores or auctions, to recover some value from returned products. The following quotations illustrate COR recovery through secondary channels:

> "[…] a good example is that people buy a laptop and then say the laptop is slow. And they send it back, and in the meantime, they've loaded windows and they've actually created a profile […] but then […] it's no longer a new item. So, that then becomes tricky […] they'll try and resell the stuff to second-hand dealers […]. You need one or two partners at most that are willing to take the entire consignment of stock for a set price […]. So, you would then say to them, you know what, this stock has got the evaluation of a million rand. We are willing to part with it at 40 percent […] and you'll [the buyer] say, fine, bang, I'll pay you R400 K. I'll take everything. Because it's just a way of salvaging cost." (P5, general manager, online retailer)

> "[…] recovery on that cost. So, if you're going to resell products or you're able to resell at full value, if not, then rather send it through to a liquidation channel […] [like] factory outlets that a lot of stuff [returned products] gets sold through." (P4, owner/CEO, 3PRL provider firm)

> "[…] the other stuff gets bundled up and either auctioned off or sold through secondary channels. And at a massively discounted price." (P1, operations manager, 3PRL provider firm)

As support RL practices for COR recovery through secondary channels, online retailers can implement (as supported by literature) the (1) SCI strategies of using contracts, using SC agreements and partnerships, and SC communication and information sharing (section 6.4.1), and (2) disposition strategies of benefit-driven disposition options and developing secondary market strategies and practices (section 6.6.1).

No recent studies from the reviewed literature identified the value of COR recovery through secondary channels. In fact, Bensalem and Kin (2019:23) found that RL research often overlooks reselling through secondary markets as a disposition option in the RL process. Therefore, this study contributes to the literature by identifying COR recovery through secondary markets as a valuable option for online retailers to recover value from used product returns. Additionally, this study shows that COR recovery through secondary channels can help online retailers address several cost pitfalls and problems, including the cost (1) pitfalls of RL process failures (operational failures), poor RL planning (poor RLM) and a lack of SCI (poor integration), and (2) cost pitfalls of unnecessary expenses, a loss of money and sales (cash problem), obsolete stock, poor/no recovery and loss of product and product value (recovery problems).

- *COR recovery through suppliers*

Like COR recovery through the primary channels, COR recovery through suppliers can be a high priority for online retailers to recover costs from product returns, especially for warranty and defective products. As key practice elements, online retailers can use dedicated staff and agreements for COR recovery through suppliers.

In terms of *using dedicated staff*, the participants suggested that online retailers employ product experts to effectively test and identify faults from defective/warranty returns to lodge warranty claims from suppliers, linking with COR inspection (see section 8.6.2.2.1). Additionally, online retailers can use dedicated staff (i.e. recovery staff and managers) from the established COR recovery department (COR recovery preparation element) to engage with suppliers for effective COR recovery. Using dedicated staff can help online retailers to avoid money and product losses by obtaining credits/refunds and replacements from suppliers to reimburse consumers for defective product returns. Moreover, online retailers can use the COR recovery *agreements* established with suppliers to maximise cost recovery, which enables transfer of the RL costs/expenses of consumer returns to suppliers for full cost recovery. The following quotations denote these findings:

> "As an online retailer, you will always try and get your money back. That's your number one priority. So, sending it back to the supplier for a warranty claim is the easiest thing in the world, done deal." (P5, general manager, online retailer)

> "So, you employ a number of experts in that field […] that's got experience in handling such electronics, for instance, they'll put it to test and right there and then they'll decide, OK, well, you know what, the customer's correct, this item is defective and they can then class that as a […] supplier warranty claim […] the lost sale and the defective item is then made the problem of the supplier to come and collect and replace or credit the business." (P5, general manager, online retailer)

> "That's the 'request for credit' team where we work with the suppliers' hand in hand. When we get the item that the customer returns and says that it's faulty, we will create an RFC back to the supplier for them to either credit us or exchange that product with the new one." (P3, returns manager, online retailer)

> "[…] the manager of the fulfilment centre […] will contact our supplier […] and let them know that this item has come back. We are returning it to supplier." (P9, regional & online DC manager, online retailer)

> "[…] items we sent back to our suppliers. And we get a cost price plus logistics cost return from those vendors, which is agreed up front." (P8, logistics manager, multichannel retailer)

As support RL practices for COR recovery through suppliers, online retailers can implement (as supported by literature) the (1) SCI strategies of using SC agreements and partnerships, SC communication, collaboration and coordination, and information and costs sharing with SC partners (section 6.4.1), (2) disposition strategies of benefit-driven disposition options and developing other recovery strategies and practices (section 6.6.1), (3) RC strategy of human RC in RL (section 6.9.1), (4) RL manager strategy of assigning experienced managers to RL, and (5) RL staff strategies of establishing a RL function and producing well-skilled staff for RL (section 6.9.5).

While the use of dedicated recovery staff and trained product experts are unique to this study, Biswas and Abdul-Kader (2018:1019) confirmed that warranty claims and supplier agreements enable online retailers to return damaged products to suppliers for full cost recovery. Therefore, this study reemphasises the economic value of COR recovery through suppliers, which can help online retailers mitigate the cost (1) pitfalls of RL process failures (operational failure), inattention to RLM, lack of resources (poor RLM) and a lack of SCI (poor integration), and (2) problems of unnecessary expenses, high RL costs, a loss of money (cash problems), obsolete stock, poor/no recovery and a loss of products and product value (recovery problems).

In conclusion, COR propositions, including COR processes and COR recovery, can help online retailers to realise cost savings and cost recovery through RL processes and product recovery initiatives as well as address various cost pitfalls and problems. Therefore, online retailers can implement COR propositions for the effective RLM of consumer returns. In the next section, return cost management (RCM) propositions will be discussed and analysed.

8.6.2.3 Return cost management (RCM) propositions

RCM as a main cost proposition involves the proposition categories of *RCM mitigation* and *RCM execution*, which focusses on mitigating high RL costs and losses and managing and controlling RL costs for the cost-effective management of consumer returns. In the subsequent sections, RCM mitigation and RCM execution as RCM proposition categories will be discussed and analysed.

8.6.2.3.1 Return cost management (RCM) mitigation

RCM mitigation as an RCM proposition category involves the key practices of (1) *return regulation*, (2) *return avoidance*, (3) *return charges and penalties*, and (4) *cost absorption* (see **Figure 8.15**) for the mitigation of high RL costs and financial losses. Consequently, online retailers can use the findings

of the RCE (return cost evaluation) propositions (section 8.6.2.1) to support RCM mitigation. The key RCM mitigation practices will be explored in the subsequent paragraphs.

- *Return regulation for RCM mitigation*

Return regulation for RCM mitigation involves gatekeeping initiatives and inspection initiatives (key practice elements) to prevent losses, mitigate high RL costs and avoid unnecessary expenses associated with product returns.

Linking with post-sales proactive return prevention (PRP) propositions (section 8.4.2.1.2), online retailers can use the *gatekeeping initiatives* of online authorisation and requesting evidence from consumers to regulate returns. For instance, online retailers can digitise their return policies and use their online system to automatically reject illegitimate returns, complementing the use of an online system for COR request and gatekeeping (section 8.6.2.2.1). Additionally, online retailers can use human gatekeepers who review photos to judge the legitimacy of the return reasons provided by consumers. Subsequently, gatekeeping can be essential to regulate return volumes, avoid unnecessary RL costs/expenses and prevent losses associated with ineligible returns for effective RCM mitigation. The following quotations support these findings:

> "So, often what happens is [the consumer says] 'I would like to return this laptop'. So, I [as the consumer] phone the contact centre and I spin them a whole story […], and [as the contact centre agent] my heart goes out to this person. And so, I authorise the return. The fact of the matter [is], this person [the consumer] bought the item two years ago and it's out of warranty and it is not returnable. […] what are you going to do with this two-year old computer that's now potentially broken? It's nothing. It's old, it's obsolete, and so it's only a cost driver. So, avoiding that on the front end by digitising your returns policy […]. Your computer system understands what the product is and when they [the consumer] bought it, what the return parameters are for that item, what the policy is for that item and allows that customer to return it or rejects the return with treatable messaging." (P1, operations manager, 3PRL provider firm)

> "So, when a customer logs a return, they obviously need to take a photo of an item, a picture of something so that the person [gatekeeper] can see that item has been used. It obviously gets declined right away. So, you don't have that cost incurred to actually go and collect the item, evaluate it at the warehouse and then having to send it back." (P3, returns manager, online retailer)

> "[…] you are going to lose money with returns. There's just no doubt and all you can do is to minimise that risk. And I think gatekeeping is the correct word because if people simply return things because [Retailer C] will just take it back, don't worry. And those floodgates will open, and people will abuse the system […]." (P5, general manager, online retailer)

> "So, gatekeeping, I think, is an absolute prerequisite because, you know, the e-retailer could open themselves up to huge claims […]." (P7, owner, 3PRL provider firm)

While gatekeeping initiatives for return regulation take place before the online retailer accepts a return, *inspection initiatives* take place post-receipt in the facility. The participants indicated that online retailers train and educate inspection staff to (1) test products for false failures, (2) identify user damage (product abuse), (3) identify illegitimate return claims, and (4) avoid making emotional decisions regarding the legitimacy of a return claim. Consequently, the inspection staff should be capable of regulating return claims, enabling prevention of financial losses associated invalid return claims (e.g. accepting a return claim for a used electronic device). As a further cost saving measure, one participant

mentioned that online retailers can request suppliers to educate inspectors, which not only eliminates training costs but also improve return regulation efforts for RCM mitigation. The following quotations demonstrate inspection initiatives as a return regulation measure for RCM mitigation:

> "[…] training goes without question because financially, the checking of a claim […] every facet that we operate with has to be checked and the person doing it has to be suitably qualified to do so." (P7, owner, 3PRL provider firm)

> "So, educating your inspectors with the help of the supplier and possibly even at their cost. So, you can try and educate your inspectors on the supplier's cost, saying that we run thousands of electronic items through your doors every week. We need your team to come and educate our team, so you save a couple bucks […] [and for] the business acumen saying that you can't make an emotional decision when dealing with a R40000 electronic device […]." (P5, general manager, online retailer)

Subsequently, using inspection initiatives for return regulation, complements the COR process practice (section 8.6.2.2.1) of COR inspection (i.e. appointing educated inspection staff) and COR recovery practice (section 8.6.2.2.2) of COR recovery preparation (i.e. establishing agreements with suppliers). Additionally, as support RL practices for return regulation as an RCM mitigation practice, online retailers can implement (as supported by literature) the (1) Internet and web-based IT strategies of developing online return capabilities and using the Internet and website for RL (section 6.3.2), (2) SCI strategies of using SC agreements and sharing information, resources, responsibilities and costs (section 6.4.1), (3) return prevention and avoidance (RPA) strategy of implementing gatekeeping practices (section 6.9.3) and (4) RL staff strategies of developing staff training and education programmes, providing formal training and producing well-trained and skilled staff for RL (section 6.9.5).

Some studies from the reviewed literature align with the interview findings in terms of return regulation. Specifically, studies identified that (1) gatekeeping as a preventative measure can reduce costs (Andresen & Istad, 2019:8), (2) IT can be used to verify returns for cost reductions (Jović *et al*. 2020:164), (3) proper use of skilled staff for gatekeeping and claims can reduce costs (Ashan & Rahman, 2021:22), and (4) collaboration between suppliers and retailers can enhance resource effectiveness for improved RL process efficiency and enable sharing of information about product return reasons (Dapiran & Kam, 2017:832). Essentially, online retailers can address several cost pitfalls and problems through the implementation of return regulation for RCM mitigation, including the cost (1) pitfalls of poor RL planning, lack of resources, poor RPA (poor RLM) and a lack of SCI (poor integration), and (2) problems of unnecessary expenses, high RL costs, a loss of money, sales, margins and profits (cash problems), obsolete stock, poor/no recovery and a loss of product and product value (recovery problems).

- *Return avoidance for RCM mitigation*

Closely related to return regulation, return avoidance for RCM mitigation involves the implementation of a zero-return and zero-inventory initiatives (key practice elements) to avoid RL costs/expenses.

Although online retailers must accept returns due to CPA (consumer protection act) legislation, they may implement no-collection returns as a *zero-return initiative*. Subsequently, instead of collecting the product and incurring various RL costs/expenses (e.g. collection, transportation and handling costs), online retailers can issue a refund, requesting the consumer to keep the product. However, participants indicated that online retailers could implement no-collection returns for lower value or inexpensive products where the return costs exceed the product price. Consequently, implementing the zero-return initiative of no-collection returns emphasises the importance of cost assessment for RCE execution, relating to assessing the cost implications of accepting inexpensive product returns (section 8.6.2.1.2). The following quotations illustrate the application and importance of zero-return initiatives for return avoidance to mitigate unnecessary and high RL costs:

> "[…] it had introduced, no-collection returns, in other words, at a certain threshold, if the customer triggered a return, the item wouldn't be collected and be brought back to the warehouse, they would just be refunded. And I'll give you the typical example is a CD or DVD, they cost R100 to R150 per courier and bring it back to the warehouse is R50." (P1, operations manager, 3PRL provider firm)

> "[…] really have a good look at whether or not you want to accept a return in terms of cost. Example, I would if it's under a certain chargeable mass and if it's under a certain product price, I would actually tell the customer not to even return it. I would tell the customer to keep it. And I will refund that customer or give the customer a credit." (P12, Head of logistics, online retailer)

> "[…] have some sort of way to avoid or reduce a return when it's not actually going to give the desired outcome, because you don't want to pay for reverse logistics for no reason." (P13, supply chain manager, multichannel retailer)

As a *zero-inventory initiative*, online retailers can consider adopting a fourth party logistics (4PL) strategy by selling products for suppliers without carrying the inventory in their facilities. Therefore, both the delivery and product return become the responsibility of the supplier, enabling the online retailer to avoid RL collection, transportation, receiving, inspection, sorting, warehousing, disposition and redistribution costs. An example of this strategy can be an online retailer with an online marketplace acting as an intermediary between consumers and sellers. The following quotation depicts the return avoidance initiative of zero inventory for RCM mitigation:

> "[…] we would call that our 4PL process. So, normally when you sell online, […] you can have your own warehouse and you can keep your own stock. [But this is] Not efficient because you've got a stock life cycle, and that's also costly. If you can't return that or turn that stock in 30 days or 50 days, it cost you money. Then you can have the option also of selling directly from your supplier's own warehouse, so you don't carry stock, but your supplier, that manufacturer, carry stock. In other words, you can then do a supply chain 4PL purchase. So, I receive the online purchase from the client. I don't carry any stock, but their purchase is directly redirected to the supplier or manufacturer of a specific product, and that specific supplier or manufacturer will make sure that the delivery takes place from his or her own facility or warehouse. So, that's completely then with that supplier […] and that's the same then in terms of a reverse or a return, is that supplier will get notified by the customer care department that they've logged that return. That return will be redirected to that supplier […]." (P12, Head of logistics, online retailer)

As support RL practices for return avoidance as an RCM mitigation practice, online retailers can implement (as supported by literature) the (1) SCI strategies of communication and information sharing (section 6.4.1), and (2) RPA strategy of a cost-benefit analysis and developing and implementing return avoidance strategies (section 6.9.3). As mentioned in section 8.6.2.1.2, the interview findings related to no-collection returns coincide with the findings of Hjort *et al.* (2019:775). Therefore, online retailers can request consumers to keep and discard products and only pay for the refund, eliminating additional RL costs. Likewise, Chen *et al.* (2017:255) identified that return avoidance can impact both the cost and the profitability of the online retailer by minimising product returns. Concerning a zero-inventory strategy, no studies from literature identified zero-inventory as a possibility for the elimination of RL costs. Therefore, online retailers with high returns and unstainable expenses can consider implementing a zero-inventory strategy for certain product returns.

Essentially, online retailers can mitigate various cost pitfalls and problems through return avoidance for RCM mitigation. Particularly, online retailers can mitigate the cost (1) pitfalls of FL failures, RL process failures (operational failures), poor RPA (poor RLM), dismissing RL costs, poor RL cost monitoring (poor FM) and a lack of SCI (poor integration), and (2) problems of poor pricing, poor cost visibility (costing problems), unnecessary expenses, high RL costs, a loss of money, sales, margins and profits (cash problems), obsolete stock, poor/no recovery and a loss of product and product value (recovery problems).

- *Return charges and penalties for RCM mitigation*

Return charges and penalties as a key RCM mitigation practice involves charging consumers for product returns and issuing penalties for product return damages or losses (key practice elements).

Particularly, online retailers can implement stricter return policies by *charging consumers* transportation, handling and/or processing fees, which not only helps with return reduction but also avoiding high RL costs. Alternatively, online retailers can add conditions to a neutral (neither strict nor lenient) return policy, only charging consumers that return products for unwanted (e.g. change of mind and order errors) reasons. Consequently, the online retailers only incur the costs of defective returns, which with the implementation of COR recovery through suppliers can be pushed to the suppliers (see section 8.6.2.2.2). Moreover, online retailers might charge a consumer for the original delivery costs if the consumer bought items to qualify for free delivery but returned a product that fall below the original free delivery threshold. Evidently, return charges for RCM mitigation emphasises the importance of cost assessment for RCE execution, which involves assessing the cost implications of return leniency (see sections 8.6.2.1.2). The following quotations demonstrate return charges for RCM mitigation:

> "[…] they will reduce the number of returns if they do attach a cost to the return" (P2, owner, supply chain consultancy firm)
>
> "But if you send it back because you just don't like it, we charge you for the delivery and if it's our fault or product fault, well then, your return pick up is free." (P6, logistics "manager, multichannel retailer)
>
> "You know, like when you place an order to get free delivery, you have to order R500. Something will come that if you want to return, there's going to be a charge […] the free opportunity to send goods back, in my opinion, is an unsustainable cost for businesses […]." (P7, owner, 3PRL provider firm)

In terms of *penalties*, online retailers can charge 3PL providers/couriers for return transportation damages and product losses. However, online retailers can develop appropriate SC performance metrics and integration efforts to successfully charge 3PL/courier partners, linking with the reactive return prevention (RRP) proposition of party-related interventions (see section 8.4.2.2.2). The following quotation convey this finding:

> "And to ensure that you engage with carriers or couriers that will deliver products to your customers, […] [to] take care of your product, and they are measured against any of their own damages. If our carrier loses a parcel or damages a good, they pay for it, which encourages good behaviour." (P8, logistics manager, multichannel retailer)

As support RL practices for return charges and penalties, online retailers can implement (as supported by literature) the (1) SCI strategies of SC agreements, integration and information sharing and cost and risk sharing (section 6.4.1), (2) PM strategies of establishing appropriate KPIs and performance monitoring and review (section 6.7.1), and (3) RPA strategy of implementing return restrictions (section 6.9.3). No studies from the reviewed literature identified return charges as possibilities to mitigate RL costs and losses. However, Zhang *et al.* (2023:10) suggested that online retailers adjust return policies by shortening the return period and Ermes and Niemann (2023:9) suggested that online retailers customise return policies to accommodate fewer returns. Additionally, Andresen and Istad (2019:7) mentioned that stricter return policies and conditions can lower RL costs due to lower returns. Nevertheless, this study distinctly identifies the use of return charges or sharing of returns costs as initiatives that online retailers can consider. Moreover, as mentioned in section 8.4.2.2.2 (RRP interventions), the use of supplier penalties can be a unique practice for South African online retailers due to retailers being more powerful parties in the SCs of South Africa. Evidently, this study adds to the literature, demonstrating an additional avenue for mitigating and managing RL costs effectively.

Essentially, return charges and penalties for RCM mitigation can help online retailers address the cost (1) pitfalls of RL process failures (operational failures), poor RL planning, poor RPA (poor RLM), and a lack of SCI (poor integration), and (2) problems of unnecessary expenses, high RL costs, a loss of money, sales, margins and profits (cash problems), poor/no recovery and a loss of product (recovery problems).

- *Cost absorption for RCM mitigation*

Cost absorption for RCM mitigation involves the avoidance of RL costs/expenses by effectively absorbing RL costs into the selling price of products through activity-based costing and creating a separate account for RL (key practice elements).

Particularly, participants indicated that online retailers could *perform activity-based costing*, which involves estimating the return costs of various RL processes to accurately include it in the selling price of the product. Additionally, online retailers can *create a separate account* for RL to accurately gauge return transportation costs for effective absorption into the selling price. Evidently, through cost absorption online retailers can avoid additional RL costs/expenses but still satisfy consumers with the appearance of return leniency by not charging return fees. The following quotations demonstrate cost absorption as a key RCM mitigation practice:

> "And so, when we do activity-based costing […] we absorb the cost of the returns into the overall pricing […]. So, we don't always necessarily charge for it separately. But we take the cost of the returns, processing the returns handling and returns transportation, and we add that to the original sales handling cost." (P2, owner, supply chain consultancy firm)

> "It needs to be a completely different dual account. It needs to be completely independent from any other thing you do […]. So that when I do future planning in terms of margin and markup, I can use that percentage of cost to accurately gauge my transport component onto my selling price, but importantly not overinflated because of my own wastage […]. I'm going to load into my price, which is completely fine." (P5, general manager, online retailer)

> "[…] the end-product pricing is included in all the variables. So, obviously return logistics is a variable. So that is priced in the determination of a product, all these kinds of variables are taken into account. And it's built into price." (P11, Demand and sales manager, FMCG distributor)

Consequently, cost absorption for RCM mitigation emphasises the importance of the RCE propositions (section 8.6.2.1), including RCE cost determination tools (i.e. account separation) and cost identification for RCE execution (i.e. cost identification of standard RL costs). Additionally, as support RL practices for cost absorption, online retailers can implement (as supported by literature in section 6.9.2) the FM strategies of using costing techniques for RL, cost value estimations and identifying RL costs (section 6.9.2). No studies from the reviewed literature indicated the use of cost absorption as practices that online retailers can use to avoid RL costs. Therefore, this study exclusively identifies that using cost absorption for RCM can help online retailers mitigate the cost pitfalls of poor RL accounting and dismissing RL costs (poor FM), and cost problems of poor pricing, inaccurate view of financial performance, poor cost visibility (costing problems), high RL costs and a loss of money, margins and profits (cash problems).

In the next section, the RCM execution propositions will be discussed and analysed.

8.6.2.3.2 Return cost management (RCM) execution

RCM execution as an RCM proposition category involves strategies, standards, accountancy, systems and measures to effectively manage, control and monitor RL costs. As illustrated in **Figure 8.15**, the key practices of RCM execution include *formalisation, accounting* and *cost monitoring* for RCM execution, which will be discussed in subsequent paragraphs.

- *Formalisation for RCM execution*

Formalisation for RCM execution involves RLM prioritisation and cost control strategies and standards (key practice elements) to effectively manage and control RL costs.

RLM prioritisation for RCM execution involves paying attention to RLM to effectively manage and control RL costs. The participants indicated that online retailers could prioritise RLM by including RL in the design of logistics processes, developing policies and procedures for RLM and appointing a dedicated RL manager to effectively control RL costs. RLM prioritisation as a formalisation initiative complements RCM mitigation propositions (section 8.6.2.3.1), enabling the prevention of money and profit losses. The following quotations demonstrate the importance of prioritising RLM for RCM execution:

> "[…] returns and reverse logistics was sort of an afterthought for the company. And therefore, when they actually started to do the reverse logistics and the returns, we found a lot of issues. And obviously the company lost a lot of money by doing that. So, I think in any online industry or actually any logistics company, you need to design your supply chain with the mind of having reverse logistics in it." (P3, returns manager, online retailer)

> "[…] return logistics needs to be managed because it can grow into a loss for the company in the wink of our eyes. So, you need to have all your procedures in place, your policies in place and your quality checks needs to be in place." (P11, Demand and sales manager, FMCG distributor)

> "And again, because of the easiness of returning products with free returns in an online environment, that's such a big area of your cost that it warrants someone to look after that portion of your business and you try and control the costs within that portion of your business." (P2, owner, supply chain consultancy firm)

> "[…] if you don't manage it proactively and like every single day, it is something that can get out of hand extremely quickly. So, I think it is very important to have somebody to oversee that at all times. And also, it's a great loss area to actually gain some of the losses back." (P3, returns manager, online retailer)

For *cost control strategies and standards,* the participants suggested that online retailers include RL in their strategic planning, enabling the development of effective cost control strategies. Additionally, online retailers can develop cost control standards by establishing a RL cost benchmark. Particularly, online retailers need to estimate and identify an acceptable ratio for RL costs per total logistics costs for RCM execution, emphasising the importance of the RCE execution propositions of cost identification and cost assessments (section 8.6.2.1.2). For instance, the online retailer can identify that an acceptable ratio for RL costs can be five percent of the total logistics costs. The following quotations expand on these findings:

> "[…] you can have it [RL] as part of a strategic plan […]. I have to make sure that there's a strategic intent to get the cost down […]. It can be part of a cost containment strategy." (P6, logistics manager, multichannel retailer)

> "[…] you still have your costs, right? Because returns and reverse logistics is inevitable […]. So, normally what you do is you try and work on a ratio that's a benchmark or standard that [it] is not really going to eat into your bottom line. […] you have a ratio of so for the 3000 orders that you've delivered, you probably work on maybe nought point two percent or one percent from an order perspective, from a logistics cost ratio perspective. If it costed you, hypothetically speaking, a million rand or R500000 to deliver those units in terms of logistics cost, you're reverse logistics costs, should be probably one per cent or five or 10 percent of that total logistics cost, and that's the one that needs to be done. Again, you've got to have some sort of a threshold that you need to reach […]. But you've got to as time progresses, you've got to reach an equilibrium where you believe that this is the matrix, that everybody has a standard target of what your logistics cost ratio should be, and that's how it needs to be measured." (P10, Head of Sales and Logistics, OEM/multichannel retailer)

As support RL practices for the formalisation of RCM execution, online retailers can implement (as supported by literature) the (1) PM (performance measurement) strategies of strategic benchmarking, developing performance objectives and metrics and standardising PM (section 6.7.1), (2) FM strategy of implementing cost policies, controls and measures (section 6.9.2), (3) strategic planning strategies of developing strategic plans and strategies for RL and integrating RL strategic plans and strategies with organisational strategic plans strategies, (4) strategic procedure strategies of prioritising strategic procedures in RL, developing a formalisation strategy for RL and developing formal rules and controls for RL (see section 6.9.4), and (5) RL manager strategies of establishing sufficient leadership for RL, creating a full-time RL manager portfolio and assigning experienced managers to RL (section 6.9.5).

Limited studies from the reviewed literature identified practices related to the formalisation of RCM. However, Ahlén and Johansson (2023:32) and Badenhorst (2017:611) identified that top management commitment and support to RL can address economic barriers in RL. Furthermore, Frei *et al.* (2020:1616) noted that product returns should be directed by senior management due to the impact of product returns on the bottom line. Evidently, prioritising RLM can be valuable for online retailers to manage and control RL costs. Concerning cost controls strategies and standards, no studies from the reviewed literature identified the use of strategies and standards to manage RL costs. Therefore, this study contributes to literature by demonstrating the importance of various practices to formalise RCM execution, which can help online retailers address the cost (1) pitfalls of inattention to RLM, poor RL planning, a lack of resources (poor RLM), dismissing RL costs and poor cost monitoring (poor FM), and (2) problems of poor cost visibility, hidden costs (costing problems), unnecessary expenses, high RL costs and a loss of money and profits (cash problems).

- *Accounting for RCM execution*

Accounting for RCM execution involves RL cost isolation and accounting initiatives to effectively manage RL costs. Accounting for RCM execution closely relates to the cost determination RCE (return cost evaluation) tool of accounting separation and systems (section 8.6.2.1.1). Subsequently, the key practice elements of accounting for RCM execution include accounting separation initiatives and the use of third parties to manage RL costs.

Regarding *accounting separation initiatives*, the participants indicated that online retailers establish a dedicated RL department and ring-fence RL costs for RCM execution. Specifically, the participants mentioned that a dedicated RL department can help with the isolation of RL costs on the income statement, which enables improved management and control of return costs. Additionally, using traditional accounting systems and ring-fencing of RL costs, for example, separating return collection and forward delivery costs, enables effective accounting separation for RL cost management. The following quotations illustrate these findings:

> "So, it's not just running a truck from point B to point A, it's all the processing and admin around it and repackaging if necessary, and reselling and liquidating and destruction. That's all put into different categories of [the] income statement, which gets hidden and washed away. So, if you have a dedicated [RL department as a] resource for reverse logistics that all comes out of the income statement into the reverse logistics pool and it's much easier to manage those costs." (P4, owner/CEO, 3PRL provider firm)

> "[You can use a normal accounting system for RL] as long as you can ring-fence […]. So, we've got identifiers that says, you know what? This is a returns cart or returns transaction code and those transaction codes are […] managed separately." (P6, logistics manager, multichannel retailer)

In terms of *using third parties* for RCM execution, online retailers can use 3PRL providers with the necessary accounting expertise to effectively control and manage RL costs through account reconciliation. For example, a consumer claimed that a product was unused but during inspection, the inspector noticed that the product was used, resulting in a return rejection. However, the accounting department may be unaware of the rejection, or the rejection was not captured on the system, resulting in accounting errors. The following quotation illustrates the value of using a 3PRL provider to manage RL costs through accounting:

> "Claims Department, a Reverse Logistics Department […] extends back into finance because one of the biggest problems in our industry is pick up the goods, no problem. But then when the account from the accounts payable teams of the retailers come and there are claims on there, that's an area where we get involved in and to help our customers reconcile their accounts at the end of the month because sometimes there are claims that are illegitimate." (P7, owner, 3PRL provider firm)

Consequently, using third parties for accounting purposes to manage RL costs can be important for the effective execution of return regulations as a key RCM mitigation practice, involving claims regulation through inspection initiatives (section 8.6.2.3.1). As supporting practices for accounting as a key RCM execution practice, online retailers can implement (as supported by literature) the (1) RL outsourcing strategies of deciding on the types of RL services and third parties for RL outsourcing, and selecting a 3PRL provider (section 6.5.1), (2) FM strategies of using financial and accounting statements for RL and applying accounting techniques and systems for RL (section 6.9.2), and (3) RL staff strategy of establishing a dedicated RL function (section 6.9.5).

No studies from the reviewed literature match the interview findings related to accounting for RCM execution. Consequently, this study extends RL literature by demonstrating the importance of appropriate accounting for RCM as well as the ability of online retailers to address the cost (1) pitfalls of lack of resources (poor RLM), poor RL accounting, dismissing RL costs and poor cost monitoring

(poor FM), and (2) cost problems of poor pricing, inaccurate view of financial performance, poor cost visibility, hidden costs (costing problems) and a loss of money (cash problem).

- *Cost monitoring for RCM execution*

Cost monitoring for RCM execution involves measures and cost/benefit analyses to monitor RL costs and practices for effective RCM. Subsequently, as key practice elements online retailers can use appropriate KPIs and perform regular cost/benefit analyses to monitor RL costs.

Specifically, the participants suggested several *KPIs* that online retailers could develop and use as cost metrics to monitor RL cost performance, including RL cost per unit, RL cost performance between two annual periods, RL costs as a percentage of turnover, and RL costs as a percentage of the budget. Therefore, developing appropriate KPIs for cost monitoring complements the RCE tools of using appropriate measures to determine costs (see section 8.6.2.1.1), demonstrating the importance of cost metrics to manage consumer returns cost-effectively. The following quotations support the use of appropriate KPIs for cost monitoring to manage RL costs:

> "So, the first thing you need to measure is the percentage of items that have been returned […] we use cost per unit […] so its [a] cost efficiency measure […]." (P8, logistics manager, multichannel retailer)

> "Cost per unit processing, critical, you got to know that your cost per units are [sic] all managed […] they are constant metrics that we manage on the cost of returns […]." (P6, logistics manager, multichannel retailer)

> "[…] measure are returns costing you less this year than they did last year. And if so, why? And if not, why?" (P4, owner/CEO, 3PRL provider firm)

> "[…] returns as a percentage of turnover and cost as a percentage of turnover as well. Obviously, budget for a quarter of a percent or whatever the case may be for your logistics costs to bring the product back. And that you have to run against the budget […]." (P7, owner, 3PRL provider firm)

Closely related to cost assessments for RCE execution (section 8.6.2.1.2), online retailers can *perform regular cost/benefit analyses* to monitor RL costs associated with RL practices. For example, performing a cost/benefit analysis for return transportation can help online retailers to determine if the economic benefits (e.g. economies of scale) of return transportation outsourcing remains valid or if the online retailer can derive more economic benefits (e.g. cost savings) from insourcing return transportation. Additionally, online retailers can use cost metrics and cost aggregation software to analyse the feasibility of current return transportation routes and practices. For example, measuring the inexpensive routes versus the expensive routes and comparing the rates of various couriers in different regions. Consequently, cost/benefit analyses can be especially important if online retailers outsource RL processes and activities, enabling effective cost monitoring for RCM. The following quotations convey these findings:

> "There's nothing that's not a business case. We will outsource until there's no more economical benefit to outsource. Then we will try and insource if we can do it better or cheaper, but when your outsource component becomes such a big component of the outsourced company, well, now it becomes a problem because now it's really just a margin depleter [sic] […] because you should be able to do it yourself if there's that much volume that somebody else can run a complete business just on you." (P6, logistics manager, multichannel retailer)

> "[…] the transport costs per parcel, per cube, per route. What are our expensive routes versus the non-expensive routes? […] they are constant metrics that we manage on the […] cost of transport […]." (P6, logistics manager, multichannel retailer)

> "[…] you have the software that does some aggregation for you, telling you that you are picking stuff up at outlying areas, this service provider is giving you a better cost on that area […] to manage costs […]." (P13, supply chain manager, multichannel retailer)

As support RL practices for effective cost monitoring for RCM execution, online retailers can implement (as supported by literature) the (1) PM strategies of establishing appropriate KPIs for RL, performance monitoring and evaluation of performance results (section 6.7.1), and (2) FM strategies of using accounting systems, performing cost/benefit analyses and implementing cost controls and measurements (section 6.9.2). The studies from the reviewed literature mostly focus on KPIs and metrics to monitor consumer service performance (see section 8.5.2.2), which means that this study contributes to the literature by emphasising the importance of cost metrics to monitor and manage RL costs. While no study mentioned that online retailers can monitor costs by performing regular cost/benefit analysis, Prajapati *et al*. (2021:14) mentioned that organisations need to perform cost/benefit analysis before selecting a 3PL/3PRL provider. Consequently, online retailers can continue with the cost/benefit analysis after outsourcing, ensuring that the benefits exceed the costs. Additionally, online retailers can apply this approach to all implemented RL practices, ensuring that cost efficiencies are maintained.

Essentially, cost monitoring for RCM execution can help online retailers to mitigate the cost (1) pitfalls of poor RL accounting, dismissing RL costs and poor cost monitoring (poor FM), and (2) problems of inaccurate view of financial performance, poor cost visibility, hidden costs (costing problems), unnecessary expenses, high RL costs and a loss of money, margins and profits (cash problems).

In conclusion, RCM propositions, including RCM mitigation and RCM execution, can help online retailers to effectively control and manage RL costs as well as mitigate various cost pitfalls and problems. Therefore, online retailers can implement RCM propositions for the effective RLM of consumer returns. In the next section, the final cost proposition category of cost parameters, will be analysed and discussed.

8.6.2.4 Cost parameters

Cost parameters as the *final main cost proposition*, involve various proposition (parameter) categories, including volume, product, organisational, SC, legal and environmental parameters (see **Figure 8.15**). Like prevention and control and service parameters (sections 8.4.2.4 and 8.5.2.3), no studies in the reviewed literature focused on the factors (parameters) that can impact the implementation of cost propositions, meaning that this study adds new insights into important considerations for the effective implementation of return cost evaluation (RCE), cost-orientated return (COR) and return cost

management (RCM) propositions. However, some studies from the reviewed literature unintentionally identified parameters that align with the interview findings, which will be emphasised in the discussion. In the subsequent sections, the cost parameter proposition categories will be discussed and analysed.

8.6.2.4.1 Volume cost parameters

Volume cost parameters involve the key parameters of return volume and sales volume (see **Figure 8.15**) that can be important for the implementation of various cost propositions.

Specifically, *return volume* can be an important parameter for implementing several COR and RCM propositions, including key COR process, COR recovery and RCM execution practices. Regarding key COR process practices, the COR inspection initiative of performing pre-return inspection at consumer locations for cost savings might be more appropriate for locations with higher return volumes. Similarly, COR transportation initiatives can be influence by return volume, for example, online retailers with low return volumes may benefit from using 3PLs to obtain economies of scale. Alternatively, online retailers with high volumes can use a separate return facility located next to the main facility for COR transportation. The following quotations demonstrate the association between return volume as a cost parameter and COR process propositions:

> "But if you had a team of people that could evaluate at the point of taking it from the customer, you would salvage tons of money and time. […] a practical way of putting a team of people into the street and saying, you know, what returns is such a big thing in our world […] So, let's put a dedicated team in there that are our first line evaluators […]." (P5, general manager, online retailer)

> "I believe outsourcing is an amazing opportunity […] the reason I say that is, I don't have scale in returns […] it becomes part of the courier's greater scale." (P6, logistics manager, multichannel retailer)

> "So, in terms of location, it needs to be, if not inside the DC, very close to the main DC hubs because you want to eliminate any excessive transport […] if you can't fit it in the very same facility […] then the next best option would be to have a centralised unit closest to your main hub […]." (P5, general manager, online retailer)

Concerning key COR recovery practices, online retailers can consider return volume for the implementation of COR recovery preparation and COR recovery through primary channels and secondary channels. Specifically, for the appointment of a dedicated RL manager as part of COR recovery preparation, online retailers need to consider return volume. Therefore, online retailers with lower return volumes can use general managers (with dual roles) for COR recovery preparation. Additionally, online retailers with high return volumes must be mindful of potential sales cannibalisation by selling returned products at a discount through their primary channels. Consequently, if return volumes are too high, online retailers might benefit more from COR recovery through secondary channels. Lastly, return volume as a cost parameter can be important for the key RCM execution practice of cost monitoring, which involves cost/benefit analyses. For example, if the return volume increases the online retailer's strategy can change from RL outsourcing to RL insourcing for scale advantages and cost saving. The following quotations show the importance of considering return volume for COR recovery and RCM execution:

> "[…] depending on scale […] all the reverse logistics manager is actually [responsible for is] managing the inventory component. What are we going to do with the stock? How are we going to handle it? How are we going to disposition it?" (P1, operations manager, 3PRL provider firm)

> "[…] if you got high volumes of product. Are you going to really be able to do it and are you cannibalising your sales? So, moving it through secondary and tertiary channels is really your only option." (P1, operations manager, 3PRL provider firm)

> "There's nothing that's not a business case. We will outsource until there's no more economical benefit to outsource. Then we will try and insource if we can do it better or cheaper, but when your outsource component becomes such a big component of the outsourced company, well, now it becomes a problem because now it's really just a margin depleter [sic] […] because you should be able to do it yourself if there's that much volume that somebody else can run a complete business just on you." (P6, logistics manager, multichannel retailer)

Finally, both *return volume* and *sales volume* can be important for the key RCE execution practice of cost assessment and key RCM execution practice of formalisation. Specifically, for RCE execution, online retailer can consider sales volumes and return volumes to assess the cost implications of return leniency, which can help online retailers prevent large financial losses if the return volume exceeds the sales volume. Similarly, for RCM execution, online retailers can consider the return and sales volumes for the establishment of costs standards and a RL cost benchmark. Consequently, online retailers can adapt the RL cost benchmark for areas with higher sales since higher sales means higher returns. The following quotations illustrate the importance of considering both return and sales volume for RCE and RCM execution:

> "I think that's important to track the cost […] to perhaps distinguish between products that are returned for free and product where there is a cost in returning it […]. I've recently seen some studies about online retail in Europe where the returns volume is bigger than the sales volume, because of the effect of free returns that these companies start running at a loss. They think they've sold something, but actually they've not sold it, [products are] returned with such high rates that is no longer feasible." (P2, owner, supply chain consultancy firm)

> "So, normally what you do is you try and work on a ratio that's a benchmark or standard that is not really going to eat into your bottom line […] you're reverse logistics costs, should be probably one per cent or five or 10 percent of that total logistics cost, and that's the one that needs to be done. […] you've got to look at the types of volumes that you do […] if more sales taking place within Johannesburg, your returns should be greater within Johannesburg […]." (P10, Head of Sales and Logistics, OEM/multichannel retailer)

As support RL practices to consider volume cost parameters, online retailers can implement (as supported by literature) the (1) RL in/outsourcing strategies of considering and analysing RL in/outsourcing decisions (section 6.4.1), (2) disposition strategies of considerations for disposition and understanding market-related factors for disposition (section 6.6.1), (3) general facility/location strategy of considering operational factors in facility/location decisions (section 6.8.1), (4) RC strategy of strategic considerations for RC (section 6.9.1), and (5) FM strategy of strategic considerations for factors that influence RL costs (section 6.9.2). No studies in the reviewed literature identified the significance of considering return volume and sale volume for the effective implementation of cost propositions. Subsequently, this study identifies new factors that online retailers can consider for the effective implementation of cost propositions.

Essentially, considering volume as a cost parameter can help online retailers effectively address the cost (1) pitfalls of RL process failures (operational failure), poor RPA (poor RLM), dismissing RL

costs and poor cost monitoring (poor FM), and the (2) problems of hidden costs (costing problem), unnecessary expenses, high RL costs, and loss of money, sales, margins and profits (cash problems).

8.6.2.4.2 Product cost parameters

Product cost parameters involve the key parameters of the type of return and product condition, type of product, product value/price and product margin (see **Figure 8.15**), which associate with various cost propositions.

Particularly, online retailers should consider the of *type of return* and *product condition* for COR recovery and RCM mitigation propositions. Particularly, considering the type of return and product condition can be important for the implementation of the key COR recovery practices of COR recovery through primary channels, secondary channels and suppliers. For example, products in new and unused condition can be recovered through the primary channel, products in used condition can be recovered through secondary channels and defective products can be recovered through suppliers. Nevertheless, online retailers can still consider return volume for the effective implementation of COR recovery (see section 8.6.2.4.1). Concerning RCM mitigation, online retailers can consider the type of return and product condition for the RCM mitigation practice of return charges and penalties. For example, charging consumers for unwanted returns but carrying the return costs for defective or damaged product returns. Online retailers that consider paying for damaged/defective returns may pay more attention to FL efficiencies, addressing the cost pitfall of FL failures. The following quotations demonstrate the importance of considering the type of return and product condition for COR recovery and RCM mitigation practices:

> "The product is still in perfect condition. We can resell it […]. It goes through a vas system of value-added system. They check it and they reintroduce it into the stock inventory network for resale." (P5, general manager, online retailer)

> "So, if the item is in a working condition, but it does not have its packaging, we obviously will make a decision to say, can we repackage it and sell it for a little bit less than the original price? Or is it in such a condition that we cannot resell it on our website and then we have to use external parties like Cash Crusaders […]." (P3, returns manager, online retailer)

> "[…] things like Unbox deals […] are essentially unwanted returns that are in perfect condition […]." (P1, operations manager, 3PRL provider firm)

> "When we get the item that the customer returns and says that it's faulty, we will create an RFC back to the supplier for them to either credit us or exchange that product with the new one." (P3, returns manager, online retailer)

> "But if you send it back because you just don't like it, we charge you for the delivery if you send it back and if it's our fault or product fault, well then, your return pick up is free." (P6, logistics manager, multichannel retailer)

The *type of product* can be important for the implementation of key RCE execution, COR process, COR recovery and RCM mitigation practices. Specifically, online retailers should consider the product type for the key RCE execution practice of cost identification (i.e. standard RL costs) since the type of product can influence disposition costs. For example, a mobile device with personal information must

be wiped before resale, which adds to the disposition costs. Additionally, online retailers can consider product type for COR inspection (COR process practice), for example, using dedicated staff to perform pre-return inspection at consumer locations for electronics, appliances and computers, linking with the return volume parameter (section 8.6.2.4.1). Moreover, the product type can influence COR recovery through suppliers, for example, employing product experts in electronics to effectively test and identify faults to lodge warranty claims from suppliers. Lastly, product type can influence return regulation for RCM mitigation involving gatekeeping initiatives, for example, online retailers who sell computers and electronic products may benefit more from online authorisation for RCM mitigation. The following quotations show the influence of product type on the implementation of various cost propositions:

> "[…] then disposition in some products you need, you have specialist disposal. You know, what are those costs going to look like, or you're sort of stripping out personal information. What about hygiene products? You can't allow those back into secondary market [or] you potentially have a health issue. So, you know, whatever those will cost." (P1, operations manager, 3PRL provider firm)

> "But if you had if you had a team of people that could evaluate at the point of taking it from the customer, you would salvage tons of money and time […]. So, let's put a dedicated team in there that […] can go to the customer and say, you know what, before I take this laptop from you, can we quickly do one, two, three and four, maybe solve them right there […] Or you know what? I can see that you've got the incorrect phone. It's not compatible with this device." (P5, general manager, online retailer)

> "[…] you employ somebody that's got experience in handling such electronics, for instance, they'll put it to test and right there and then they'll decide, OK, well, you know what, the customer's correct, this item is defective and they can then class that as a supplier claim […]." (P5, general manager, online retailer)

> "So, often what happens is [the consumer says] 'I would like to return this laptop'. So, I [as the consumer] phone the contact centre and I spin them a whole story […], and [as the contact centre agent] my heart goes out to this person. And so, I authorise the return. […] But there is also, what are you going to do with this two-year old computer […] it's only a cost driver. So, avoiding that on the front end by digitising your returns policy […]." (P1, operations manager, 3PRL provider firm)

Furthermore, both the *type of product* and *product value/price* can influence the key RCE execution practice of cost assessment and the key RCM mitigation practice of cost avoidance. For example, assessing the cost implications of accepting a return for a CD worth a R100 and appropriately implementing a zero-return initiative of no-collection returns. Similarly, considering product type and value can influence inspection initiatives for return regulations (key RCM mitigation practice), ensuring that inspection staff are trained in certain product categories for effective return claim regulations for high value products. The following quotations depict this finding:

> "So, if you're looking at an item less, and I worked it out […] if you sell it for R220, there's no ways I will collect an item that has had a sales value of R220 or less, because it will cost you in terms of profit margin to actually go and fetch these items. It makes no sense." (P12, Head of logistics, online retailer)

> "[…] no-collection returns, in other words, at a certain threshold, if the customer triggered a return, the item wouldn't be collected and be brought back to the warehouse, they would just be refunded. And I'll give you the typical example is a CD or DVD, they cost R100 to R150 per courier and [to] bring it back to the warehouse is R50." (P1, operations manager, 3PRL provider firm)

> "So, educating your inspectors with the help of the supplier and possibly even at their cost. Right. So, you can try and educate your inspectors on the supplier's cost, saying that we run thousands of electronic items through your doors every week. We need your team to come and educate our team, so you save a couple bucks […] [and for] the business acumen saying that you can't make an emotional decision when dealing with a R40000 electronic device […]." (P5, general manager, online retailer)

Furthermore, online retailers can consider *product value* for the implementation of cost assessment for RCE execution. Specifically, performing a cost assessment for disposition options, online retailers should consider the product value to assess the feasibility of the repair option. Lastly, *product margin* associates with the key COR process practice of COR transportation, involving a decentralised network design to save transportation costs. For instance, online retailers that sell products with high margins may be less concerned with using decentralisation for COR transportation. The following quotations show the importance of considering product value for RCE execution and product margin for COR transportation:

> "[…] to repair can be quite expensive in terms of the lead times, because now the product could be handled into your facility, then it has to be booked up to a repair agent or to repairer on site, and it has to be booked back into your site. […] and then it goes back to stock and then it can be dispatched again. So, that is also quite expensive. And unless you've got very high value goods, the costs of those repairs are not feasible for you to correct that product." (P2, owner, supply chain consultancy firm)

> "I think decentralised is better, and the reason being is cost […]. The fact that it gets back to the reclamation centre a little time later than that, that to me is in the ability to save costs. If your product has margin that it can sustain flying it around the world twice […] then my argument goes out the window." (P7, owner, 3PRL provider firm)

As support RL practices to consider product cost parameters, online retailers can implement (as supported by literature) the (1) SCI strategies of considerations for SCI, communicating and cooperating with SC partners and sharing information, responsibilities and costs (section 6.4.1), (2) disposition practices of disposition decision factors (section 6.6.2), (3) general facility/location strategies of considering economic and operational factors for facility/location decisions (section 6.8.1), (4) RC strategy of considerations for RC (section 6.9.1), (5) FM strategy of considerations for factors that influence RL costs (section 6.9.2), (6) RPA strategies of considerations for gatekeeping and return avoidance (section 6.9.3), and (7) RL staff strategies of staff training and education initiatives and producing skilled and well-trained staff (section 6.9.5).

Apart from Biswas and Abdul-Kader (2018:1019), who identified that recovery through suppliers can be appropriate for products in defective condition, no studies from the literature review identified the influence of product cost parameters on the implementation of various cost propositions. Subsequently, this study identifies new product-related factors that online retailers can consider for the effective implementation of RCE, COR and RCM propositions, which can help address the cost (1) pitfalls of FL failures, RL process failures (operational failures), a lack of resources, poor RPA (poor RLM), dismissing RL costs (poor FM) and a lack of SCI (poor integration), and (2) problems of poor cost visibility (costing problem), unnecessary expenses, high RL costs, a loss of money, sales, margins and profits (cash problems), obsolete stock, poor/no recovery and a loss of product and product value (recovery problems).

8.6.2.4.3 Organisational cost parameters

As illustrated in **Figure 8.15**, the organisational cost parameters involve the key parameters of organisation type, capabilities and strategies, which can associate with various cost propositions.

Specifically, *organisation type* associates with the type of retailers, which can influence key RCE execution and COR process practices. Specifically, cost identification for RCE execution will be different for multi/omnichannel retailers and online-only retailers since multi/omnichannel retailers can use their stores to perform RL activities, impacting collection and transportation costs. Similarly, a multichannel retailer can use return to store for COR collection, while an online-only retailer can only use various dop-off points for COR collection. Subsequently, the implementation of cost propositions can be more important for online retailers to manage consumer returns cost effectively. The following quotations demonstrate these findings:

> "[…] a big thing that you obviously don't think about when you started out, is the fact that returns in an online retailing industry is very expensive when it comes to getting the product back to your warehouse. So, the same as you've got that other factor that is different from any brick-and-mortar business that you actually have your external like 3PL and courier services that is added extra on every single thing that goes to and from the customer." (P3, returns manager, online retailer)

> "[Preferring the store option] because then there is no reverse logistics cost involved. And I think because you have the store option in that footprint […] we have a lower return rate percentage, it would seem as compared to maybe some of the other people that are just purely online players." (P13, supply chain manager, multichannel retailer)

Organisational capabilities involve product disposition, IT and accounting capabilities (key parameter elements), which can be important for the implementation of various RCE, COR and RCM propositions. Particularly, *product disposition capability* can be important for the implementation of cost assessment for RCE execution, COR disposition (key COR process practice), COR recovery preparation and COR recovery through suppliers (key COR recovery practices). For example, online retailers that lack the product recovery capability of repair may be less likely to consider the cost implications of the repair option for cost assessment, linking with the product parameter of product value (section 8.6.2.4.2). Additionally, online retailers that lack the capabilities to implement speedy disposition for COR disposition can consider using 3PRL providers with the necessary capabilities for COR disposition. Moreover, online retailers that lack the capability to perform product recovery activities, like repair, need to consider this for the establishment of agreements with suppliers (COR recovery preparation) to perform COR recovery through suppliers. Evidently, product disposition capability links with the product parameters of return type and product condition (section 8.6.2.4.2). These findings can be supported by the subsequent quotations:

> "[…] we don't repair or anything on site. So, if an item needs to be repaired, we need to engage the supplier to get it done." (P3, returns manager, online retailer)

> "So, whilst there is a saving [through RL outsourcing], the saving may not come in direct costs, but it will become in the recoverability of the product, the control, the discipline and the turnaround of the stock that it doesn't get left for six months before somebody, when it's starting to encroach on warehouse space, and somebody says, we've got to get this nonsense out of here […]." (P7, owner, 3PRL provider firm)

> "[…] they'll put it to test and right there and then they'll decide, OK, well, you know what, the customer's correct, this item is defective and they can then class that as a […] supplier warranty claim […] the defective item is then made the problem of the supplier to come and collect and replace or credit the business." (P5, general manager, online retailer)

Furthermore, online retailers should consider their *IT capabilities* for the implementation of (1) cost understanding RCE tools (i.e. sophisticated accounting systems and internal information sharing), (2) COR request and gatekeeping (i.e. self-service request and online authorisation), (3) COR transportation (i.e. bulk transportation), and (4) cost monitoring for RCM execution (i.e. using special software for cost/benefit analysis). Subsequently, if online retailers lack the IT capabilities, they can consider using 3PRL providers. Similarly, online retailers that lack the *accounting capabilities* to perform accounting for RCM execution can consider outsourcing to 3PRL providers with the necessary accounting expertise to manage RL costs. The following quotations convey these findings:

> "Within the system, like an SAP ERP that's quite sophisticated or the bespoke systems that I've dealt with, they have a specific module to deal with returns and to deal with the logistics around the returns, as well as the financial transactions, the credit side of the return and the cost side of the return […]." (P2, owner, supply chain consultancy firm)

> "And that's what for us we have done successfully through many different IT platforms, that this information becomes available to the sales force […] integration is an imperative." (P7, owner, 3PRL provider firm)

> "And I developed an app that actually does all those processes the […] capturing of the […] financial information […] to give immediate authorisation […] to know what's coming back […] and […] the [cost] implications thereof." (P7, owner, 3PRL provider firm)

> "[…] there needs to be like a secondary network of delivery agents and delivery services that can capitalise on the quantity of deliveries that need to take place for […] the returning part […], which are making [return] deliveries very expensive for the retailer […] they need more integration and vertical integration with transportation companies and transportation management systems, which is in the same way that you can broke the loads for normal bigger loads, that you can do a brokering kind of service for the [return] delivery." (P2, owner, supply chain consultancy firm)

> So, I think in that case, if you have a system that can allow the customer or the consumer to initiate the request for a return by themselves on their own, it makes for a lot more smoother [sic] process." (P3, returns manager, online retailer)

> "[…] you have the software that does some aggregation for you, telling you that you are picking stuff up at outlying areas, this service provider is giving you a better cost on that area […] to manage costs […]." (P13, supply chain manager, multichannel retailer)

> "[…] extends back into finance because one of the biggest problems in our industry is pick up the goods, no problem. But then when the account from the accounts payable teams of the retailers come and there are claims on there that's an area where we get involved in and to help our customers reconcile their accounts at the end of the month because sometimes there are claims that are illegitimate." (P7, owner, 3PRL provider firm)

In terms of *organisational strategies,* online retailers can consider their facility/location, disposition and network design strategies (key parameter elements) for COR process and RCM execution propositions. Particularly, as part of their *facility/location strategies,* online retailers with space limitations can consider locating a returns facility close to the main facility for COR transportation, linking with the return volume parameter (section 8.6.2.4.1). Additionally, online retailers with *disposition strategies* that involve disposal (e.g. for perishable products) can consider using decentralised locations for COR disposition. Additionally, online retailers should consider their *network design* strategies for the key RCM execution practice of formalisation, which involves the establishment of cost control strategies and standards (key practice element) For instance, online

retailers with a centralised facility in one location can develop a higher RL cost benchmark for long-distance locations, linking with return and sales volume parameters. These findings can be illustrated by the following quotations:

> "So, in terms of location, it needs to be, if not inside the DC, very close to the main DC hubs because you want to eliminate any excessive transport […] if you can't fit it in the very same facility […] then the next best option would be to have a centralised unit closest to your main hub […] just to save transport cost." (P5, general manager, online retailer)

> "[…] I'm going to dispose of something regardless, then you want to do it as quickly as possible without incurring additional transportation or other costs. And then you might want to say, well, I've decentralised points in different cities, and I'll just dispose." (P2, owner, supply chain consultancy firm)

> "So, normally what you do is you try and work on a ratio that's a benchmark or standard that is not really going to eat into your bottom line […]. Cape Town being your longest lead-time or your longest distance if I may call it that. And therefore, the logistics cost to return from the Cape Town is going to be a lot greater than what it is from Johannesburg." (P10, Head of Sales and Logistics, OEM/multichannel retailer)

As support RL practices to consider organisational cost parameters, online retailers can implement (as supported by literature) the (1) Internet and web-based IT strategies of developing online return capabilities (section 6.3.2), (2) TLIT strategy of using TMS for RL (section 6.3.3), (3) RLIT (RL information technology) strategy of considerations for RLIT (section 6.3.5), (4) SCI strategies of considerations for SCI, negotiations, SC agreements and sharing information, responsibilities and costs (section 6.4.1), (5) RL in/outsourcing strategy of considerations and analysis of RL in/outsourcing decisions (section 6.4.1), (6) disposition strategies of considerations for disposition and benefit-driven disposition decisions (section 6.6.1), (7) general facility/location strategies of decisions related to transportation flows, benefit-driven facility/location strategies and considering facility/location decision factors (section 6.8.1), and (8) FM strategies of considerations for FM and considerations for factors that influence RL costs (section 6.9.2).

Several studies from the reviewed literature coincide with the interview findings about organisational cost parameters. Specifically, studies identified that (1) product return costs in online retailing can be more costly than traditional retailing because of additional transportation, gatekeeping, handling, inspection, disposition and redistribution costs (Ahsan & Rahman, 2021:16; Das *et al.* 2020:59; Wang *et al.* 2017:681), (2) multi/omnichannel retailers can realise cost savings through return to store options (Bozzi *et al.* 2022:20), (3) online retailers lacking the capabilities to manage RL can outsource RL (Wang, Dang *et al.* 2021:2), (4) 3PRL providers can perform RL processes and practices on behalf of online retailers (Prajapati *et al.* 2021:6), including product return collection, transportation, inspection, disposition and redistribution (Tombido *et al.* 2018:236), (5) integrating with suppliers through contracts can help online retailers stipulate shared responsibilities in the RL process (Mostert *et al.* 2017:10, 13), and (6) RL network design should focus on efficiency and cost-effectiveness (Misni & Lee, 2017:91). Nevertheless, no studies identified the importance of considering disposition strategies for COR transportation and RL network design strategies for the establishment of a RL cost

benchmark. Evidently, this study highlights additional organisational cost parameters that can be important for the implementation of cost propositions.

Essentially, considering organisational cost parameters can help online retailers with the implementation of various RCE, COR and RCM propositions and mitigation of the cost (1) pitfalls of RL process failures (operational failures), poor RL planning, lack of resources (poor RLM), poor RL accounting, dismissing RL costs, poor cost monitoring (poor FM) and a lack of SCI (poor integration), and (2) problems of inaccurate view of financial performance, poor cost visibility, hidden costs (costing problems), unnecessary expenses, high RL costs, a loss of money, sales, margins and profits (cash problems), obsolete stock, poor/no recovery, a loss of product and product value (recovery problems).

8.6.2.4.4 SC cost parameters

SC cost parameters involve the key parameters of supplier return policies and type and charges of 3PLs/couriers (see **Figure 8.15**) that can influence the implementation of several cost propositions.

Specifically, online retailers should consider *supplier return policies* for the key COR recovery practices of COR recovery preparation and COR recovery through secondary channels and suppliers. For example, the supplier return policy may stipulate that the online retailer can return damaged/defective consumer product returns for a period of six months. Therefore, as part of the COR recovery strategy (element of COR recovery preparation), online retailers should plan for consumer product returns that fall outside supplier return policies, identifying alternative avenues, like COR recovery through secondary channels (e.g. selling to third-party buyers) for COR recovery. The impact of supplier return policies on COR recovery can be demonstrated by the following quotation:

> "We have a category department. […] So, our category department takes care of all the suppliers based on the different categories […] And obviously I know the service level agreements based on that supplier. So, before we check it, […] we have to establish whether we can send it back or not. So, I would look at the service level and say, OK, you know what, we have an agreement with these guys so that we can send it, provided that it is sent back within X amount of days, because every supplier will have a different SLA." (P9, regional & online DC manager, online retailer)

Furthermore, online retailers can consider the *type* and *charges of 3PLs/couriers* for key RCE execution and RCM mitigation practices. For instance, the online retailer needs to consider the geographic coverage of the courier for the identification of return transportation costs and potential hidden costs of sub-contracting third-party agents for outlining areas (cost identification for RCE execution). Subsequently, online retailers should consider courier transportation charges for assessing the cost implications of accepting returns for inexpensive products (cost assessment for RCE execution) and for implementing zero-return initiatives (return avoidance for RCM mitigation), linking with product type and product value parameters (section 8.6.2.4.2). The subsequent quotations support these findings:

> "[…] your couriers in South Africa, they charge you per mass, per let's say your kilo mass is one rate […]. So, if you're looking at an item less, and I worked it out, […] if you sell it for R220, there's no ways I will collect an item that has had a sales value of R220 or less, because it will cost you in terms of profit margin to actually go and fetch these items. It makes no sense. So, outlining your areas, your zones, plays a huge role, your size of the commodity or your product, that plays a huge role and then you need to define that courier type. Is it them themselves or is it a third-party agent? But it all comes back, and it hits you on your margin." (P12, Head of logistics, online retailer)

> "[…] you look at the product type and you look at the chargeable mass of that product type, […] But it does not warrant to bring an item which is under one kilo and it's costed R100 […]. It just does not warrant the cost.". (P12, Head of logistics, online retailer)

As support RL practices to consider SC cost parameters, online retailers can implement (as supported by literature) the (1) SCI strategies of considerations for SCI (section 6.4.1), (2) disposition strategies of considerations for disposition (section 6.6.1), (3) FM strategy of considerations for factors that influence RL costs (section 6.9.2), and (4) RPA strategy of considerations for return avoidance (section 6.9.3). This study exclusively identified that online retailers need to consider supplier return policies for COR recovery and types and charges of 3PL products for RCE execution and RCM mitigation. Additionally, this study shows that considering SC cost parameters can help online retailers to address the cost (1) pitfalls of RL process failures (operational failure), poor RL planning, poor RPA (poor RLM), poor cost monitoring (poor FM) and a lack of SCI (poor integration), and (2) problems of poor cost visibility, hidden costs (costing problems), unnecessary expenses, high RL costs, a loss of money, margins and profits (cash problems) and poor/no recovery (recovery problem).

8.6.2.4.5 Legal and environmental cost parameters

As illustrated in **Figure 8.15**, legal and environmental cost parameters involve the key parameters of consumer protection laws and environmental disruptions that associate with a few cost propositions.

In terms of *consumer protection laws*, online retailers should consider the CPA (consumer protection act) for the implementation of COR recovery and RCM mitigation propositions. Specifically, for COR recovery through the primary channel, online retailers can consider the CPA for the reselling of unboxed items at a discount on the primary online store, ensuring that the website clearly stipulates the condition of the product. Therefore, consumer protection law as legal cost parameter links with product condition as a product cost parameter (section 8.6.2.4.2). Moreover, online retailers need to consider the CPA for the implementation of return regulation and return avoidance as key RCM mitigation practices. Evidently, online retailers need to ensure that gatekeeping initiatives and zero-return (no-collection) initiatives comply with the stipulations of consumer protection laws. The following quotations support these findings:

> "So, in other words, unboxed deals or something like that. But you've got to be very sure that product is pristine or that you are able to identify the defects because the CPA makes it very clear [if] you can sell it. But if there's a scratch or a nick or a cosmetic damage, that kind of stuff, you've got to be able to specify it." (P1, operations manager, 3PRL provider firm)

> "[…] massive cost for their returns processes […]. So, you obviously want to reduce the returns, but I think that's going to be very difficult in an online space because it's so easy to return it. […] you've got the Consumer Protection Act and all sorts of things working in the favour of consumers, so you never going to eliminate returns." (P4, owner/CEO, 3PRL provider firm)

For *environmental disruptions* as a key environmental cost parameter, online retailers can consider occurrences, like the Covid pandemic, for implementation of the key COR process practice of COR transportation. For example, changing the network structure from decentralisation to centralisation to reduce activities and labour requirements, which can impact use of appropriate networks to save transportation costs. Therefore, the environmental cost parameter can associate with the key organisational parameter of organisational strategies (i.e. network design strategies). The following quotation points to this finding:

> "[…] we always had ours decentralised because it cost less if you do it regionally. Although now with Covid, we've actually centralised it. So, everything's going up to Joburg. But in my opinion, decentralised is better from a cost point of view its more cost effective […]. It's a hell of a cost to transport something within 48 hours across the country." (P4, owner/CEO, 3PRL provider firm)

As support RL practices to consider legal and environmental cost parameters, online retailers can implement (as supported by literature) the (1) disposition strategy of considerations for disposition (section 6.6.1), (2) general facility/location strategies of considering facility/location decision factors (section 6.8.1), and (3) RPA strategy of considerations for gatekeeping and RA (section 6.9.3).

While Hjort *et al.* (2019:774) found that early gatekeeping in Europe is mostly practiced for information purposes because EU laws mandate that returns must be accepted for online product returns, no studies identified the impact of consumer protection laws on the resale of unboxed returned products through the primary channel. Therefore, this study extends the literature by adding additional legal parameters that can influence the implementation of recovery through the primary channels. Additionally, no study identified the impact of environmental disruptions on the network design strategies of organisations. However, Misni and Lee (2017:85) mentioned that organisations need to design a robust RL network to reduce SC risks, ensuring efficient product return flows. Therefore, online retailers can benefit from considering environmental disruptions on their network design, enabling the cost-effective management of consumer returns.

Essentially, considering legal and environmental cost parameters can help online retailers effectively implement COR and RCM propositions, and mitigate the cost (1) pitfalls of RL process failures (operational failures), poor RL planning and poor RPA, and (2) problems of hidden costs (i.e. penalties for non-compliance) (costing problem), unnecessary costs, high RL costs, a loss of money, a loss of sales (cash problems), poor/no recovery and a loss of product and product value (recovery problems).

In conclusion, the cost parameters can be important for implementing RCE, COR and RCM propositions and addressing various cost pitfalls and problems. Therefore, online retailers should

consider cost parameters as a main cost proposition for the effective RLM of consumer returns. The next section contains a framework and summary of the findings for cost propositions in RLM.

8.6.2.5 Framework and summary of findings for cost propositions in RLM

Clearly the discussion in section 8.6.2 showed that cost propositions, including RCE, COR and RCM practices and cost parameters, can be important for the effective RLM of consumer returns in online retailing. Based on the discussion of findings, Figure 8.**23** provides a broad overview of the cost propositions for RLM.

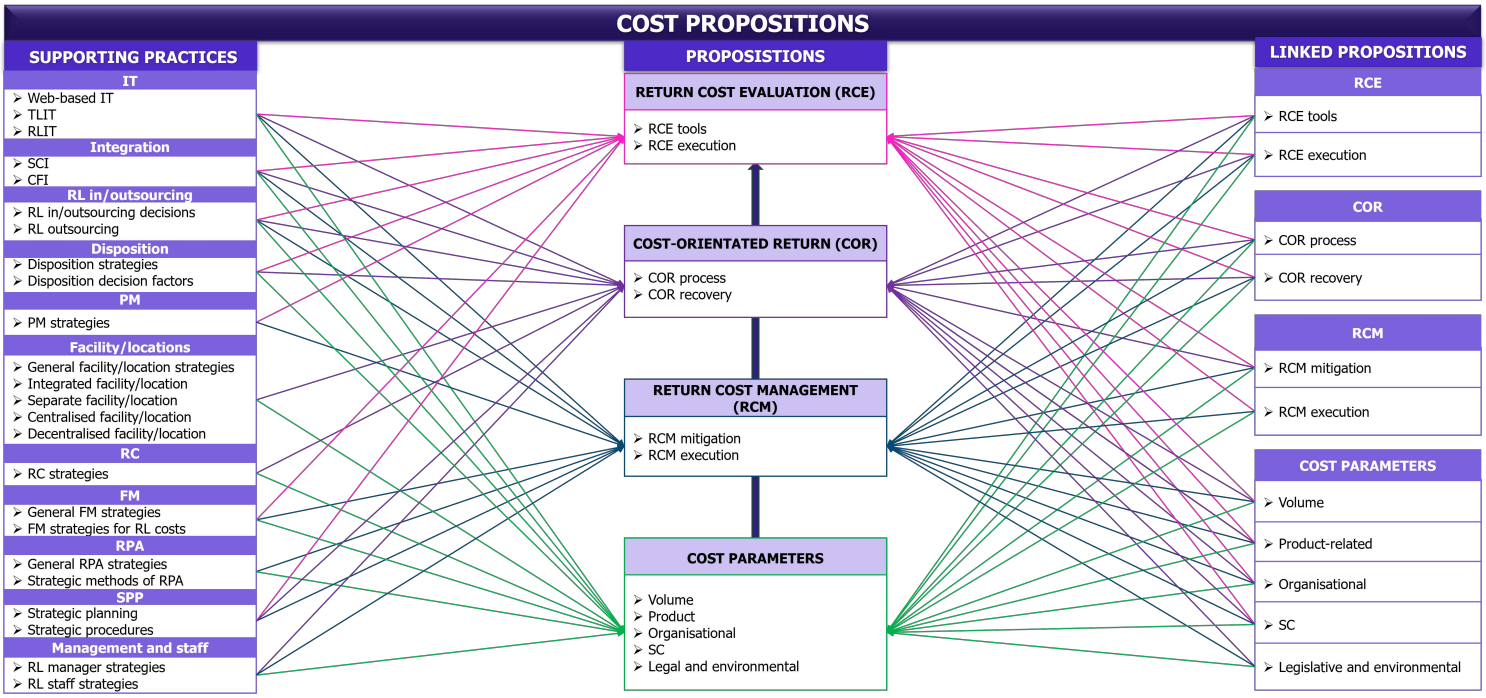


Figure 8.23 Framework for cost propositions
Source: Compiled by the researcher

Figure 8.**23** demonstrates the links between supporting practices and cost propositions, demonstrating the links between the RL support practices, main propositions and propositions categories (listed below the main propositions in the middle and right columns). In terms of the *supporting practices*, the framework shows that cost propositions can be supported by implementing strategies from all RL support practices from the QCA of RL literature findings. The most significant RL practice categories (associated with all main propositions) include IT, integration and RL in/outsourcing, which means that online retailers can prioritise implementing these RL support practices for the successful implementation of cost propositions. In contrast, the least significant support RL practices include PM, facility/location and RC practices, which means online retailers can implement PM, facility/location and RC practices as a last priority for the successful implementation of cost propositions.

In terms of the *cost propositions*, cost parameters associate with the highest variety of RL support practices. Consequently, online retailers can benefit the most from implementing/considering various RL support practices for the effective consideration of cost parameters. However, cost parameters might be more complicated to consider for cost effectiveness in RL. Regarding the *links between* the *cost propositions*, the framework shows that RCM propositions and cost parameters associate with the most proposition categories, indicating that online retailers should pay attention to RCM propositions and costs parameters for the implementation of various costs proposition categories. Finally, the framework shows that the cost proposition categories of RCE tools, RCE execution, COR process, COR recovery, RCM mitigation and volume, product, organisational and SC equally link with the main cost propositions. Subsequently, online retailers can pay attention to these cost proposition categories in the implementation of various cost propositions.

Table 8.**22** provides a detailed proposition framework and summary of the findings, demonstrating the cost proposition categories, key practices/parameters (with elements if applicable), support RL practices, linked proposition categories, and the number of requirements per key practice/parameter and per proposition category. The links between the cost propositions and cost pitfalls and problems will be summarised in the final framework and summary of findings for the cost theme (section 8.6.4).

Table 8.22 Summary of findings for cost propositions

Proposition categories	Key practices/ parameters	Support RL practices	Linked proposition categories	Requirements per key practice/parameter	Requirements per proposition category
RCE tools (return cost evaluation)	**Cost determination tools** • Appropriate measures and planning • Accounting separation and systems	• PM • FM • Disposition • Strategic planning	• RCE execution • COR process • RCM mitigation and execution	• Key practices – 2 • Support practices – 4 • Total requirements – 6	• ***Key practices – 5*** • ***Support practices – 11*** • ***Total requirements – 16***
	Cost understanding tools • Appropriate metrics • Internal information sharing • Use capable third parties	• General IT and RLIT • CFI • RL outsourcing • PM and FM • RL manager strategy	• RCE execution • COR process • Organisational parameters	• Key practices – 3 • Support practices – 7 • Total requirements – 10	
RCE execution	**Cost identification** • Identify standard RL costs • Identify hidden RL costs	• FM	• RCE tools and execution • COR process and recovery • RCM mitigation and execution • Product, organisational and SC	• Key practices – 2 • Support practices – 1 • Total requirements – 3	• ***Key practices – 5*** • ***Support practices – 4*** • ***Total requirements – 9***
	Cost assessment • Cost assessment for return leniency • Cost assessment for return acceptance • Cost assessment for disposition options	• Disposition • PM • FM	• RCE tools and execution • COR recovery • RCM mitigation and execution • Volume, product, organisational and SC parameters	• Key practices – 3 • Support practices – 3 • Total requirements – 6	
COR process (cost-orientated return)	**COR request and gatekeeping** • Self-service return request • Online authorisation • Use third parties	• Web-based IT • RLIT • RL outsourcing	• RCE tools and execution • RCM mitigation • Organisational parameters	• Key practices – 3 • Support practices – 3 • Total requirements – 6	• ***Key practices – 11*** • ***Support practices – 17*** • ***Total requirements – 28***
	COR collection • Simultaneous return pickup and replacement delivery • Drop-off collection • Use third parties	• CFI • RL outsourcing • Decentralised facility/location	• RCE execution • Organisational parameters	• Key practices – 3 • Support practices – 3 • Total requirements – 6	
	COR transportation • Bulk transportation • Use appropriate network design	• TLIT and SCI • RL outsourcing • Separate, decentralised and centralised facilities/locations	• COR recovery • Volume, product, organisational and environmental parameters	• Key practices – 2 • Support practices – 6 • Total requirements – 8	
	COR inspection	• RC	• COR recovery	• Key practices – 2	

Proposition categories	Key practices/ parameters	Support RL practices	Linked proposition categories	Requirements per key practice/parameter	Requirements per proposition category
	• Pre-return inspection • Post-return inspection	• RL staff strategies	• RCM mitigation • Volume and product parameters	• Support practices – 2 • Total requirements – 4	
	COR disposition	• RL outsourcing • Disposition • Decentralised facility/location	• COR recovery • Organisational parameters	• Key practice – 1 • Support practices – 3 • Total requirements – 4	
COR recovery	**COR recovery preparation** • COR recovery strategy • COR recovery department • COR recovery agreements	• SCI • Disposition • RC • RL manager strategies • RL staff strategies	• RCE tools and execution • COR recovery • RCM mitigation • Organisational, product and SC parameters	• Key practices – 3 • Support practices – 5 • Total requirements – 8	• ***Key practices – 9*** • ***Support practices – 15*** • ***Total requirements – 24***
	COR recovery through the primary channel • Resell at full value • Resell at a discount*	• Disposition • Integrated and separate facility/location	• COR process • Volume, product and legal parameters	• Key practices – 2 • Support practices – 3 • Total requirements – 5	
	COR recovery through secondary channels • Resell to third-party buyers • Resell through liquidation channels	• SCI • Disposition	• COR recovery • Volume, product and SC parameters	• Key practices – 2 • Support practices – 2 • Total requirements – 4	
	COR recovery through suppliers • Use dedicated staff • Use agreements	• SCI • Disposition • RC • RL manager strategy • RL staff strategy	• COR process and recovery • RCM mitigation • Product, organisational and SC parameters	• Key practices – 2 • Support practices – 5 • Total requirements – 7	
RCM mitigation (return cost management)	**Return regulation** • Gatekeeping initiatives • Inspection initiatives	• Internet and web-based • SCI • RPA • RL staff strategies	• RCE execution • COR process and recovery • RCM execution • Product parameters	• Key practices – 2 • Support practices – 4 • Total requirements – 6	• ***Key practices – 8*** • ***Support practices – 10*** • ***Total requirements – 18***
	Return avoidance • Zero-return initiatives • Zero-inventory initiatives	• SCI • RPA	• RCE execution • Product, SC and legal parameters	• Key practices – 2 • Support practices – 2 • Total requirements – 4	
	Return charges and penalties • Charge consumers for product returns • Issue penalties to for product damages/losses	• SCI • PM • RPA	• RCE execution • COR recovery • Product and legal parameters	• Key practices – 2 • Support practices – 3 • Total requirements – 5	
	Cost absorption • Activity-based costing • Separate account for RL	• FM	• RCE tools • RCE execution	• Key practices – 2 • Support practices – 1 • Total requirements – 3	
RCM execution	**RCM formalisation** • Prioritise RLM • Cost control strategy and standards	• PM and FM • Strategic planning • Strategic procedures • RL manager	• RCE execution • RCM mitigation • Volume and organisational parameters	• Key practices – 2 • Support practices – 5 • Total requirements – 7	• ***Key practices – 6*** • ***Support practices – 10*** • ***Total requirements – 16***
	Accounting • Accounting separation • Use third parties	• RL outsourcing • PM • RL staff strategy	• RCE tools • RCM mitigation • Organisational parameter	• Key practices – 2 • Support practices – 3 • Total requirements – 5	
	Cost monitoring • Use appropriate KPIs • Cost/benefit analyses	• PM • FM	• RCE tools • RCE execution • Volume parameters	• Key practices – 2 • Support practices – 2 • Total requirements – 4	
Volume parameters	**Return volume**	• RL in/outsourcing • Disposition • General facility/location • RC and FM	• RCE execution • COR process and recovery • RCM execution • Product and organisational parameters	• Key parameter – 1 • Support practices – 5 • Total requirements – 6	• ***Key parameter – 2*** • ***Support practices – 6*** • ***Total requirements – 8***
	Sales volume	• FM	• RCE execution • RCM execution • Organisational parameter	• Key parameter – 1 • Support practices – 1 • Total requirements – 2	
Product parameters	**Type of return/product condition**	• SCI • Disposition • FM	• COR recovery • RCM mitigation • Volume parameter	• Key parameter – 1 • Support practices – 3 • Total requirements – 4	• ***Key parameter – 4*** • ***Support practices – 12*** • ***Total requirements – 16***
	Type of product	• SCI • Disposition • RC, FM and RPA • RL staff strategy	• RCE execution • COR process • RCM mitigation • Volume and SC parameters	• Key parameter – 1 • Support practices – 6 • Total requirements – 7	
	Product value/price	• FM • RPA	• RCE execution • RCM mitigation • Organisational & SC parameters	• Key parameter – 1 • Support practices – 2 • Total requirements – 3	
	Product margin	• General facility/location	• COR process	• Key parameter – 1 • Support practices – 1 • Total requirements – 2	
Organisational parameters	**Organisation type**	• General facilities/ locations • FM	• RCE execution • COR process	• Key parameter – 1 • Support practices – 2 • Total requirements – 3	• ***Key parameter – 7*** • ***Support practices – 11*** • ***Total requirements – 18***
	Organisational capabilities • Disposition capability	• Internet and web-base • TLIT, RLIT and SCI	• RCE tools and execution • COR process and recovery	• Key parameter – 3 • Support practices – 7	

Proposition categories	Key practices/ parameters	Support RL practices	Linked proposition categories	Requirements per key practice/parameter	Requirements per proposition category
	• IT capability • Accounting capability	• RL outsourcing • Disposition • FM	• RCM execution	• Total requirements – 10	
	Organisational strategies • Facility/location strategies • Disposition strategies • Network design strategies	• Disposition • General facilities/ locations	• COR process • RCM execution • Volume and environmental parameters	• Key parameter – 3 • Support practices – 2 • Total requirements – 5	
SC parameters	**Supplier return policies**	• SCI • Disposition	• COR recovery	• Key parameter – 1 • Support practices – 2 • Total requirements – 3	• ***Key parameter – 2*** • ***Support practices – 4*** • ***Total requirements – 6***
	Type and charges of 3PL/courier	• FM • RPA	• RCE execution • RCM mitigation • Product parameters	• Key parameter – 1 • Support practices – 2 • Total requirements – 3	
Legal and environmental parameters	**Consumer protection laws**	• Disposition • RPA	• COR recovery • RCM mitigation	• Key parameter – 1 • Support practices – 2 • Total requirements – 3	• ***Key parameter – 2*** • ***Support practices – 3*** • ***Total requirements – 5***
	Environmental disruptions	• General facility/location	• COR process • Organisational parameter	• Key parameter – 1 • Support practices – 1 • Total requirements – 2	

Source: Compiled by the researcher

Table 8.**22** provides a detailed summary of the interview findings for cost propositions, which can help online retailers to identify the (1) requirements for specific cost proposition categories, (2) support practices that links with the highest number of cost propositions, (3) key practice and key parameter that link with the highest number of cost proposition categories, (4) proposition categories that require the most key practices/parameters and key elements, (5) key practice or parameter that requires the most key elements, (6) proposition category that associates with the most support practices, (7) key practice or parameter that associates with the most support practices, and (8) proposition category and key practice/parameter that involves the most requirements for successful implementation/consideration. Some examples of using the framework will be given in the subsequent paragraphs.

In terms of the *requirements for specific cost proposition categories*, an online retailer interested in implementing, for example, RCE tools propositions can identify (1) cost determination tools and cost understanding tools as the required key practices, (2) general IT, RLIT, CFI, RL outsourcing, PM, FM, strategic planning and RL manager strategies as required support RL practices, and (3) RCE execution, COR process, RCM mitigation, RCM execution and organisational parameters as associated proposition categories. Similarly, online retailers that experience, for example, various type of returns/product return conditions (as a key product parameter) can focus on return type and product condition for implementing/considering (1) SCI, disposition and FM as support RL practices, (2) COR recovery and RCM mitigation as associated proposition categories, and (3) volume as an associated parameter proposition category.

The most *significant support RL practices* for the implementation of cost propositions include disposition and FM practices. Subsequently, to effectively implement/consider various cost propositions, online retailers can prioritise the implementation of disposition and FM as support RL

practices. Furthermore, the *key practices* of cost identification and cost assessment for RCM execution and *key parameter* of return volume (volume parameter) *associates with the highest number of proposition categories*, which means that online retailers should pay attention to cost identification, cost assessment and return volume for the successful implementation of various cost proposition categories.

Regarding the *proposition categories*, COR processes *require the most key practices/elements,* which means that online retailers can implement several key practices/elements for the effective implementation of COR process practices. Additionally, the *key practices/parameters* of cost understanding tools (RCE tools), cost assessments (RCE execution), COR request and gatekeeping, COR collection (COR process), COR recovery preparation (COR recovery), organisational capabilities and strategies (organisational parameters) *require the most key elements*.

Furthermore, the *proposition category* of COR processes *associate with the most support RL practices,* which means that support RL practices can be the most beneficial for the implementation of various COR process practices. Similarly, the *key practice* of cost understanding RCE tools and the *key parameter* of organisational capabilities *associates with the most support RL practices,* which means that support RL practices can be the most beneficial for implementing cost understanding RCE tools and considering organisational capability parameters. However, COR processes as a proposition category, cost understanding RCE tools as a key practice and organisational capabilities as a parameter might be more complicated to implement for cost effectiveness.

Finally, COR processes as a *proposition category*, cost understanding RCE tools as a *key practice*, organisational capabilities as a *key parameter* involve the *highest number of requirements,* which means that COR processes, cost understanding RCE tools and organisational capabilities might be a too challenging to implement/consider successfully for cost effectiveness. Nevertheless, before online retailers choose to implement proposition categories and key practices/parameters based on the number of requirements, they should first identify the linked benefits. The benefits represent the number of cost pitfall and problems addressed and profits realised, which will be identified in the final framework and summary of finding for the cost theme (section 8.6.4).

In the next section, the cost profits (subtheme 3) that can be realised through the effective implementation of prevention and control propositions, will be analysed and discussed.

8.6.3 Cost profits – Subtheme 3

As illustrated in Figure 8.19 and discussed in section 8.2.2., the cost profits (meaning benefits or outcomes) consist of profit categories, including economic, operational, organisational, SC and market

and other themes, profit subcategories and related profits, which can be realised through the implementation/consideration of return cost evaluation (RCE), cost-orientated return (COR) and return cost management (RCM) propositions and cost parameters. Figure 8.**24** provides an overview of the cost profit categories, subcategories and related profits that can be realised through the implementation/consideration of cost propositions.

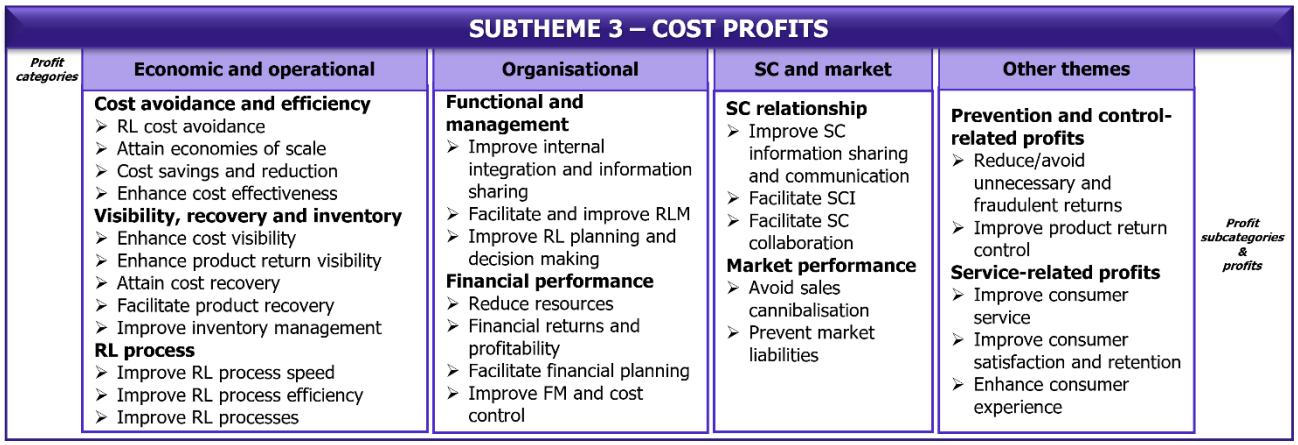


Figure 8.24 Overview of subtheme 3 - cost profits
Source: Compiled by the researcher

In the subsequent sections the main cost profit categories, including economic, operational, organisational, SC and market and other theme profits, with related profit subcategories and cost profits will be discussed.

8.6.3.1 Economic and operational cost profits

As illustrated in Figure 8.**24**, economic and operational cost profits can be categorised as (1) *cost avoidance and efficiency*, (2) *visibility, recovery and inventory*, and (3) *RL process profits*, which will be discussed in the subsequent sections

8.6.3.1.1 Cost avoidance and efficiency profits

Cost avoidance and savings profits involve RL cost avoidance, economies of scales and cost savings and reductions, and cost effectiveness, which can be realised through various cost propositions.

The participants indicated that online retailers could *avoid RL costs* through the implementation of key COR process and RCM mitigation practices and consideration of key product and organisational parameters. Specifically, RL costs can be avoided through the implementation/consideration of (1) COR collection (i.e. store return drop-offs), COR inspection (i.e. pre-return inspection) and COR disposition, (2) return regulation for RCM mitigation (i.e. gatekeeping initiatives) and return avoidance for RCM mitigation (i.e. zero-return and zero-inventory strategies), (3) type of product, and (4)

organisational type and organisational (disposition strategies). The following quotations demonstrate these findings:

> "You can actually go to a store […] it's still a return but you are actually not paying a return logistics costs […]." (P13, supply chain manager, multichannel retailer)

> "The staff that's physically going to handle the product from the first time, the guy with the motorbike comes back with that jacket or whatever it is to be able to inspect and do the right thing at that point in time […]. Where if you can train your people up at the right point […] without incurring double handling costs." (P2, owner, supply chain consultancy firm)

> "[…] I'm going to dispose of something regardless, then you want to do it as quickly as possible without incurring additional transportation or other costs." (P2, owner, supply chain consultancy firm)

> "So, often what happens is [the consumer says] 'I would like to return this laptop'. So, I [as the consumer] phone the contact centre and I spin them a whole story […], and [as the contact centre agent] my heart goes out to this person. And so, I authorise the return. […] But there is also, what are you going to do with this two-year old computer […] it's only a cost driver. So, avoiding that on the front end by digitising your returns policy […]." (P1, operations manager, 3PRL provider firm)

> "So, when a customer logs a return, they obviously need to take a photo of an item, […] that person can see that item has been used. It obviously it gets declined right away. So, you don't have that cost incurred to actually go and collect the item, evaluate it at the warehouse and then having to send it back." (P3, returns manager, online retailer)

> "[…] have some sort of way to avoid or reduce a return when it's not actually going to give the desired outcome, because you don't want to pay for reverse logistics for no reason." (P13, supply chain manager, multichannel retailer)

> "[…] we would call that our 4PL process. So, normally when you sell online, […] you can have your own warehouse and you can keep your own stock. [But this is] Not efficient because you've got a stock life cycle, and that's also costly. If you can't return that or turn that stock in 30 days or 50 days, it cost you money. Then you can have the option also of selling directly from your supplier's own warehouse, so you don't carry stock, but your supplier, that manufacturer, carry stock. […] So, that's completely then with that supplier […] and that's the same then in terms of a reverse or a return, is that supplier will get notified by the customer care department that they've logged that return. That return will be redirected to that supplier […]." (P12, Head of logistics, online retailer)

Furthermore, online retailers can attain *economies of scale* by implementing/considering the key (1) COR process practice of COR transportation (i.e. bulk transportation and appropriate network design), (2) RCM execution practice of cost monitoring (i.e. performing regular cost/benefit analyses), and (3) volume parameter of return volume. The following quotations support these findings:

> "I believe outsourcing is an amazing opportunity […] the reason I say that is, I don't have scale in returns […] it becomes part of the courier's greater scale." (P6, logistics manager, multichannel retailer)

> "[…] it can be quite costly to go and set up a complete courier network or even part of a courier network. So, potentially the customer to warehouse, bit, is a part that you would normally outsource and just because you would get economies […]." (P1, operations manager, 3PRL provider firm)

> "There's nothing that's not a business case. We will outsource until there's no more economical benefit to outsource. Then we will try and insource if we can do it better or cheaper, […] because you should be able to do it yourself if there's that much volume that somebody else can run a complete business just on you." (P6, logistics manager, multichannel retailer)

In terms of *cost savings* and *reductions* online retailers can implement various key COR process practices and various cost parameters. Particularly, participants indicated that online retailers could save and reduce RL costs by implementing (1) COR request and gatekeeping (i.e. self-service return request, online authorisation and using third parties), (2) COR collection (i.e. simultaneous return pickup and replacement drop-off and using 3PRL providers), (3) COR transportation (i.e. using an appropriate network), (4) COR inspection (i.e. pre-return and post-return inspection), and (5) COR

disposition. Additionally, online retailers can realise cost savings and reductions by considering the key (1) volume parameter of return volume, (2) product parameter of type of product, and (3) organisational parameters of organisational capabilities and strategies. Finally, online retailers can enhance *cost effectiveness* through the key COR process practice of COR transportation, which involves using decentralised facilities/locations for COR transportation. The following quotations illustrate the cost saving, reduction and effectiveness profits:

> "I think it saves a lot of costs […] when a consumer or customer of your goods can log a return for themselves […]." (P3, returns manager, online retailer)
>
> "So, the whole authorisation was done on online […] the cost saving was disproportionately big because we didn't have the customer interactions […]." (P1, operations manager, 3PRL provider firm)
>
> "[…] like outsourcing a contact centre, the only reason you do it is to gain actual financial savings." (P1, operations manager, 3PRL provider firm)
>
> "I think we could save [Retailer C] a fortune, because if you return something and you order a replacement, they come up with two different deliveries […]. So, I thought to myself, if we [as the 3PRL provider] could convince them [Retailer C] that when you [the consumer] do a request for return and you [want to] replace […] you hook the two together." (P7, owner, 3PRL provider firm)
>
> "So, whilst there is a saving [through RL outsourcing], the saving may not come in direct costs, but it will become in the recoverability of the product, the control, the discipline and the turnaround of the stock […] [and] there are costs that can be saved elsewhere and some non-attributable costs in the form of customer service ….] I [as the 3PRL provider] pick it up [the product return] tomorrow and that […] is done very quickly, very efficiently." (P7, owner, 3PRL provider firm)
>
> "I personally think that decentralised operations are far more […] cost effective […]. The fact that it gets back to the reclamation centre a little time later than that, that to me is in the ability to save costs […]." (P7, owner, 3PRL provider firm)
>
> "So, in terms of location, it needs to be, if not inside the DC, very close to the main DC hubs […] just to save transport cost." (P5, general manager, online retailer)
>
> "I believe with it being centralised is that you collect that unit and deliver directly to your warehouse […] because less activities[are] involved, [for a] reduction in costs […]." (P10, Head of Sales and Logistics, OEM/multichannel retailer)
>
> "But if you had a team of people that could evaluate at the point of taking it from the customer, you would salvage tons of money and time. […] a practical way of putting a team of people into the street and saying, you know, what returns is such a big thing in our world […] So, let's put a dedicated team in there that […] can go to the customer and say, you know what, before I take this laptop from you, can we quickly do one, two, three and four, maybe solve them right there […]."(P5, general manager, online retailer)
>
> "[…] employing the right people. It will save you money in the long run because you don't want an uneducated person dealing with a return claim on a forty- or fifty-thousand-rand electronics item […]." (P5, general manager, online retailer)
>
> "[…] we always had ours decentralised because it cost less […] decentralised is better from a cost point of view its more cost effective. […] It's a hell of a cost to transport something within 48 hours across the country […]." (P4, owner/CEO, 3PRL provider firm)

Few studies from the reviewed literature identified cost avoidance and efficiency profits through the implementation of practices related to the cost propositions. Specifically, studies from the reviewed literature identified that (1) costs can be avoided through no-collection returns (Hjort *et al.* 2019:775), (2) economies of scales can be realised by outsourcing to 3PLs/3PRLs (Gu *et al.* 2019:160; Wang, Wang *et al.* 2021:67) and using centralised facilities (Hjort *et al.* 2019:781), and (3) cost savings and reductions can be realised through efficient return processes (Ashan & Rahman, 2021:20), IT to verify returns (Jović *et al*. 2020:164), gatekeeping (Andresen & Istad, 2019:8), shorter routes and distances

using decentralised network (Bozzi *et al.* 2022:20, 30), and proper allocation of skilled human resources (Ashan & Rahman, 2021:22; Le, 2023:15). Nevertheless, this study distinctly identifies that online retailers can avoid cost, attain economies of scale, and save and reduce costs through numerous additional key COR process and RCM execution practices and related cost parameters, expanding the literature.

Essentially, cost avoidance and reduction as cost profits, reemphasise that online retailers can address RL process failures (operational failures), poor RPA (poor RLM) and poor cost monitoring (poor FM) pitfalls and unnecessary expenses, high RL costs and a loss of money (cash problems) through the implementation of cost propositions for the effective RLM of consumer returns.

8.6.3.1.2 Visibility, recovery and inventory profits

The visibility, recovery and inventory cost profits involve the enhancement of cost visibility, enhancement of product return visibility, attainment of cost recovery, facilitation of product recovery and improvement of inventory management through the implementation of various cost propositions.

The participants indicated that online retailers could *enhance costs visibility* through RCE tools, RCM execution and organisational parameters. Specifically, online retailers can enhance cost visibility by implementing/considering (1) cost determination RCE tools (i.e. accounting separation and systems), (2) cost understanding RCE tools (i.e. internal information sharing), (3) accounting for RCM execution (i.e. accounting separation through a dedicated RL department), and (4) organisational (IT) capabilities. Similarly, online retailers can *enhance product return visibility* through the key (1) RCE tools practice of cost determination (i.e. using a capable third party), (2) COR process practice of COR request and gatekeeping (i.e. using third parties), and (3) organisational cost parameter of organisational (IT) capabilities. The following quotations demonstrate the attainment of cost and product return visibility profits through various cost propositions:

> "[…] within the system, like a SAP ERP that's quite sophisticated or the bespoke systems that I've dealt with, they have a specific module to deal with returns and to deal with the logistics around the returns, as well as the financial transactions, the credit side of the return and the cost side of the return, so that as much as when you try to do an online purchase, you can select various logistics delivery options. The same thing should be on the reverse, at least for the people in the organisation to see what's the cost of various return options." (P2, owner, supply chain consultancy firm)

> "[…] they have more visibility and [by] sharing of information between different departments, they can start understanding the cost of these returns […]." (P2, owner, supply chain consultancy firm)

> "So, it's not just running a truck from point B to point A, it's all the processing and admin around it and repackaging if necessary, and reselling and liquidating and destruction. That's all put into different categories of [the] income statement, which gets hidden and washed away. So, if you have a dedicated [RL department as a] resource for reverse logistics that all comes out of the income statement into the reverse logistics pool and it's much easier to manage those costs." (P4, owner/CEO, 3PRL provider firm)

> "And I developed an app that actually does all those processes […] to give immediate authorisation […] So, from a point of view of the technologies, obviously, whatever platform you may use […] to know immediately why things are happening, what is happening, what it looks like and the [cost] implications thereof. (P7, owner, 3PRL provider firm)

Online retailers can *attain cost recovery* by effectively implementing key COR recovery and RCM execution practices and considering key product and SC parameters. Specifically, online retailers can attain cost recovery through (1) COR recovery preparation (i.e. establishing a COR recovery department and COR recovery agreements), (2) COR recovery through the primary market (i.e. reselling at full value, (3) COR recovery through the secondary market, (4) COR recovery through suppliers, (5) cost absorption for RCM mitigation (i.e. activity-based-costing), and (6) type of return, product condition and supplier return policy parameters. The subsequent quotations show these findings:

> "But when they want to return it, if you haven't invested in that process and those people […] How are we going to maximise the disposition return? And if you haven't invested in all of that, can we offset some of the disposition in some of the cost of servicing with the [cost] recovery and disposition […]." (P1, operations manager, 3PRL provider firm)

> "So that's what they'll go into agreement with one or two parties at most and say, you know what, every other day we'll call you, you'll come, you'll come and view the stuff in the racks. You'll see what it is. You'll get a fair price, and you'll say, fine, bang, I'll pay you R400 K. I'll take everything. Because it's just a way of salvaging cost." (P5, general manager, online retailer)

> "[…] your first priority would be to put it back for resale […] So, that decision of resale is driven by cost recovery." (P5, general manager, online retailer)

> "I think cost is one, you know, and recovery on that cost. So, if you're going to resell products, you're able to resell at full value, if not, then rather send it through to a liquidation channel." (P4, owner/CEO, 3PRL provider firm)

> "[…] items we sent back to our suppliers. And we get a cost price plus logistics cost return from those vendors, which is agreed up front." (P8, logistics manager, multichannel retailer)

> "As a as an online retailer, always try and get your money back. That's your number one priority. So, sending it back to the supplier to a warranty claim is the easiest thing in the world, done deal." (P5, general manager, online retailer)

> "And so, when we do activity-based costing […] because you can't recover your true returns cost separately, you have to recover that cost somewhere." (P2, owner, supply chain consultancy firm)

Moreover, online retailers can *facilitate product recovery* through RCE, COR propositions and organisational parameters, including the key (1) RCE tools practice of cost determination (i.e. using appropriate planning), (2) COR process practice of COR disposition (i.e. using third parties), (2) COR recovery practice of COR recovery preparation (i.e. establishing a COR recovery department) and (3) organisational parameter of organisational (disposition) capability. Finally, online retailers can *improve inventory management* through the implementation of COR recovery preparation and consideration of the volume parameter of return volume, which involves the appointment of a dedicated RL manager. The following quotation support these claims:

> "They need to have [disposition decisions in their strategic planning] […] to know upfront […] what the cost of that return will be further down the supply chain. […] and the cost involved to recover that product or to take it up into the supply chain again safely." (P2, owner, supply chain consultancy firm)

> "So, whilst there is a saving [through RL outsourcing], the saving may not come in direct costs, but it will become in the recoverability of the product […]." (P7, owner, 3PRL provider firm)

> "So, we also have a recovery department, in our warehouse, which then will assess the heights and either repackage it […]." (P3, returns manager, online retailer)

> "[…] depending on scale […] the reverse logistics manager is actually managing the inventory component. What are we going to do with the stock? How are we going to handle it? How are we going to disposition it?" (P1, operations manager, 3PRL provider firm)

No studies from the reviewed literature identified that cost visibility can be enhanced through the implementation of practices related to RCE tools, RCM execution and organisational parameters. However, a few studies identified that product return visibility can be enhanced by using IT in the RL process (Biswas & Abdul-Kader, 2018:1021; Frei *et al.* 2020:1619; Jović *et al*. 2020:164). Additionally, only Biswas and Abdul-Kader (2018:1019) identified that cost recovery can be realised through supplier agreements and shipping product returns to suppliers. Therefore, this study extended the literature by identifying that cost recovery can be realised by implementing various key COR recovery practices, absorbing costs for RCM execution and considering related cost parameters. Nevertheless, a few studies identified that product recovery can be realised through the inclusion of disposition decisions in the strategic planning (Andresen & Istad, 2019:23), appointment of appropriate and skilled staff (Zailani *et al.* 2017:35) and utilisation of third parties in the disposition process (Le, 2023:15). Finally, no studies identified that appointing a dedicated RL manager can facilitate inventory management, meaning that this study extends the literature by emphasising the importance of appointing a dedicated RL manager and considering return volume.

Essentially, realising visibility, recovery and inventory profits, reiterate that implementing/considering cost propositions can help online retailers address (1) RL process failures (operational failure), inattention to RLM, lack of resources (poor RLM), poor RL accounting, dismissing RL costs, poor cost monitoring (poor FM) and a lack of CFI and SCI (poor integration) cost pitfalls, and (2) inaccurate view of financial performance, poor cost visibility, hidden costs (costing), a loss of sales, profits and margins (cash), obsolete stock, poor/no recovery and a loss of product and product value (recovery) cost problems.

8.6.3.1.3 RL process profits

RL process profits entail improving RL process speed, RL process efficiency and RL processes through the implementation/consideration of COR process propositions and a few cost parameters.

The participants identified that online retailers could implement various key COR process practices and related key cost parameters to *improve RL process speed.* Specifically, online retailers can improve RL process speed through the implementation of (1) COR collection involving simultaneous return pickup and replacement delivery and third parties, (2) COR transportation involving appropriate network designs, (3) COR inspection involving pre-return inspection, and (4) COR disposition involving speedy disposition. Additionally, online retailers can improve RL process speed by considering the key (1) volume parameter of return volume, (2) product parameter of product type, and (3) organisational parameters of organisational (disposition) capabilities and organisational (disposition) strategies. The subsequent quotations support these findings:

> "The two processes happen at the same time, trigger the return and trigger the outbound order for the replacement item. OK, so the courier going to fetch the returned item is also dropping off the replacement [which] truncates that wait period […]." (P1, operations manager, 3PRL provider firm)

> "So, whilst there is a saving [through RL outsourcing], the saving may not come in direct costs, […] but there are costs that can be saved elsewhere and some non-attributable costs in the form of customer service [...] I [as the 3PRL provider] pick it up [the product return] tomorrow and that […] is done very quickly […]." (P7, owner, 3PRL provider firm)

> "[…] we always had ours decentralised because it's cost less if you do it regionally […] decentralised is […] faster, you don't have to wait, even if you're waiting 48 hours." (P4, owner/CEO, 3PRL provider firm)

> "I believe with it being centralised is that you collect that unit and deliver directly to your warehouse […] because less activities[are] involved, [for a] reduction in costs and quicker expedition time […]." (P10, Head of Sales and Logistics, OEM/multichannel retailer)

> "But if you had a team of people that could evaluate at the point of taking it from the customer, you would salvage tons of money and time […] [by] putting a team of people into the street and saying, you know what, returns is such a big thing in our world […] So, let's put a dedicated team in there that are our first line evaluators […] that can go to the customer and say, you know what, before I take this laptop from you, can we quickly do one, two, three and four, maybe solve them right there […] just to give them a better service [and] save some time and traffic at the DC." (P5, general manager, online retailer)

> "I'm going to dispose of something regardless, then you want to do it as quickly as possible […] And then you might want to say, well, I've decentralised points in different cities, and I'll just dispose." (P2, owner, supply chain consultancy firm)

Additionally, online retailers can *improve RL process efficiency* by implementing COR collection, using decentralised drop-off points and 3PRL providers, and considering organisational parameters of organisation type and organisational strategies. Finally, online retailers can *improve RL processes* through the implementation of COR request and gatekeeping (i.e. self-service return request) and consideration of organisational (IT) capabilities (organisational parameter). These findings can be illustrated by the following quotations:

> "I think decentralised is better from a cost point of view, [and] an efficiency point of view […] that they would be able to go to a Caltex garage and there's a drop point there." (P4, owner/CEO, 3PRL provider firm)

> "So, whilst there is a saving [through RL outsourcing], the saving may not come in direct costs, […] but there are costs that can be saved elsewhere and some non-attributable costs in the form of customer service [...] I [as the 3PRL provider] pick it up [the product return] tomorrow and that […] is done very quickly, very efficiently." (P7, owner, 3PRL provider firm)

> "[...] if you have a system that can allow the customer or the consumer to initiate the request for a return by themselves on their own, it makes for a lot more smoother [sic] process." (P3, returns manager, online retailer)

The interview findings related to RL process profits align with several studies from the reviewed literature. Specifically, studies identified that online retailers could improve (1) RL process speed through a simultaneous return pick-up and replacement delivery (Bozzi *et al.* 2022:20), decentralised facilities/locations (Bozzi *et al.* 2022:20; Karlsson *et al.* 2023:8) and dedicated skilled staff (Ahsan & Rahman, 2022:157; Mostert *et al.* 2017:13), (2) RL process efficiency through outsourcing to 3PRL providers (Wang, Dang *et al.* 2021:2), and (3) RL processes through appropriate IT (Ahlén & Johansson, 2023:31; Bozzi *et al.* 2022:21; Hjort *et al.* 2019:788). Nevertheless, this study identified that centralised facilities can reduce RL process speed, contradicting the findings of Hjort *et al.* (2019:781), who identified that centralised facilities could reduce RL process speed. Therefore, this study shows that centralised facilities can also increase RL speed, extending the benefits of using

centralised facilities in the RL process. Additionally, this study uniquely identified that COR collection using drop-off collection points can enhance RL process efficiency.

Subsequently, this study not only confirms but also extends RL literature by identifying additional RL process profits that can be realised through cost propositions. Essentially, realising RL process cost profits reemphasise the ability of online retailers to address the cost pitfall of RL process failures (operational failure) and cost problems of unnecessary expenses, high RL costs and a loss of money (cash problems) through the implementation of COR process and cost parameter propositions for the effective RLM of consumer returns.

8.6.3.2 Organisational cost profits

As highlighted in **Figure 8.10**, organisational cost profits can be categorised as *functional and management* and *financial performance profits*, which will be discussed and analysed in subsequent sections.

8.6.3.2.1 Functional and management profits

Functional and management profits involve the facilitation of internal integration and information sharing, improvement of RLM, and improvement of RL planning and decision making, which can be realised through various cost propositions.

Specifically, online retailers can *facilitate internal integration* and *information sharing* through the implementation of cost understanding RCE tools (key RCE tools practice), simultaneous return pick-up and replacement delivery for COR collection (key COR process practice) and consideration of organisational (IT) capabilities (organisational parameter). Additionally, online retailers can *facilitate* and *improve RLM* through the implementation of formalisation for RCM execution, which involves prioritisation of RLM for cost management. The following quotations show the cost profits related to internal integration and information sharing and RLM:

> "And that's what for us we have done successfully through many different IT platforms, that this information becomes available to the sales force […] integration is an imperative." (P7, owner, 3PRL provider firm)

> "[…] you need sales, marketing, finance […]. You definitely need someone to account for it. You definitely need someone […] to communicate the whole [return] process […]." (P4, owner/CEO, 3PRL provider firm)

> "[…] cross-functional [integration] is imperative […] If the guy gets the wrong thing and he wants it replaced […] I think we could save [Retailer C] a fortune, because if you return something and you order a replacement, they come up with two different deliveries […]. So, I thought to myself, if we [as the 3PRL provider] could convince them [Retailer C] that when you [the consumer] do a request for return and you [want to] replace […] you hook the two together." (P7, owner, 3PRL provider firm)

> "[…] return logistics needs to be managed because it can grow into a loss for the company in the wink of our eyes. So, you need to have all your procedures in place, your policies in place and your quality checks needs to be in place." (P11, Demand and sales manager, FMCG distributor)

> "[…] if you don't manage it proactively and like every single day, it is something that can get out of hand extremely quickly. So, I think it is very important to have somebody to oversee that at all times. And also, it's a great loss area to actually gain some of the losses back." (P3, returns manager, online retailer)

Finally, online retailers can *improve RL planning and decision making* through key RCE tools, RCM mitigation and RCM execution practices and product parameters. Specifically, online retailers can improve RL planning and decision making by implementing/considering (1) cost determination RCE tools (i.e. including disposition decisions in strategic planning), (2) return regulation for RCM mitigation (i.e. using educated/trained inspectors), (3) formalisation for RCM execution (i.e. developing cost control strategy), and (4) product type and product value parameters, as depicted in the subsequent quotations:

> "They need to have [disposition decisions in their strategic planning] […] to know upfront […] what the cost of that return will be further down the supply chain. So, mostly it's a lost sale and the loss of the product […] because of the [product return] issues and the cost involved to recover that product or to take it up into the supply chain again safely." (P2, owner, supply chain consultancy firm)

> "So, educating your inspectors with the help of the supplier and possibly even at their cost. Right. So, you can try and educate your inspectors on the supplier's cost, saying that we run thousands of electronic items through your doors every week. We need your team to come and educate our team, so you save a couple bucks […] [and for] the business acumen saying that you can't make an emotional decision when dealing with a R40000 electronic device […]." (P5, general manager, online retailer)

> "[…] you can have it [RL] as part of a strategic plan […]. I have to make sure that there's a strategic intent to get the cost down […]. It can be part of a cost containment strategy." (P6, logistics manager, multichannel retailer)

A few studies from the reviewed literature coincided with the interview findings related to functional and management cost profits. Specifically, some studies identified that (1) internal information sharing and integration can be facilitated through appropriate IT (Jović *et al*. 2020:164), management involvement and commitment (Mostert *et al.* 2017:9), and simultaneous return pickup and exchange delivery (Bozzi *et al.* 2022:19), (2) RLM can be improved and facilitated through management involvement and commitment (Frei *et al.* 2020:1616), and (3) RL decision making can be improved by training staff to conduct effective gatekeeping and uphold return policies (Dapiran & Kam, 2017:832; Zhang *et al.* 2023:10) and make correct disposition decisions (Zailani *et al.* 2017:35). While no studies mentioned that RL planning can be improved, Hjort *et al.* (2019:769) advised that online retailers must develop a strategic plan for RL and Xu (2019:33) mentioned that online retailers can benefit from including RLM in their overall strategic planning, pointing to improvements in RL planning.

Essentially, the functional and management profits related to internal integration and information sharing, RLM and RL planning and decision making, reemphasise that online retailers can address inattention to RLM, poor RL planning (poor RLM) and a lack of CFI (poor integration) pitfalls and a loss of money, sales and profits (cash) problems through the implementation/consideration of various cost propositions.

8.6.3.2.2 Financial performance profits

Apart from cost avoidance and efficiency profits (section 8.6.3.1.1), financial performance profits can be one of the most significant cost profits that online retailers can realise through various cost propositions. The financial performance profits involve a reduction in resources, realisation of financial returns and profitability, facilitation of financial planning and improvement of financial management (FM).

In terms of *resource reduction*, online retailers can implement key COR process practices and consider key organisational parameters. Specifically, online retailers can reduce resources through the implementation of COR request and gatekeeping (i.e. self-service return request and online authorisation) and COR collection (i.e. using 3PL providers) and consideration of organisational (IT) capabilities. Subsequently, online retailers can reduce both human and physical resources through cost propositions, as demonstrated in the following quotations:

> "I think it saves a lot of costs, […] you don't need to employ as many people when a consumer […] can log a return for themselves, whereas some other companies obviously you need to phone the company or send an email to initiate the return. So, I think in that case, if you have a system that can allow the customer or the consumer to initiate the request for a return by themselves on their own, it makes for a lot more smoother [sic] process." (P3, returns manager, online retailer)

> "[…] because there is so many 3PL services out there that you can just at the drop of a hat, send somebody to go and collect your returns […]. If you still have to focus on getting a driver to going to pick up a certain item at a certain time of the day, you will tend to use more resources and end up spending more money than actually just outsourcing it to somebody else." (P3, returns manager, online retailer)

Furthermore, online retailers can *realise financial returns* and *profitability* through key RCE execution, COR recovery, RCM mitigation and RCM management practices and product and SC parameters. Specifically, financial returns and profitability can be realised through the implementation/consideration of (1) costs assessment for RCE execution (i.e. cost assessment for accepting returns for inexpensive products), (2) COR recovery preparation (i.e. dedicated manager as part of the COR recovery department), (3) COR recovery through the primary market (i.e. reselling at a discount), (4) return avoidance for RCM mitigation (i.e. zero-return initiatives), (5) formalisation for RCM execution (i.e. prioritise RLM), (6) product condition, type of product and product value parameters, and (7) types and chargers of 3PLs/couriers. Additionally, online retailers can *facilitate financial planning* through the key RCE tools practice of cost understanding (i.e. accounting separation) and the key RCM mitigation practice of cost absorption. The following quotations substantiated these findings:

> "So, if you're looking at an item less, and I worked it out […] if you sell it for R220, there's no ways I will collect an item that has had a sales value of R220 or less, because it will cost you in terms of profit margin to actually go and fetch these items. It makes no sense." (P12, Head of logistics, online retailer)

> "[…] as somebody's job […] to focus on it [product recovery], they [the online retailers] are seeing, some significant financial returns being obtained with focus." (P7, owner, 3PRL provider firm)

> "[…] you need to try and salvage whatever you can. […] the unbox deals, which is a pretty good initiative to sell kind of new but unboxed goods to regain some of the profit." (P5, general manager, online retailer)

> "[…] if you don't manage it proactively and like every single day, it is something that can get out of hand extremely quickly. So, I think it is very important to have somebody to oversee that at all times. And also, it's a great loss area to actually gain some of the losses back." (P3, returns manager, online retailer)

> "It needs to be a completely different dual account. It needs to be completely independent from any other thing you do […] you want to do a proper case rate analysis […] to see how much money I spent on positive sales […]. So, that when I do future planning in terms of margin and markup, I can use that percentage of cost to accurately gauge my transport component onto my selling price, but importantly not overinflated because of my own wastage […]. I'm going to load into my price, which is completely fine." (P5, general manager, online retailer)

Finally, online retailers can *improve FM* and *cost control* in RL through most cost propositions, including key RCE tools, COR process, RCM mitigation and RCM execution practices and various cost parameters. Specifically, online retailers can improve FM in RL through the implementation of (1) cost determination RCE tools (i.e. appropriate measures and accounting separation), (2) COR collection (i.e. simultaneous return pick-up and replacement delivery), (3) return regulation for RCM mitigation (i.e. inspection initiatives), (4) formalisation for RCM execution (i.e. prioritising RLM and establishing cost control strategies and standards), (5) accounting for RCM execution (i.e. accounting separation and using a 3PRL provider), and (6) cost monitoring for RCM execution (i.e. using appropriate KPIs and software for cost/benefit analysis). Additionally, online retailers can improve FM by effectively considering the key (1) volume parameters of return volume and sales volume, (2) organisational parameters of organisational (IT and accounting) capabilities and organisational (network) strategies, and (3) SC parameter of types and charges of 3PLs/couriers. The following quotations convey these findings:

> "Cost per unit processing, [is] critical, you got to know that your cost per units are [sic] all managed and understood [to identify] what it is costing you to build returns." (P6, logistics manager, multichannel retailer)

> "[You can use a normal accounting system for RL] as long as you can ring-fence […]. So, we've got identifiers that says, you know what? This is a returns cart or returns transaction code in those transaction codes are measured separately and managed separately." (P6, logistics manager, multichannel retailer)

> "The two processes happen at the same time, trigger the return and trigger the outbound order for the replacement item. OK, so the courier going to fetch the returned item is also dropping off the replacement […], and it means that you from a cash flow point of view, you're keeping the money in the business." (P1, operations manager, 3PRL provider firm)

> "And like I said, the training goes without question because financially, the checking of a claim […] every facet that we operate with has to be checked and the person doing it has to be suitably qualified to do so." (P7, owner, 3PRL provider firm)

> "And again, because of the easiness of returning products with free returns in an online environment, that's such a big area of your cost that it warrants someone to look after that portion of your business and you try and control the costs within that portion of your business." (P2, owner, supply chain consultancy firm)

> "[…] you can have it [RL] as part of a strategic plan […]. I have to make sure that there's a strategic intent to get the cost down […]. It can be part of a cost containment strategy." (P6, logistics manager, multichannel retailer)

> "So, normally what you do is you try and work on a ratio that's a benchmark or standard that is not really going to eat into your bottom line […] you're reverse logistics costs, should be probably one per cent or five or 10 percent of that total logistics cost, and that's the one that needs to be done. […] you've got to look at the types of volumes that you do […] if more sales taking place within Johannesburg, your returns should be greater within Johannesburg […] Cape Town being your longest lead-time or your longest distance […], the logistics cost to return from Cape Town is going to be a lot greater than what it is from Johannesburg." (P10, Head of Sales and Logistics, OEM/multichannel retailer)

> "So, if you have a dedicated [RL department as a] resource for reverse logistics that all comes out of the income statement into the reverse logistics pool and it's much easier to manage those costs." (P4, owner/CEO, 3PRL provider firm)

> "Claims Department, a Reverse Logistics Department […] extends back into finance because one of the biggest problems in our industry is pick up the goods, no problem. But then when the account from the accounts payable teams of the retailers come and there are claims on there, that's an area where we get involved in and to help our customers reconcile their accounts at the end of the month because sometimes there are claims that are illegitimate." (P7, owner, 3PRL provider firm)

> "[…] returns as a percentage of turnover and cost as a percentage of turnover as well. Obviously, budget for a quarter of a percent or whatever the case may be for your logistics costs to bring the product back. And that you have to run against the budget […]." (P7, owner, 3PRL provider firm)

> "[…] you have the software that does some aggregation for you, telling you that you are picking stuff up at outlying areas, this service provider is giving you a better cost on that area […] to manage costs […]." (P13, supply chain manager, multichannel retailer)

Some studies from the reviewed literature identified that financial performance profits can be realised through the implementation of practices related to the cost propositions. For instance, Wang, Dang *et al.* (2021:2) identified that outsourcing RL can address resource constraints. Additionally, several studies identified that financial returns and profitability could be realised through (1) return avoidance (Chen *et al.* 2017:255), (2) management commitment and involvement (Frei *et al.* 2020:1616), (3) appropriate human resources (Le, 2023:15) and (4) product reuse and reselling (Ahsan & Rahman, 2021:21; Phuong, 2019:12). Moreover, a few studies recognised that improved FM and control can be attained through the appropriate application of RL processes (Solati *et al.* 2023:2), investment in appropriate resources (Phuong, 2019:3) and appropriate KPIs and performance measures (Euchi *et al.* 2019:40; Karlsson *et al.* 2023:9). Evidently, this study extends the literature through the identification of various additional cost propositions that can help online retailers reduce resources, realise financial returns and profitability, improve financial planning, and improve FM and cost control.

Essentially, the financial performance profits emphasise the ability of online retailers to address the cost (1) pitfalls of RL process failures (operational failure), poor RL planning (poor RLM), poor RL accounting, dismissing RL costs and poor cost monitoring (poor FM), and (2) problems of poor pricing, inaccurate view of financial performance, poor cost visibility (costing problems), unnecessary expenses, high RL costs, a loss of money, sales, margins and profits (cash problems) and poor/no recovery (recovery problem) through the implementation of various cost propositions.

8.6.3.3 SC and market cost profits

SC and market profits can be categorised as *SC relationship* and *market performance profits* (see **Figure 8.10**), which will be analysed and discussed in the subsequent sections.

8.6.3.3.1 SC relationship profits

SC relationship profits involve improvement of SC information sharing and communication, facilitation of SCI and facilitation of SC collaboration, which can be realised through the implementation of various cost propositions.

Specifically, online retailers can *improve SC information and communication* through key COR recovery and RCM mitigation practices and key product, organisational and SC parameter. For instance, SC information sharing and communication can be improved by implementing/considering (1) COR recovery preparation (i.e. establish of COR recovery department with a dedicated manager), (2) COR recovery through suppliers (i.e. use dedicated staff), (3) return avoidance for RCM mitigation (i.e. zero-inventory strategy), (4) type of return and product condition, (5) organisational (disposition) capabilities and (6) supplier return policies. These findings can be identified from the following quotations:

> "[…] the manager of the fulfilment centre and I have to decide whether which route it should take. So, from there on, we decide whether the packaging is damaged. If the packaging is damaged, then we will contact our supplier […] and let them know that this item has come back. We are returning it to supplier." (P9, regional & online DC manager, online retailer)

> "[…] we would call that our 4PL process. So, normally when you sell online, […] you can have your own warehouse and you can keep your own stock. [But this is] Not efficient because you've got a stock life cycle, and that's also costly […]. So, I receive the online purchase from the client. I don't carry any stock, but their purchase is directly redirected to the supplier or manufacturer of a specific product, and that specific supplier or manufacturer will make sure that the delivery takes place from his or her own facility or warehouse. […] and that's the same then in terms of a reverse or a return, is that supplier will get notified by the customer care department that they've logged that return. That return will be redirected to that supplier […]." (P12, Head of logistics, online retailer)

> "[…] we don't repair or anything on site. So, if an item needs to be repaired, we need to engage the supplier to get it done." (P3, returns manager, online retailer)

Similarly, online retailers can *facilitate SCI* through key COR process, COR recovery and RCM execution practices and key volume and organisational parameters. Particularly, online retailers can facilitate SCI by implementing/considering (1) COR disposition (i.e. bulk transportation), (2) COR recovery preparation (i.e. establish COR recovery agreements), (3) COR recovery through secondary markets (i.e. resell product return to third-party buyers), (4) return avoidance for RCM mitigation (i.e. zero-inventory strategy), (5) return volume and (6) organisational (IT) capabilities, as illustrated in the subsequent quotations:

> "[…] there needs to be like a secondary network of delivery agents and delivery services that can capitalise on the quantity of deliveries that need to take place for […] the returning part […], which are making [return] deliveries very expensive for the retailer […] they need more integration and vertical integration with transportation companies and transportation management systems, which is in the same way that you can broke the loads for normal bigger loads, that you can do a brokering kind of service for the [return] delivery." (P2, owner, supply chain consultancy firm)

> "[…] they'll go into agreement with one or two parties at most and say, you know what, every other day we'll call you, you'll come, you'll come and view the stuff in the racks. You'll see what it is. You'll get a fair price, and you'll say, fine, bang, I'll pay you R400 K. I'll take everything. Because it's just a way of salvaging cost." (P5, general manager, online retailer)

> "[…] we would call that our 4PL process. So, normally when you sell online, […] you can have your own warehouse and you can keep your own stock. [But this is] Not efficient because you've got a stock life cycle, and that's also costly. If you can't return that or turn that stock in 30 days or 50 days, it cost you money. Then you can have the option also of selling directly from your supplier's own warehouse, so you don't carry stock, but your supplier, that manufacturer, carry stock. In other words, you can then do a supply chain 4PL purchase. So, I receive the online purchase from the client. I don't carry any stock, but their purchase is directly redirected to the supplier or manufacturer […] and that's the same then in terms of a reverse or a return, is that supplier will get notified by the customer care department that they've logged that return. That return will be redirected to that supplier […]." (P12, Head of logistics, online retailer)

Finally, online retailers can *facilitate SC collaboration* through key COR recovery and RCM mitigation practices and key product and SC parameters, including (1) COR recovery preparation (i.e. establish a COR recovery department and agreements), (2) COR recovery through secondary markets, (3) COR recovery through suppliers (i.e. use dedicated staff and agreements), (4) return regulation (i.e. inspection initiatives), (5) product type and value parameters, and (6) supplier return policy parameters. The following quotations support these findings:

> "That's the 'request for credit' team where we work with the suppliers' hand in hand. When we get the item that the customer returns and says that it's faulty, we will create an RFC back to the supplier for them to either credit us or exchange that product with the new one." (P3, returns manager, online retailer)
>
> "So that's what they'll go into agreement with one or two parties at most and say, you know what, every other day we'll call you, you'll come, you'll come and view the stuff in the racks. You'll see what it is. You'll get a fair price, and you'll say, fine, bang, I'll pay you R400 K." (P5, general manager, online retailer)
>
> "And obviously, I know the service level agreements based on that supplier […] we have an agreement with these guys so that we can send it back […]." (P9, regional & online DC manager, online retailer)
>
> […] needs to also be sent back to the supplier or the manufacturer. I've had agreements in place that my supplier or manufacturer would come once a month and collect all the items if that agreement was in place." (P12, Head of logistics, online retailer)
>
> "So, educating your inspectors with the help of the supplier and possibly even at their cost. So, you can try and educate your inspectors on the supplier's cost, saying that we run thousands of electronic items through your doors every week. We need your team to come and educate our team, so you save a couple bucks […] [and for] the business acumen saying that you can't make an emotional decision when dealing with a R40000 electronic device […]." (P5, general manager, online retailer)

The literature findings related to SC relationship cost profits align with a few studies from the reviewed literature, which found that (1) integrated IT systems can improve SC information sharing (Frei *et al.* 2020:1618), (2) SC information sharing (Ahlén & Johansson, 2023:32), SC contracts/agreements and shared responsibilities (Mostert *et al.* 2017:10) can improve SCI, and (3) SC information exchange, cooperative policies (Ahlén & Johansson, 2023:32), partnerships (Pal, 2017:883) and staff training (Mostert *et al.* 2017:10, 13) can improve SC collaboration. Subsequently, this study confirms that SC relationships can be improved through the implementation of various cost propositions that involve SC engagement, integrated systems, information exchange, agreements and shared responsibilities.

Essentially, SC relationship cost profits, reemphasises that online retailers can address a lack of SCI (poor integration) pitfalls and unnecessary expenses (cash), obsolete stock, poor/no recovery and a loss of product and product value (recovery) problems through the implementation of cost propositions for the effective RLM of consumer returns.

8.6.3.3.2 Market performance profits

The market performance profits involve avoidance of sales cannibalisation and prevention of market liabilities, which can be realised through key COR recovery practices and key volume and product parameters.

Specifically, online retailers can *avoid sales cannibalisation* by implementing COR recovery through secondary channels and considering return volume. Therefore, online retailers with high return volumes can avoid sales cannibalisation by shifting COR recovery through the primary market to COR recovery through secondary markets. Furthermore, online retailers can *prevent market liabilities* through the consideration of product type parameters, for example, considering the product type can help online retailers ensure appropriate COR recovery preparation to avoid liabilities related to personal information and health issues. The following quotations show the market performance profits that can be realised through COR recovery practices, volume parameters and product parameters:

> "[…] if you got high volumes of product. Are you going to really be able to do it and are you cannibalising your sales? So, moving it through secondary and tertiary channels is really your only option." (P1, operations manager, 3PRL provider firm)

> "[…] then disposition in some products you need, you have specialist disposal. You know, what are those costs going to look like, or you're sort of stripping out personal information. What about hygiene products? You can't allow those back into secondary market [or] you potentially have a health issue." (P1, operations manager, 3PRL provider firm)

No studies from the reviewed literature identified that practices related to cost propositions can result in market performance profits. Evidently, this study exclusively identifies that online retailers can avoid sales cannibalisation and prevent market liabilities through the implementation of COR recovery practices and considerations of volume and product parameters, thereby extending RL literature. Subsequently, realising market performance profits reemphasises that online retailers can address RL process failures (operational failure) pitfalls and hidden costs (costing) and a loss of money and sales (cash) problems through the implementation of cost propositions for the effective RLM of consumer returns in online retailing.

8.6.3.4 Other theme cost profits

As illustrated in **Figure 8.10**, the other themes cost profits include profits related to prevention and control (theme 1) and service (theme 2). In the subsequent sections, prevention and control-related and service-related cost profits will be discussed.

8.6.3.4.1 Prevention and control-related cost profits

The prevention and control-related cost profits involve reduction of unnecessary and fraudulent returns and improvement of product return control, which online retailers can realise through a few cost propositions.

Online retailers can *reduce/avoid unnecessary and fraudulent returns* through COR process, RCM execution, product parameters and organisational parameters. The participants indicated that online retailers could reduce/avoid unnecessary and fraudulent returns by implementing/considering (1) COR request and gatekeeping (i.e. online authorisation), (2) return regulation for RCM mitigation, (3) return

charges and penalties for RCM mitigation, (4) type of product, and (5) organisational (IT) capabilities. The following quotations illustrate these findings:

> "So, often what happens is [the consumer says] 'I would like to return this laptop'. So, I [as the consumer] phone the contact centre and I spin them a whole story […], and [as the contact centre agent] my heart goes out to this person. And so, I authorise the return. […] But there is also, what are you going to do with this two-year old computer […] it's only a cost driver […]. Your computer system understands what the product is and when they bought it […] and allows that customer to return it or rejects the return […] that avoids those sorts of fraudulent returns right at the outset." (P1, operations manager, 3PRL provider firm)

> "So, when a customer logs a return, they obviously need to take a photo of an item, a picture of something so that the person [gatekeeper] can see that item has been used. It obviously gets declined right away. So, you don't have that cost incurred to actually go and collect the item, evaluate it at the warehouse and then having to send it back […] I think that's a great way to try to avoid unnecessary returns." (P3, returns manager, online retailer)

> "[…] they will reduce the number of returns if they do attach a cost to the return" (P2, owner, supply chain consultancy firm)

Furthermore, online retailers can effectively *control product returns* through key RCE tools and COR process practices and key organisational parameters. Specifically, improved product return control can be realised through the implementation/consideration of (1) cost understanding RCE tools (i.e. using capable third parties), (2) COR request and gatekeeping (i.e. using third parties), (3) COR disposition, and (4) organisational (disposition and IT) capabilities. These findings can be supported by the following quotations:

> "And I developed an App that actually does all those [RL] processes in the form of physical inspection, photographs of the goods, routing, capturing of the information […] to know what's coming back for stock control […]." (P7, owner, 3PRL provider firm)

> "I believe there will be a saving [through RL outsourcing] […] the saving may not come in direct costs, but it will become in the recoverability of the product, the control, the discipline and the turnaround of the stock that it doesn't get left for six months before, when it's starting to encroach on warehouse space, somebody says, we've got to get this nonsense out of here […]." (P7, owner, 3PRL provider firm)

Limited studies from the reviewed literature identified cost profits related to prevention and control. In fact, studies only identified that unnecessary returns can be reduced by return restrictions (Andresen & Istad, 2019:8, 57) and gatekeeping (Andresen & Istad, 2019:8; Hjort *et al.* 2019:774). Consequently, this study contributes to literature by identifying that COR request and gatekeeping (i.e. online authorisation) can avoid fraudulent returns and cost understanding RCE tools, COR request and gatekeeping, COR disposition and organisational capabilities parameters can improve product return control.

Subsequently, reducing/avoiding unnecessary and fraudulent product returns and improving product control as cost profits, reemphasise that online retailers can address the cost (1) pitfalls of RL process failures (operational failure) and poor RPA (poor RLM), and (2) problems unnecessary expenses, high RL costs, a loss of money (cash problems), obsolete stock, poor/no recovery and a loss of product and product value (recovery problems) through the implementation of cost propositions for the effective RLM of consumer returns.

8.6.3.4.2 Service-related cost profits

The service-related cost profits involve improvement in consumer service, improvement in consumer satisfaction and retention, and enhancement of consumer experience, which online retailers can realise through key COR process practices and key volume, product and organisational parameters.

Specifically, online retailers can *improve consumer service* through COR inspection (i.e. pre-return inspection) and consideration of return volume and type of product parameters. Additionally, online retailers can *improve consumer service, satisfaction* and *retention* through the COR collection, involving third parties. Finally, online retailers can *enhance consumer return experience* by implementing COR collection (i.e. simultaneous return pickup and replacement delivery) and COR transportation (i.e. bulk return transportation) and considering return volume as a related parameter. The following quotations illustrate the service-related cost profits:

> "But if you had a team of people that could evaluate at the point of taking it from the customer, you would salvage tons of money and time. […] a practical way of putting a team of people into the street and saying, you know what, returns is such a big thing in our world […]. So, let's put a dedicated team in there that are our first line evaluators […] that can go to the customer and say, you know what, before I take this laptop from you, can we quickly do one, two, three and four, maybe solve them right there? […] So, I think that's possibly another avenue that one can explore just to give them a better service […]." (P5, general manager, online retailer)

> "[…] there are costs that can be saved elsewhere [through RL outsourcing] and some non-attributable costs in the form of customer service […], where your customers are getting that kind of service that you buy it [the dress] today, it doesn't fit. I [the 3PRL provider] pick it up tomorrow and that kind of thing is done very quickly, very efficiently. And you have a very happy customer who buys again." (P7, owner, 3PRL provider firm) (P7, owner, 3PRL provider firm)

> "[…] cross-functional is imperative in providing the customer with a pleasant customer experience. If the guy gets the wrong thing and he wants it replaced […] I think we could save [Retailer C] a fortune, because if you return something and you order a replacement, they come up with two different deliveries […]. So, I thought to myself, if we [as the 3PRL provider] could convince them [Retailer C] that when you [the consumer] do a request for return and you [want to] replace […] you hook the two together." (P7, owner, 3PRL provider firm)

> "I believe outsourcing is an amazing opportunity to ensure that the customer gets the best experience possible, and the reason I say that is I don't have scale in returns. […] it becomes part of the courier is greater scale." (P6, logistics manager, multichannel retailer)" (P6, logistics manager, multichannel retailer)

Apart from Le (2023:16), who identified that consumer satisfaction can be improved through outsourcing to 3PRL providers, no studies from the reviewed literature identified that online retailers could improve consumer service, retention and experience through the implementation of key COR process practices and consideration of key volume, product and organisational parameters. Subsequently, this study contributes to literature by demonstrating additional service-related cost profits that online retailers can realise through cost propositions. Essentially, the service-related cost profits reemphasise that online retailers can address RL process failure (operational failure) pitfalls and unnecessary expenses, high RL costs and a loss of money and sales (cash) problems through the implementation/consideration of cost propositions for the effective RLM of consumer returns.

In conclusion, online retailers can realise various economic, operational, organisational, SC, market, prevention and control-related and service-related cost profits through the implementation of various

cost propositions, reemphasising that cost propositions can be important for the effective RLM of consumer returns. In the next section, the cost theme will be concluded with a framework and summary of findings.

8.6.4 Framework, summary and analysis of findings for Theme 3 - Cost for the effective RLM of consumer returns

In section 8.2.2, the application of the overall framework, summary and analysis of findings for each theme were described. Accordingly, based on the interview findings presented in section 8.6, Figure 8.**25** shows a broad framework and overview of the links between cost pitfalls/problems, propositions and profits. The most significant cost pitfalls, problems and profits illustrated in Figure 8.**25** were emphasised in several ways. Particularly, per cost pitfall, problem and profit category the most significant pitfall, problem and profit (associated with the most cost proposition categories) was emphasised through *italics*, the top three cost pitfalls and problems (associated with nine or more proposition categories), and profits (associated with five or more proposition categories) were emphasised in **bold**, and the highest and most significant cost pitfall/problem and profit was emphasised through an asterisk*.

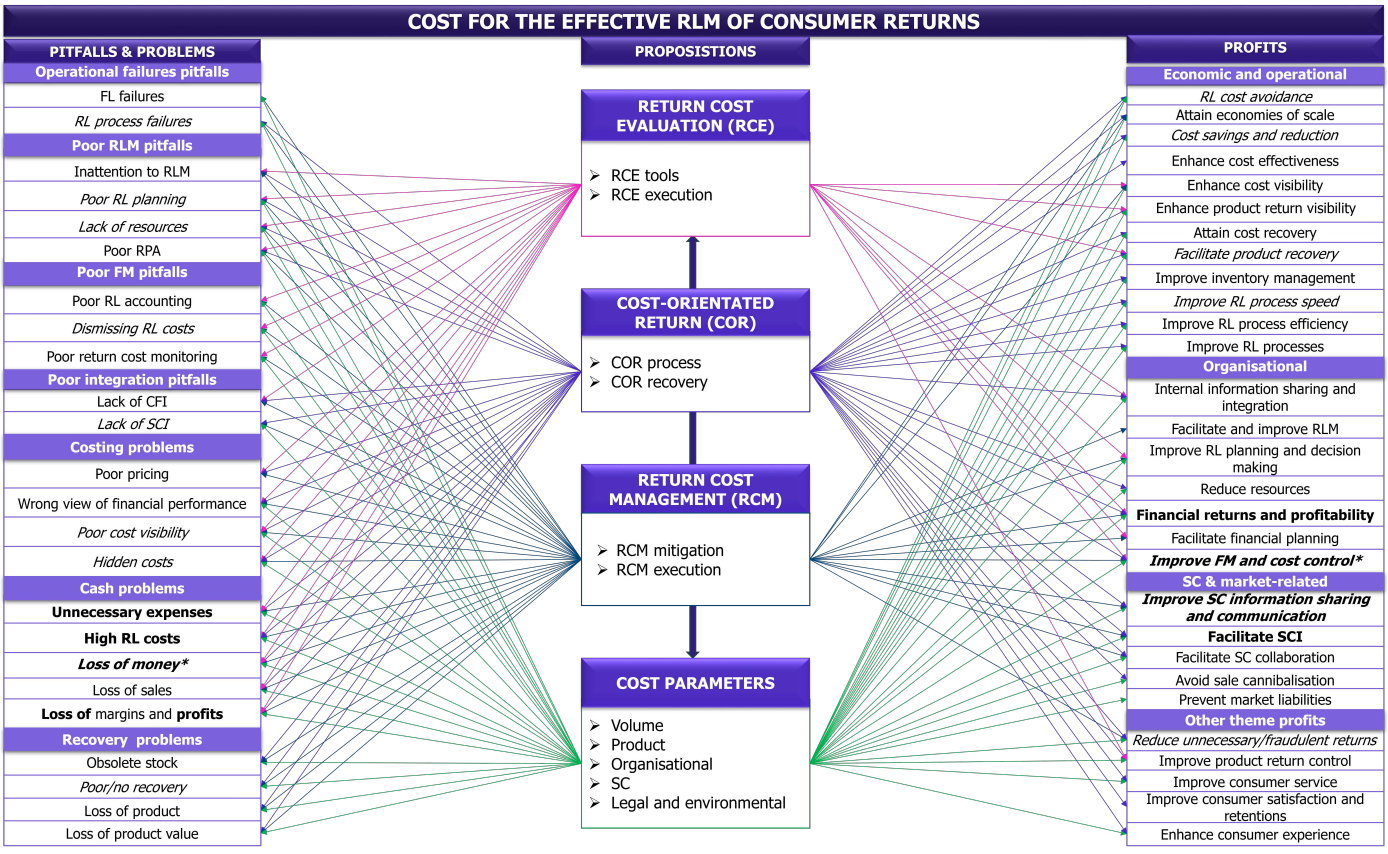


Figure 8.25 Framework for Theme 3 – Cost for the effective RLM of consumer returns
Source: Compiled by the researcher

In terms of the *cost pitfalls/problems,* Figure 8.**25** shows that most main *cost pitfall/problem* categories, except operational failure and poor FM pitfalls and poor recovery problems, associate with all main cost propositions. Subsequently, online retailers can address various pitfalls and problems through various costs propositions. Furthermore, the cost pitfalls/problems that associate with all (four) main cost propositions include (1) all poor RLM pitfalls, except inattention to RLM, (2) all costing problems, except poor pricing, and (3) all cash problems. Subsequently, online retailers can implement any cost propositions to address these cost pitfalls and problems.

Per cost pitfall/problem category, the framework illustrates that the *most significant cost pitfalls/problems* (presented in *italics*) that can be addressed by the cost proposition categories, include (1) RL process failures (operational failure pitfall), (2) poor RL planning and a lack of resources (poor RLM pitfall), (3) dismissing RL costs (poor FM pitfall), (4) a lack of SCI (poor integration pitfall), (5) poor visibility and hidden costs (costing problem), (6) loss of money (cash problem), and (7) poor/no recovery (recovery problem). Additionally, the *top three most significant cost pitfalls/problems* (presented in **bold**) that can be addressed by the implementation of (nine or more out of 11) cost proposition categories include a loss of money (11), unnecessary expenses and high RL costs (ten each), and loss of profits (nine). Subsequently, the *highest* and *most significant cost problem* (presented with an asterisk*) that can be addressed by cost proposition categories includes the cash problem of a loss of money. Evidently, online retailers can implement any cost proposition category to address a loss of money, followed by various proposition categories for addressing unnecessary expenses, high RL costs and a loss of profits.

In terms of the *cost propositions,* the framework shows that cost parameters (21 pitfalls/problems and 25 profits), followed by COR propositions (20 pitfalls/problems and 24 profits), can be the most significant propositions in terms of addressing various cost pitfalls/problems and realising various cost profits. Therefore, online retailers can prioritise the consideration of cost parameters and implementation of COR propositions to effectively address various cost pitfalls and problems and realise various cost profits.

Concerning the *cost profits*, the framework demonstrates that the most significant profit categories (associated with the most propositions) include economic and operational profits, organisational profits and other theme profits, indicating that cost propositions can be the most beneficial for realising economic and operational profits, organisational profits and other theme profits. Furthermore, financial returns and profitability and improved FM and cost control (organisational profits) associate with all main cost propositions, indicating that online retailers can implement any cost propositions to realise financial returns and profitability and improve FM and cost control.

Per cost profit category the framework shows that the *most significant cost profits* (presented in *italics*) that can be realised through the implementation of various cost proposition categories include (1) RL cost avoidance, cost savings and reductions, facilitating product recovery and improving RL process speed (economic and operational profit), (2) improving FM and cost control (organisational profit), (3) improving SC information sharing and communication (SC and market profit), and (4) reducing/avoiding unnecessary and fraudulent returns (other theme profits). Similarly, the *top three most significant cost profits* (presented in **bold**) that can be realised through the implementation of (five or more out of 11) cost proposition categories include (1) improving FM and cost control (seven), (2) realising financial returns and profitability (six), and (3) improving SC information sharing and communication and facilitating SCI (five each). Subsequently, the *highest* and *most significant cost profit* (presented with an asterisk*) that can be realised through various cost proposition categories include improvement in FM and cost control. Evidently, online retailers can expect improvements in FM and control of RL costs through the implementation of various cost proposition categories, reemphasising the significance of costs for the effective RLM of consumer returns in online retailing.

Table 8.**23** provides a summary of the main findings for the cost theme, focussing on the cost proposition categories, key practices/parameters and related cost pitfalls, problems and profits. Additionally, the table provides columns giving an overview of the costs (total requirements as identified in **Table 8.19**) versus the benefits (total benefits in terms of the number of addressed pitfalls and problems and realised profits) per key practice/parameter and proposition category.

Table 8.23: Summary of findings for theme 3 - Cost for the effective RLM of consumer returns

Proposition categories	Key practices /parameters	Addressed pitfalls	Addressed problems	Realised profits	Cost/benefit key practices/ parameters	Cost/benefit proposition categories
RCE tools	**Cost determination RCE tools**	***Poor RLM*** • Poor RL planning ***Poor FM*** • Poor accounting • Dismiss RL costs • Poor cost monitoring	***Costing*** • Poor pricing • Inaccurate view of financial performance • Poor cost visibility • Hidden costs	***Economic and operational*** • Enhance cost visibility • Enhance product return visibility • Facilitate product recovery ***Organisational*** • Improve RL planning and decision making • Improve FM and cost control	• Costs – 6 • Benefits – 13 • +7	• ***Costs – 16*** • ***Benefits – 31*** • ***+15***
	Cost understanding RCE tools	***Poor RLM*** • Inattention to RLM • Lack of resources ***Poor FM*** • Poor accounting • Dismiss RL costs • Poor cost monitoring ***Poor integration*** • Lack of CFI	***Costing*** • Poor pricing • Inaccurate view of financial performance • Poor cost visibility • Hidden costs ***Cash*** • Loss of money, margins and profits	***Economic and operational*** • Enhance cost visibility ***Organisational*** • Improve internal integration and information sharing • Facilitate financial planning ***Other themes*** • Improve product return control	• Costs – 10 • Benefits – 18 • +8	
RCE execution	**Cost identification for RCE execution**	***Poor FM*** • Dismiss RL costs • Poor cost monitoring	***Costing*** • Poor pricing • Inaccurate view of financial performance • Poor cost visibility • Hidden costs	• -	• Costs – 3 • Benefits – 6 • +3	• ***Costs – 9*** • ***Benefits – 19*** • ***+10***
	Cost assessment for RCE execution	***Poor RLM*** • Poor RL planning • Poor RPA ***Poor FM*** • Dismiss RL costs • Poor cost monitoring	***Costing*** • Inaccurate view of financial performance • Poor cost visibility ***Cash*** • Unnecessary expenses • High RL costs	***Organisational*** • Financial returns and profitability •	• Costs – 6 • Benefits – 13 • +7	

Proposition categories	Key practices /parameters	Addressed pitfalls	Addressed problems	Realised profits	Cost/benefit key practices/ parameters	Cost/benefit proposition categories
			• Loss of money, sales, margins and profits			
COR process	**COR request and gatekeeping**	***Operational failure*** • RL process failure ***Poor RLM*** • Lack of resources • Poor RPA	***Costing*** • Hidden costs ***Cash*** • High RL costs • Loss of money	***Economic and operational*** • Cost savings and reduction • Enhance product return visibility • Improve RL process ***Organisational*** • Reduce resources ***Other themes*** • Reduce/avoid unnecessary and fraudulent returns • Improve product return control	• Costs – 6 • Benefits – 13 • +7	• ***Costs – 28*** • ***Benefits – 79*** • ***+51***
	COR collection	***Operational failure*** • RL process failure ***Poor RLM*** • Lack of resources ***Poor integration*** • Lack of CFI	***Costing*** • Poor cost visibility • Hidden costs ***Cash*** • Unnecessary expenses • High RL costs • Loss of money and margins	***Economic and operational*** • RL cost avoidance • Cost savings and reduction • Improve RL process speed • Improve RL process efficiency ***Organisational*** • Improve internal integration and information sharing • Reduce resources • Improve FM and cost control ***Other themes*** • Improve consumer service, satisfaction, retention & experience	• Costs – 6 • Benefits – 21 • +15	
	COR transportation	***Operational failure*** • RL process failure ***Poor integration*** • Lack of SCI	***Cash*** • Unnecessary expenses • High RL costs • Loss of money and margins	***Economic and operational*** • Attain economies of scale • Cost savings and reduction • Enhance cost effectiveness • Improve RL process speed ***Other themes*** • Enhance consumer experience	• Costs – 8 • Benefits – 11 • +3	
	COR inspection	***Operational failure*** • RL process failure ***Poor RLM*** • Lack of resources • Poor RPA	***Costing*** • Poor pricing • Inaccurate view of financial performance • Poor cost visibility • Hidden costs ***Cash*** • Unnecessary expenses • High RL costs • Loss of money and sales ***Recovery*** • Obsolete products • Poor/no recovery • Loss of product	***Economic and operational*** • RL cost avoidance • Cost savings and reduction • Improve RL process speed ***Other themes*** • Improve consumer service	• Costs – 4 • Benefits – 18 • +14	
	COR disposition	***Operational failure*** • RL process failure ***Poor RLM*** • Poor RL planning	***Cash*** • Unnecessary expenses • High RL costs • Loss of money and margins ***Recovery*** • Obsolete products • Poor/no recovery • Loss of product and product value	***Economic and operational*** • RL cost avoidance • Cost savings and reduction • Facilitate product recovery • Improve RL process speed ***SC and market*** • Facilitate SCI ***Other themes*** • Improve product return control	• Costs – 4 • Benefits – 16 • +10	
COR recovery	**COR recovery preparation**	***Operational failure*** • RL process failure ***Poor RLM*** • Inattention to RLM • Poor RL planning • Lack of resources ***Poor integration*** • Lack of SCI	***Cash*** • Unnecessary expenses • High RL costs • Loss of money, sales, margins and profits ***Recovery*** • Obsolete products • Poor/no recovery • Loss of product and product value	***Economic and operational*** • Attain cost recovery • Facilitate product recovery • Improve inventory management ***Organisational*** • Financial returns and profitability ***SC and market*** • Improve SC information sharing and communication • Facilitate SCI and SC collaboration	• Costs – 8 • Benefits – 22 • +14	• ***Costs – 24*** • ***Benefits – 63*** • ***+39***
	COR recovery through the primary market	***Operational failure*** • RL process failure ***Poor RLM*** • Poor RL planning	***Cash*** • Unnecessary expenses • Loss of money, sales, margins and profits ***Recovery*** • Obsolete products • Poor/no recovery • Loss of product and product value	***Economic and operational*** • Attain cost recovery ***Organisational*** • Financial returns and profitability	• Costs – 5 • Benefits – 13 • +8	
	COR recovery through secondary	***Operational failure*** • RL process failure ***Poor RLM***	***Cash*** • Unnecessary expenses • Loss of money and sales	***Economic and operational*** • Attain cost recovery ***SC and market***	• Costs – 4 • Benefits – 14	

Proposition categories	Key practices /parameters	Addressed pitfalls	Addressed problems	Realised profits	Cost/benefit key practices/ parameters	Cost/benefit proposition categories
	markets	• Poor RL planning ***Poor integration*** • Lack of SCI	***Recovery*** • Obsolete products • Poor/no recovery • Loss of product and product value	• Facilitate SCI • Facilitate SC collaboration • Avoid sales cannibalisation	• +10	
	COR recovery through suppliers	***Operational failure*** • RL process failure ***Poor RLM*** • Inattention to RLM • Lack of resources ***Poor integration*** • Lack of SCI	***Cash*** • Unnecessary expenses • High RL costs • Loss of money ***Recovery*** • Obsolete products • Poor/no recovery • Loss of product and product value	***Economic and operational*** • Attain cost recovery ***SC and market*** • Improve SC information sharing and communication • Facilitate SC collaboration	• Costs – 7 • Benefits – 14 • +7	
RCM mitigation	**Return regulations for RCM mitigation**	***Poor RLM*** • Poor RL planning • Lack of resources • Poor RPA ***Poor integration*** • Lack of SCI	***Cash*** • Unnecessary expenses • High RL costs • Loss of money, sales, margins and profits ***Recovery*** • Obsolete products • Poor/no recovery • Loss of product and product value	***Economic and operational*** • RL cost avoidance ***Organisational*** • Improve RL planning and decision making • Improve FM and cost control ***SC and market*** • Facilitate SC collaboration	• Costs – 6 • Benefits – 18 • +12	• ***Costs – 18*** • ***Benefits – 65*** • ***+47***
	Return avoidance for RCM mitigation	***Operational failure*** • FL failures • RL process failure ***Poor RLM*** • Poor RPA ***Poor FM*** • Dismiss RL costs • Poor cost monitoring ***Poor integration*** • Lack of SCI	***Costing*** • Poor pricing • Poor cost visibility ***Cash*** • Unnecessary expenses • High RL costs • Loss of money, sales, margins and profits ***Recovery*** • Obsolete products • Poor/no recovery • Loss of product and product value	***Economic and operational*** • RL cost avoidance ***Organisational*** • Financial returns and profitability ***SC and market*** • Improve SC information sharing and communication • Facilitate SCI	• Costs – 4 • Benefits – 22 • +18	
	Return charges and penalties for RCM mitigation	***Operational failure*** • RL process failure ***Poor RLM*** • Poor RL planning • Poor RPA ***Poor integration*** • Lack of SCI	***Cash*** • Unnecessary expenses • High RL costs • Loss of money, sales, margins and profits ***Recovery*** • Poor/no recovery • Loss of product	***Other themes*** • Reduce/avoid unnecessary and fraudulent returns	• Costs – 5 • Benefits – 14 • +9	
	Cost absorption for RCM mitigation	***Poor FM*** • Poor accounting • Dismiss RL costs	***Costing*** • Poor pricing • Inaccurate view of financial performance • Poor cost visibility ***Cash*** • High RL costs • Loss of money, margins and profits	***Economic and operational*** • Attain cost recovery ***Organisational*** • Facilitate financial planning	• Costs – 3 • Benefits – 11 • +8	
RCM execution	**Formalisation for RCM execution**	***Poor RLM*** • Inattention to RLM • Poor RL planning • Lack of resources ***Poor FM*** • Dismiss RL costs • Poor cost monitoring	***Costing*** • Poor cost visibility • Hidden costs ***Cash*** • Unnecessary expenses • High RL costs • Loss of money and profits	***Organisational*** • Facilitate and improve RLM • Improve RL planning and decision making • Financial returns and profitability • Improve FM and cost control	• Costs – 7 • Benefits – 15 • +8	• ***Costs – 16*** • ***Benefits – 41*** • ***+25***
	Accounting for RCM execution	***Poor RLM*** • Lack of resources ***Poor FM*** • Poor accounting • Dismiss RL costs • Poor cost monitoring ***Poor integration*** • Lack of CFI & SCI	***Costing*** • Poor pricing • Inaccurate view of financial performance • Poor cost visibility • Hidden costs ***Cash*** • Loss of money	***Economic and operational*** • Enhance cost visibility ***Organisational*** • Improve FM and cost control	• Costs – 5 • Benefits – 13 • +8	
	Cost monitoring for RCM execution	***Poor FM*** • Poor accounting • Dismiss RL costs • Poor cost monitoring	***Costing*** • Inaccurate view of financial performance • Poor cost visibility • Hidden costs ***Cash*** • Unnecessary expenses • High RL costs	***Economic and operational*** • Attain economies of scale ***Organisational*** • Improve FM and cost control	• Costs – 4 • Benefits – 13 • +9	

Proposition categories	Key practices /parameters	Addressed pitfalls	Addressed problems	Realised profits	Cost/benefit key practices/ parameters	Cost/benefit proposition categories
			• Loss of money, margins and profits			
Volume parameters	**Return volume**	***Operational failure*** • RL process failure ***Poor RLM*** • Poor RPA ***Poor FM*** • Dismiss RL costs • Poor cost monitoring	***Costing*** • Hidden costs ***Cash*** • Unnecessary expenses • High RL costs • Loss of money, sales, margins and profits	***Economic and operational*** • Attain economies of scale • Cost savings and reduction • Improve inventory management • Improve RL process speed ***Organisational*** • Improve FM and cost control ***SC and market*** • Facilitate SCI • Avoid sales cannibalisation ***Other themes*** • Improve consumer service • Enhance consumer experience	• Costs – 6 • Benefits – 20 • +14	• ***Costs – 8*** • ***Benefits – 28*** • ***+20***
	Sales volume	***Poor RLM*** • Poor RPA ***Poor FM*** • Dismiss RL costs • Poor cost monitoring	***Cash*** • High RL costs • Loss of money, sales and profits	***Organisational*** • Improve FM and cost control	• Costs – 2 • Benefits – 8 • +6	
Product parameters	**Type of return and product condition**	***Operational failure*** • FL failure • RL process failure ***Poor RLM*** • Lack of resources ***Poor integration*** • Lack of SCI	***Cash*** • Unnecessary expenses • Loss of money, sales and profits ***Recovery*** • Obsolete products • Poor/no recovery • Loss of product and product value	***Economic and operational*** • Attain cost recovery ***Organisational*** • Financial returns and profitability	• Costs – 4 • Benefits – 14 • +10	• ***Costs – 16*** • ***Benefits – 58*** • ***+42***
	Product type	***Operational failure*** • RL process failure ***Poor RLM*** • Lack of resources • Poor RPA ***Poor FM*** • Dismiss RL costs ***Poor integration*** • Lack of SCI	***Costing*** • Poor cost visibility ***Cash*** • Unnecessary expenses • High RL costs • Loss of money, sales, margins and profits ***Recovery*** • Obsolete products • Poor/no recovery • Loss of product and product value	***Economic and operational*** • RL cost avoidance • Cost savings and reduction • Improve RL process speed ***Organisational*** • Improve RL planning and decision making • Financial returns and profitability ***SC and market*** • Improve SC information sharing and communication • Facilitate SC collaboration • Prevent market liabilities ***Other themes*** • Reduce/avoid unnecessary and fraudulent returns • Improve consumer service	• Costs – 7 • Benefits – 27 • +17	
	Product value/price	***Operational failure*** • RL process failure ***Poor RLM*** • Lack of resources ***Poor FM*** • Dismiss RL costs	***Costing*** • Poor cost visibility ***Cash*** • Unnecessary expenses • High RL costs • Loss of money, sales, margins and profits	***Organisational*** • Improve RL planning and decision making • Financial returns and profitability ***SC and market*** • Facilitate SC collaboration	• Costs – 3 • Benefits – 13 • +10	
	Product margin	***Operational failure*** • RL process failure	***Cash*** • High RL costs • Loss of margins and profits	-	• Costs – 2 • Benefits – 4 • +2	
Organisation parameters	**Organisation type**	***Operational failure*** • RL process failure ***Poor FM*** • Dismiss RL costs	***Costing*** • Poor cost visibility ***Cash*** • Unnecessary expenses • High RL costs • Loss of money, margins and profits	***Economic and operational*** • RL cost avoidance • Improve RL process efficiency	• Costs – 3 • Benefits – 10 • +7	• ***Costs – 18*** • ***Benefits – 55*** • ***+37***
	Organisational capabilities	***Operational failure*** • FL failures • RL process failure ***Poor RLM*** • Lack of resources • Poor RPA ***Poor FM*** • Poor accounting • Dismiss RL costs ***Poor integration*** • Lack of SCI	***Costing*** • Inaccurate view of financial performance • Poor cost visibility • Hidden costs ***Cash*** • Unnecessary expenses • High RL costs • Loss of money, sales and margins ***Recovery*** • Obsolete products • Poor/no recovery	***Economic and operational*** • RL cost avoidance • Cost savings and reduction • Enhance cost visibility • Enhance product return visibility • Facilitate product recovery • Improve RL process speed • Improve RL process ***Organisational*** • Improve internal integration and information sharing • Reduce resources • Improve FM and cost control	• Costs – 10 • Benefits – 35 • +25	

Proposition categories	Key practices /parameters	Addressed pitfalls	Addressed problems	Realised profits	Cost/benefit key practices/ parameters	Cost/benefit proposition categories
			• Loss of product and product value	***SC and market*** • Improve SC information sharing and communication • Facilitate SCI ***Other themes*** • Reduce/avoid unnecessary and fraudulent returns • Improve product return control		
	Organisational strategies	***Operational failure*** • RL process failure ***Poor FM*** • Poor cost monitoring	***Cash*** • Unnecessary expenses • High RL costs • Loss of money and profits	***Economic and operational*** • Cost savings and reduction • Improve RL process speed • Improve RL process efficiency ***Organisational*** • Improve FM and cost control	• Costs – 5 • Benefits – 10 • +5	
SC parameters	**Supplier return policies**	***Operational failure*** • RL process failure ***Poor RLM*** • Poor RL planning ***Poor integration*** • Lack of SCI	***Recovery*** • Poor/no recovery	***Economic and operational*** • Attain cost recovery ***SC and market*** • Improve SC information sharing and communication • Facilitate SC collaboration	• Costs – 3 • Benefits – 7 • +4	• ***Costs – 6*** • ***Benefits – 18*** • ***+12***
	Types and charges of 3PLs/couriers	***Poor RLM*** • Poor RPA ***Poor FM*** • Poor cost monitoring	***Costing*** • Poor cost visibility • Hidden costs ***Cash*** • Unnecessary expenses • High RL costs • Loss of money, margins and profits	***Organisational*** • Financial returns and profitability • Improve FM and cost control	• Costs – 3 • Benefits – 11 • +8	
Legal and environment parameters	**Consumer protection laws**	***Operational failure*** RL process failure ***Poor RLM*** • Poor RPA	***Costing*** • Hidden costs ***Cash*** • Unnecessary expenses • Loss of money and sales ***Recovery*** • Obsolete products • Poor/no recovery	• -	• Costs – 3 • Benefits – 8 • +5	• ***Costs – 5*** • ***Benefits – 11*** • ***+6***
	Environmental disruptions	***Operational failure*** • RL process failure	***Cash*** • Unnecessary expenses • High RL costs	• -	• Costs – 2 • Benefits – 3 • +1	

Source: Compiled by the researcher

Table 8.**23** provides a detailed summary of the various cost proposition categories and related key practices/parameters, addressed pitfalls and problems, and realised profits as well as the costs versus benefits per key practice/parameter and proposition categories. Online retailers can use this framework in several ways for the effective RLM of consumer returns. Specifically, online retailers can identify the (1) benefits for specific cost propositions categories and key practices/parameters (hereafter propositions), (2) propositions for specific cost pitfalls, (3) propositions for specific cost problems, (4) propositions for specific cost profits, (5) most significant propositions for addressing cost pitfalls, (6) most significant propositions for addressing cost problems, (7) most significant propositions for realising cost profits, and (8) most and least beneficial propositions in terms of the costs versus the benefits. Examples of applying Table 8.**23** for the effective RLM of consumer returns will be given in the subsequent paragraphs.

For the *benefits associated with specific propositions*, an online retailer interested in implementing, for example, RCE execution propositions, can identify that (1) poor RL planning, poor RPA, dismissing RL costs and poor cost monitoring pitfalls can be addressed, (2) poor pricing, inaccurate view of

financial performance, poor cost visibility, hidden costs, unnecessary expenses, high RL costs, and a loss of money, sales, margins and profits problems can be addressed, and (3) financial returns and profitability can be realised. Additionally, an online retailer interested in implementing, for example, the key COR process practice of COR transportation can identify that (1) RL process failures and a lack of SCI pitfalls can be addressed, (2) unnecessary expenses, high RL costs and a loss of money and margins problems can be addressed, and (3) economies of scales, cost savings and reductions, cost effectiveness, RL process improvements and consumer experience enhancement can be realised.

In terms of the *propositions for specific cost pitfalls*, an online retailer that identified, for example, inattention to RLM, as a significant cost pitfall can implement the key (1) RCE tool practice of cost understanding, (2) COR recovery practices of COR recovery preparation and COR recovery through suppliers, and (3) RCM execution practice of formalisation for RCM execution, as mitigating propositions for the effective RLM of consumer returns. Regarding the *propositions for specific cost problems*, an online retailer that identified, for example, poor pricing as a cost problem can implement the key (1) RCE tools practices of cost determination and cost understanding, (2) RCE execution practice of cost identification, (3) COR process practice of COR inspection, (4) RCM mitigation practices of return avoidance and costs absorption, and (5) RCM execution practice of accounting as mitigating propositions for the effective RLM of consumer returns. In terms of the *propositions for specific cost profits*, an online retailer seeking, for example, to reduce resources can implement/consider the key (1) COR process practices of COR request and gatekeeping and COR collection, and (2) organisational parameter of organisational capabilities.

Concerning the *most significant propositions for addressing cost pitfalls*, online retailers that experience various cost pitfalls in RL can prioritise the implementation of RCM mitigation propositions and consideration of product parameters as the most beneficial cost proposition categories. Additionally, online retailers that experience various cost pitfalls in RL can prioritise the implementation of the key RCE tool practice of cost understanding and the key RCM execution practice of return avoidance, and consideration of the key organisational parameter of organisational capabilities as the most beneficial key practices and parameter. Pertaining to the *most significant propositions for addressing cost problems*, online retailers that experience various cost problems in RL can prioritise the implementation of RCM execution propositions and consideration of product parameters as the most beneficial cost proposition categories. Additionally, online retailers that experience various cost problems can prioritise the implementation of the key RCM execution practice of return avoidance and consideration of the key organisational parameter of organisational capabilities as the most beneficial key practice and parameter. Relating to the *most significant propositions for realising cost profits*, online retailers that seek various cost profits in RL can prioritise the implementation of COR process propositions and consideration of organisational parameters as the

most beneficial cost proposition categories. Subsequently, online retailers that seek various cost profits can prioritise the implementation of the key COR process practice of COR collection and consideration of the key organisational parameter of organisational capabilities as the most beneficial key practice and parameter.

Finally, online retailers can use the framework to perform a cost-benefit analysis, identifying the costs (sum of the key practices/parameters and the support practices) versus the benefits (sum of addressed cost pitfalls and problems, and realised profits) to implement/consider the most beneficial cost propositions for RLM. Specifically, Table 8.**23** shows that the *most beneficial proposition categories* include COR process propositions in terms of the costs (28) versus benefits (79), and product parameters in terms of costs (16) versus benefits (58). Consequently, online retailers can prioritise the implementation of COR process propositions and consideration of product parameters for the effective RLM of consumer returns. Additionally, the *most beneficial key practice* and *parameter* include return avoidance for RCM mitigation in terms of the costs (4) versus benefits (22) and organisational capabilities in terms of the costs (10) versus benefits (35). Subsequently, online retailers can prioritise the implementation of return avoidance for RCM mitigation as a key practice and consideration of organisational capabilities as a key parameter for the effective RLM of consumer returns.

In contrast, the *least beneficial proposition categories* include RCE execution in terms of the costs (9) versus benefits (19), and legal and environmental parameters in terms of the costs (5) versus benefits (11), which means that online retailers can implement RCE execution propositions and consider legal and environmental parameters as last priorities. Additionally, the *least beneficial key practice* and *parameter* include cost identification for RCE execution in terms of the costs (3) versus benefits (6) and environmental disruptions in terms of the costs (2) and benefits (3), indicating that online retailers may implement/consider cost identification for RCE execution and environmental disruptions as last priorities.

Nevertheless, all cost propositions can be beneficial, and online retailers that experience specific cost pitfalls/problems or seek specific cost profits can identify the most suitable propositions to implement and consider for the effective RLM of consumer returns. Essentially, “cost for the effective RLM of consumer returns” can be regarded as a critical factor for the effective RLM of consumer returns in online retailing. Therefore, online retailers can focus on identifying cost pitfalls and problems in RL for the effective implementation/consideration of mitigating cost propositions (practices/parameters) and realisation of cost profits to manage consumer returns effectively.

In the next section the framework of the factors for the effective RLM of consumer returns in online retailing will be given.

8.7 FRAMEWORK AND SUMMARY OF THE FACTORS FOR THE EFFECTIVE RLM OF CONSUMER RETURNS IN ONLINE RETAILING

Based on section 8.4, 8.5 and 8.6, this section provides a framework and summary of the three factors (i.e. prevention and control, service and cost) for the effective RLM of consumer returns in online retailing, combining corresponding findings for all three themes. Consequently, the aim is to highlight the most significant pitfalls, problems, propositions and profits (factor categories) that associate with at least two main factors. Due to the comprehensiveness of findings presented in the preceding theme sections, the framework provides a broad overview, excluding details. Figure 8.26 presents the framework of the factors for the effective RLM of consumer returns.

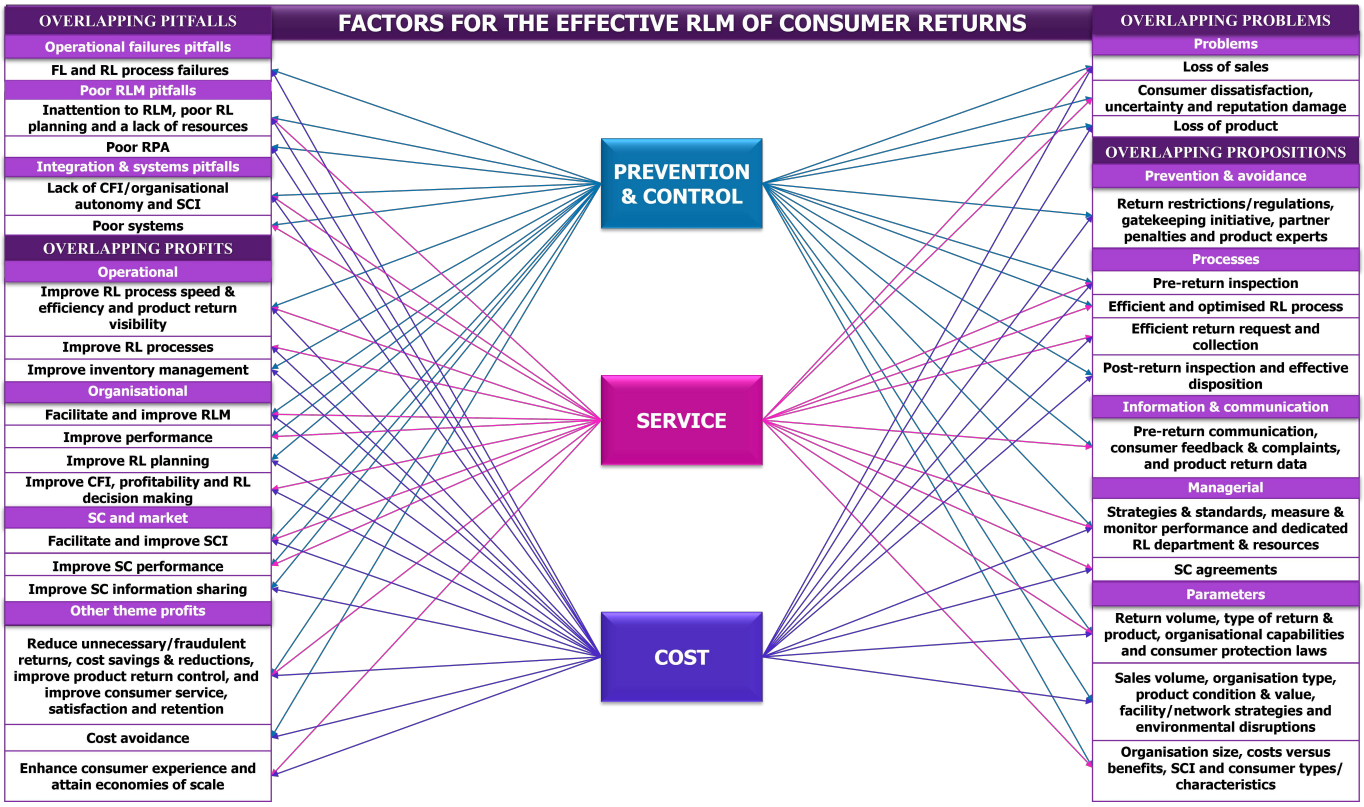


Figure 8.26 Factors for the effective RLM of consumer returns in online retailing
Source: Compiled by the researcher

Figure 8.26 shows that various pitfalls, problems, propositions and profits overlap between the three themes. Specifically, the framework demonstrates that prevention and control factors involve the most overlapping pitfalls and problems, indicating that online retailers can experience various pitfalls and problems that hamper effective return prevention and control. Likewise, the prevention and control factors involve the most overlapping propositions, which means online retailers can focus on prevention and control propositions to effectively manage consumer returns. Nevertheless, the cost factor, closely followed by the service factor, involves the most overlapping profits, implying that the implementation and consideration of cost propositions, followed by service propositions, can be profitable for the effective RLM of consumer returns.

The most overlaps between the factors entail the profits, which indicates that online retailers can generally expect overlapping profits through the implementation/consideration of propositions. The least overlaps between the factors include problems, meaning that online retailers can experience various problems that require selective countermeasures.

The most significant overlaps consist between the prevention and control factors and the cost factor (19 overlaps), indicating that the prevention and control and cost factors involve similar pitfalls/problems, propositions and profits. Therefore, the service factor contains the most unique pitfalls/problems, propositions and profits. Finally, a total of nineteen overlaps exists between the factors, which means online retailers can (1) pay attention to mitigating the overlapping pitfalls and problems, (2) prioritise the implementation/consideration of the overlapping propositions, and (3) expect the overlapping profits through the implementation/consideration of prevention and control, service and cost factors.

From the framework, more specific observations and managerial implications can be provided. Table 8.24 provides the summary of findings, including the factor categories, observations for the factors and managerial implications for the effective RLM of consumer returns.

Table 8.24 Summary of the factors for the effective RLM of consumer returns

Factor category	Observations for the factors	Managerial implications for the effective RLM of consumer returns
Pitfalls and problems	•All factors involve the pitfall of poor RLM, including inattention to RLM, poor RL planning and a lack of resources •All factors involve pitfalls related to poor integration, including a lack of cross-functional integration (CFI) and a lack of supply chain integration (SCI) •The prevention and control and cost factors involve the pitfall of operational failures, including FL failures and RL process failures •The prevention and control factor and cost factors involve pitfalls related to poor return prevention and avoidance (RPA) •The prevention and control and service factors involve the pitfall of poor systems •The prevention and control and service factors involve problems of consumer dissatisfaction, consumer uncertainty and reputational/brand damage •All factors involve the problem of a loss of sales •The prevention and control and cost factors involve the problem of a loss of product	•Online retailers can prioritise RLM, RL planning and the commitment of adequate resources •Online retailers can prioritise the identification and implementation of RLM practices to address poor internal and external (SC) integration •Online retailer can benefit from identifying and implementing prevention, control and cost practices to address FL inefficiencies and RL process inefficiencies •Online retailers can benefit from identifying and implementing prevention, control and cost measures to address poor gatekeeping and excessive return leniency •Online retailers can benefit from improving systems and technology •Online retailers can benefit from identifying and implementing prevention, control and service practices to address consumer dissatisfaction, consumer uncertainty and reputational damage •Online retailers can prioritise and implement RLM practices to counteract a loss of sales •Online retailers can benefit from identifying and implementing prevention, control and cost practices to avoid a loss of returned products
Proposition practices	•All factors involve the practices of pre-return prevention at consumer locations, strategies and standards, performance measuring and monitoring and dedicated departments/resources •The prevention and control and cost factors involve practices related to prevention and avoidance, including return restrictions/regulation, gatekeeping initiatives, partner penalties and product experts	•Online retailers can prioritise the implementation of pre-return inspection at consumer locations and strategies and standards for the effective management of consumer returns •Online retailers can prioritise the development of appropriate KPIs and performance measuring and monitoring for the effective management of consumer returns •Online retailers can prioritise the establishment of a dedicated RL department and use of dedicated RL resources for the effective management of consumer returns •Online retailers can gain from implementing return restrictions and

Factor category	Observations for the factors	Managerial implications for the effective RLM of consumer returns
	•The prevention and control and service factors involve practices associated with an efficient and optimised RL process •The service and cost factors involve practices related to efficient return request and collection processes •The prevention and control and cost factors involve practices related to post-return inspection and effective product disposition •The prevention and control and service factors involve practices associated with information and communication, including pre-return communication, consumer feedback and complaints and product return data •The service and cost factors involve the practice of establishing and using SC agreements	appropriate gatekeeping initiatives for return prevention, control and cost effectiveness •Online retailers can benefit from issuing party penalties for product damages during transportation to and from consumers for return prevention, control and cost effectiveness •Online retailers can gain from appointing product experts for return prevention, control and cost effectiveness •Online retailers can profit from streamlining the RL process for return prevention, control and service effectiveness •Online retailers can benefit from establishing efficient return request and collection processes for service and cost effectiveness •Online retailers can gain from implementing appropriate post-return inspection and disposition processes and practices for return prevention, control and cost effectiveness •Online retailers can benefit from communicating with consumers on the website before product return initiation for return prevention, control and service effectiveness •Online retailers can benefit from obtaining and using consumer feedback, complaints and product return data for return prevention, control and service effectiveness •Online retailers can profit from establishing and using appropriate SC agreements in RL for return service and cost effectiveness
Proposition parameters	•All factors involve the parameters of return volume, type of return, type of product, organisational capabilities and consumer protection laws •The prevention and control and cost factors involve the parameters of sales volume, product condition and value, organisation type, facility/network strategies and environmental disruptions •The prevention and control and service factors involve the parameters of organisation size, costs versus benefits, SCI and consumer types/characteristics	•Online retailers can prioritise the consideration of product return volumes and types, types of products, organisational capabilities and consumer protection legislation for the effective management of consumer returns •Online retailers can gain from considering their sales volume, organisation type and facility/network strategies for return prevention, control and cost effectiveness •Online retailers can benefit from considering the condition and value of returned products and environmental disruptions for return prevention, control and cost effectiveness •Online retailers can profit from considering their organisation size, types of consumers and SC partners' integration capabilities for return prevention, control and service effectiveness •Online retailers can benefit from considering the costs versus benefits of prevention and control and service practices for return prevention, control and service effectiveness
Profits	•All factors involve the operational profits of improvements in RL process speed and efficiency and product return visibility •The service and cost factors involve the operational profit of improvements in the RL process •The prevention and control and cost factors involve the operational profit of improvements in inventory management •All factors involve the organisational profit of facilitating and improving RLM •The service and cost factors involve the organisational profits of facilitating internal integration (CFI) and profitability •The prevention and control and service factors involve the organisational profit of improvement in organisational performance •The prevention and control and cost factors involve the organisational profit of improvement in RL decision making •All factors involve the SC profit of facilitating and improving SCI •The prevention and control and service factors involve the SC profit of improvements in SC performance •The prevention and control and cost factors	•Online retailers that seek to improve RL process speed and efficiency and product return visibility can implement/consider any RLM (prevention and control, service or cost) proposition •Online retailers seeking to improve the RL process can implement/consider service and cost propositions •Online retailers seeking to improve product return inventory management can implement/consider prevention and control and cost propositions •Online retailers that seek to manage RL effectively can implement/consider any RLM proposition •Online retailers seeking to improve integration between departments can implement/consider service and cost propositions •Online retailers seeking higher profitability can implement/consider service and cost propositions •Online retailers seeking to improve their organisational performance can implement/consider prevention and control and service propositions •Online retailers that seek to improve RL decision making can implement/consider prevention and control and cost propositions •Online retailers wishing to improve external integration with SC members can implement/consider any RLM proposition •Online retailers seeking to improve the performance of their SC can implement/consider prevention and control and service propositions •Online retailers that seek to improve information sharing in the SC can implement/consider prevention and control and cost propositions •Online retailers that seek to reduce/avoid unnecessary and fraudulent

Factor category	Observations for the factors	Managerial implications for the effective RLM of consumer returns
	involve the SC profit of improvements in SC information sharing •All factors involve the profits of reducing/avoiding unnecessary and fraudulent returns, saving and reducing costs, improving product return control, and improving consumer service, satisfaction and retention •The prevention and control and cost factors involve the profit of cost avoidance •The service and cost factors involve the profits of enhancing consumer return experience and attaining economies of scale	returns can implement/consider any RLM proposition •Online retailers interested in realising cost savings and reductions can implement/consider any RLM proposition •Online retailers seeking to improve product return control can implement/consider any RLM proposition •Online retailers that seek to improve consumer service, satisfaction and retention can implement/consider any RLM proposition •Online retailers wishing to avoid RL costs can implement/consider prevention and control and cost propositions •Online retailers seeking to enhance consumer return experience can implement/consider service and cost propositions •Online retailers seeking to attain economies of scale in the RL process can implement/consider service and cost propositions

Source: Compiled by the researcher

Table 8.24 provides a summary of the most significant findings from the reflexive TA, involving important factors for the RLM of consumer returns in online retailing. The managerial implications can provide a good starting point for (1) addressing the most significant pitfalls and problems, (2) implementing the most valuable practices, (3) considering the most beneficial parameters and (4) realising important profits associated with the effective RLM of consumer returns. However, online retailers that experience specific pitfalls and problems or seek to realise specific profits can refer to the frameworks and summary of findings for each theme in sections 8.4.4, 8.5.4 and 8.6.4.

In the next section, the conclusion of chapter 8 will be provided.

8.8 CONCLUSION

In this chapter, the findings and discussion of findings for the interviews with the industry experts were presented, analysed and discussed. The aims of this chapter were to achieve the fifth, sixth and seventh secondary research objectives, namely to (1) *determine consumer return types and RL processes in online retailing, based on inputs from industry experts (SRO-5)*, (2) *explore and identify important RL practices for managing consumer returns in online retailing, based on inputs from industry experts (SRO-6)*, and (3) *investigate and determine important factors for the effective RLM of consumer returns in online retailing (SRO-7).* Additionally, the findings presented in this chapter will be used to achieve the primary research objective of this study, which is to *develop a framework for the effective RLM of consumer returns in online retailing*. The chapter started with the introduction (section 8.1), followed an overview of the interviews with industry experts (section 8.2), including an overview of the descriptive analysis of the interviews with industry experts and an overview of the reflexive TA of the interviews with industry experts.

Following the overview, the findings of the descriptive analysis for consumer return types and RL processes in online retailing were presented and discussed (section 8.3). The aims of the descriptive

analysis were to answer the following questions: (1) *what are the types of consumer returns in online retailing? (RQ-1)* and (2) *what are the RL processes of consumer returns in online retailing? (RQ-2).* More specifically, the descriptive analysis aimed to compare the findings between the interviews with industry experts and QCA of RL literature, and to identify the consumer return types and RL processes that can occur in the online retailing industry of South Africa. Although some differences were identified between the interviews and QCA findings, most categories/subcategories assigned to the QCA findings were confirmed by the interview findings. Additionally, several new findings were identified from the interviews with industry experts, enabling a more accurate understanding of the consumer return types and RL processes applicable to the online retailing industry of South Africa.

Then, the interview findings for the reflexive TA of the interviews with industry experts were presented, analysed and discussed in separate sections, including Theme 1 - *Prevention and control for the effective RLM of consumer returns* (section 8.4), Theme 2 - *Service for the effective RLM of consumer returns* (section 8.5), and Theme 3 - *Cost for the effective RLM of consumer returns* (section 8.6). All themes contained overlapping subthemes, namely pitfalls and problems (subtheme 1), propositions (subtheme 2) and profits (subtheme 3). The aims of the reflexive TA of the interviews with industry experts were to answer the following questions: (1) *what are important RL practices for managing consumer returns in online retailing? (RQ-3),* and (2) *what are important factors for the effective RLM of consumer returns in online retailing? (RQ-4).*

More specifically, the focus of the third research question was to triangulate the interview findings with the QCA findings related to the RL practices. All main RL practices identified in the QCA findings applied to the interview findings, showing that most strategies and practices identified from the QCA of RL literature can apply to the online retailing industry of South Africa. Furthermore, the specific strategies and practices related to the RL practices were emphasised in the discussion of the interview findings in the proposition section (subtheme 2) of each theme. The final question focused on identifying important factors for the effective RLM of consumer returns, representing the three main themes, namely prevention and control, service and cost. Additionally, the common subthemes of pitfalls and problems, propositions and profits represented the factor categories that can be important for the effective RLM of consumer returns in online retailing.

Finally, the chapter concluded with a framework and summary of the factors for the RLM of consumer returns in online retailing (section 8.7). The main findings showed that prevention and control, service and cost are critical factors for the effective RLM of consumer returns in online retailing. Additionally, the findings showed that several common (1) pitfalls and problems can hamper the effective RLM of consumer returns, including the operational failures, poor RLM and integration and systems pitfalls and a loss of sales, consumer dissatisfaction and uncertainty, reputational damage and a loss of product

problems, (2) practices can be implemented for the effective RLM of consumer returns, including prevention and avoidance initiatives, RL process initiatives, information and communication initiatives and managerial initiatives, (4) parameters can be considered for the effective RLM of consumer returns, including volume, product, organisational, cost versus benefit, SCI, consumer types/characteristics, consumer protection law and environmental disruption parameters, and (5) profits can be realised from the effective RLM of consumer returns, including operational profits, organisational profits, SC and market profits, prevention and control-related profits, service-related profits and cost-related profits.

Essentially, the interview findings presented and discussed in this chapter forms part of the final framework for the effective RLM of consumer returns in online retailing, which will be presented in the next chapter (chapter 9).

Chapter 9 – Final framework for the effective RLM of consumer returns in online retailing and conclusion

9.1 INTRODUCTION

As indicated in section 1.1, this study defined reverse logistics management (RLM) as an organisational process that involves the management of returns, RL processes and RL practices within the organisation and across the SC for the purpose of long-term economic and environmental sustainability. However, the effective RLM of consumer returns in online retailing extends this definition, focussing on the most effective RL processes, RLM practices and RLM factors to not only address economic, operational, organisational and external barriers and problems in RL but also realise economic, operational, organisational, environmental, social, market and SC benefits.

In this chapter, the final framework for the effective RLM of consumer returns in online retailing and conclusion of the study are provided. Evidently, Chapter 9 focuses on the primary research objective of the study, which was to a ***develop a framework for the effective RLM of consumer returns in online retailing.*** The framework is based on the findings from the three phases of the study, namely the literature study (chapter 2), QCA of RL literature (chapters 4 to 6) and interviews with industry experts (chapter 8). Figure 9.1 provides an overview of the phases and the primary research objective of this study.

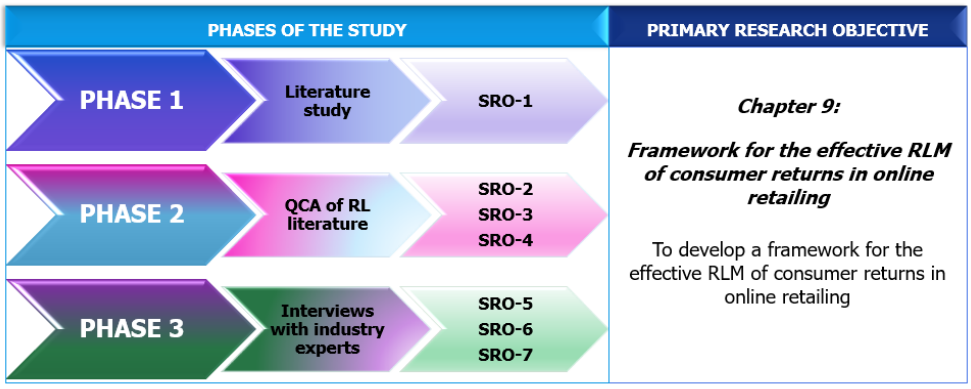


Figure 9.1 Framework for effective RLM - Aim of chapter 9
Source: Compiled by the researcher

Furthermore, this chapter provides an overview of the study, main findings, recommendations and objectives realised, contribution of the study, limitations and future research opportunities.

Figure 9.2 provides an outline of chapter 9.

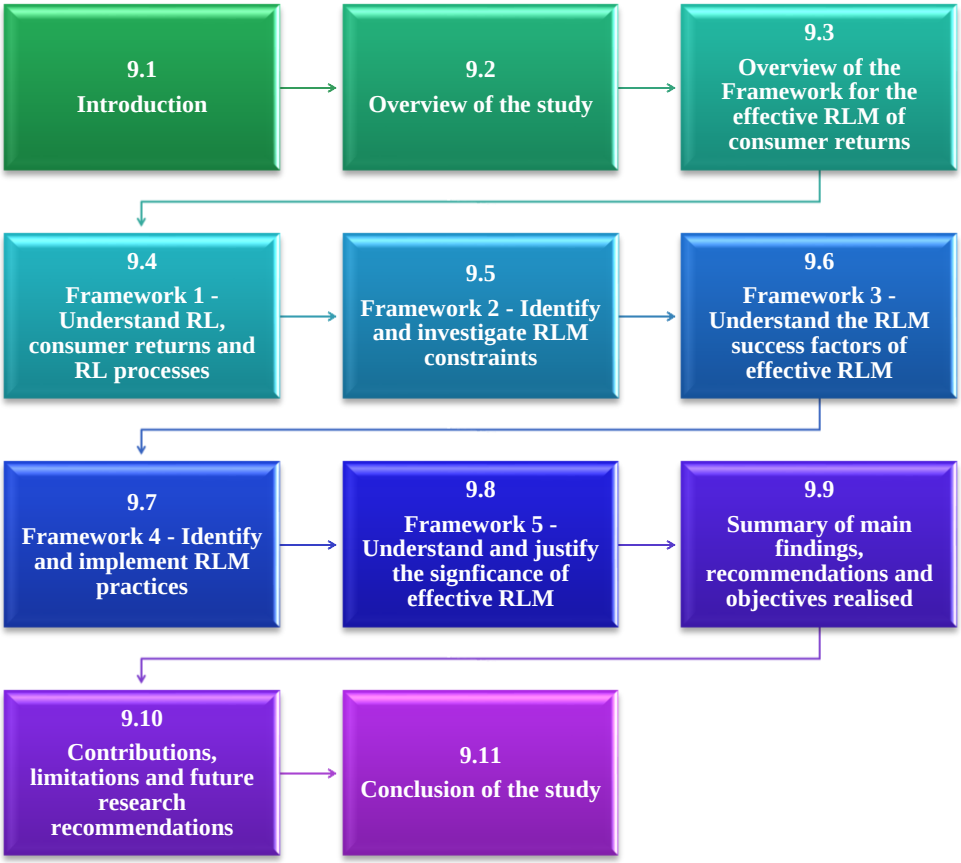


Figure 9.2 Overview of chapter 9
Source: Compiled by the researcher

Figure 9.2 provides an overview of chapter 9, starting with the introduction (this section), followed by an overview of the study (section 9.2) and an overview of the RLM framework (section 9.3). Thereafter, the parts of the RLM framework are presented and described, including Framework 1 – Understand RL, consumer returns and RL processes (section 9.4), Framework 2 – Identify and investigate RLM constraints (section 9.5), Framework 3 – Understand the success factors of effective RLM (section 9.6), Framework 4 – Identify and implement RLM practices (section 9.7) and Framework 5 – Understand and justify the significance of effective RLM (section 9.8). This chapter concludes with a summary of main findings, recommendations and objectives realised (section 9.9), contributions, limitations and future research recommendations (section 9.10), ending with a conclusion of the study (section 9.11).

9.2 OVERVIEW OF THE STUDY

In chapter 1 an outline of the study was presented, showing an overview of the chapters, related research objectives and outcomes/findings. Figure 9.2, provides the overview of the study.

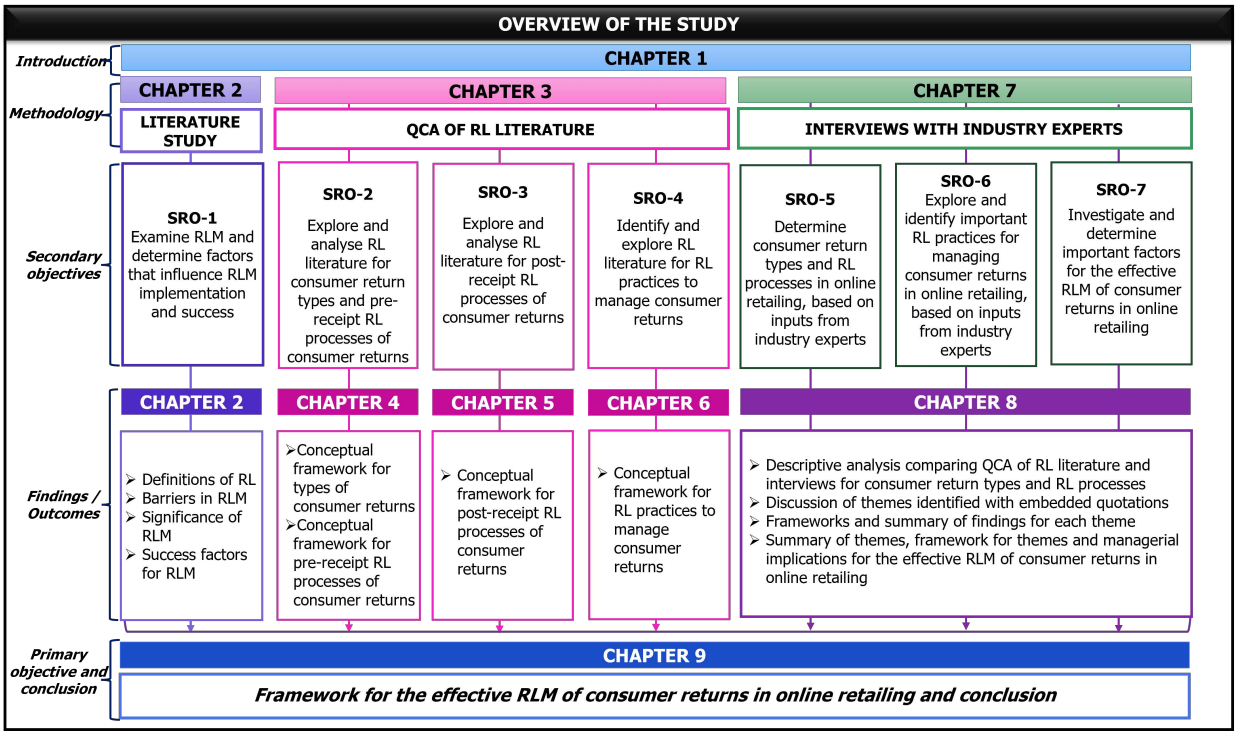


Figure 9.3 Overview of the study
Source: Compiled by the researcher

Specifically, this study included nine chapters that associated with the research objectives of the study, which can be summarised as follows:

- ***Chapter 1: Introduction.*** This chapter introduced the study with a background, problem statement and research objectives, overview of consumer return processes and practices in online retailing, scope, and research design and methodology, unique contribution of the study, an overview of the chapters and methodological map (same as Figure 9.2).

- ***Chapter 2: Overview of RLM.*** This chapter focused on the first secondary research objective (SRO-1) of the study, which was to *examine RLM and determine the factors that influence RLM implementation and success.* SRO-1 was achieved through a literature study, which provided definitions of RL for the examination of RLM, barriers in RLM as factors that influence RLM implementation, and significance of RLM as factors that influence the implementation and success of RLM. Additionally, the findings of the literature study contributed to the primary objective of the study, which formed part of Frameworks 1, 2, 3 and 5 (sections 9.4.1, 9.5, 9.6 and 9.8) for the effective RLM of consumer returns.

- ***Chapter 3: Qualitative research design of the study and research methodology of QCA.*** This chapter consisted of two parts. The first part focused on the overall qualitative research design of this study, including an overview of the justification of qualitative research designs, challenges in

qualitative research, research paradigm and assumptions, research approaches to theory development and multimethod qualitative research. The second part focused on the methodology and application of the QCA of RL literature, including an overview, phases and trustworthiness of the QCA of RL literature. Furthermore, the second part of chapter 3 formed the foundation of achieving SRO-2, SRO-3 and SRO-4.

Chapter 4: QCA findings of RL literature for consumer return types and pre-receipt RL processes of consumer returns. This chapter focused on the second secondary research objective (SRO-2) of this study, which was to *explore and analyse RL literature for consumer return types and pre-receipt RL processes of consumer returns*. SRO-2 was achieved through the presentation, analysis and discussion of findings for the QCA of RL literature for consumer returns and pre-receipt RL processes, which included quantitative overviews (frequencies, percentages, bar charts and pie charts), qualitative data tables (text matrices), discussion of findings and further explorations on the relationship of categories with conceptual frameworks and summaries (typology) of findings and managerial implications. Additionally, the findings of the QCA of RL literature for consumer return types and pre-receipt RL processes contributed to the primary objective of the study, which formed part of Framework 1 (section 9.4.1) for the effective RLM of consumer returns.

- ***Chapter 5: QCA findings of RL literature for post-receipt RL processes of consumer returns.*** This chapter focused on the third secondary research objective (SRO-3) of this study, which was to *explore and analyse RL literature for post-receipt RL processes of consumer returns*. SRO-3 was achieved through the presentation, analysis and discussion of findings for the QCA of RL literature for post-receipt RL processes, which included quantitative overviews (frequencies, percentages, bar charts and pie charts), qualitative data tables (text matrices), discussion of findings and further explorations on the relationship of categories with conceptual frameworks and summaries (typology) of findings and managerial implications. Additionally, the findings of the QCA of RL literature for the post-receipt RL processes contributed to the primary objective of the study, which formed part of Framework 1 (section 9.4.1) for the effective RLM of consumer returns.

- ***Chapter 6: QCA findings of RL literature for RL practices to manage consumer returns.*** This chapter focused on the fourth secondary research objective (SRO-4) of this study, which was to *explore and analyse RL literature for RL practices to manage consumer returns*. SRO-4 was achieved through the presentation, analysis and discussion of findings for the QCA of RL literature for RL practices to manage consumer returns, which included quantitative overviews (frequencies, percentages, bar charts and pie charts), qualitative data tables (text matrices), discussion of findings

and further explorations on the relationship of categories with conceptual frameworks and summaries (typology) of findings and managerial implications. Additionally, the findings of the QCA of RL literature for the RL practices contributed to the primary objective of the study, which formed part of Frameworks 2, 3, 4 and 5 (sections 9.5, 9.6, 9.7 and 9.8) for the effective RLM of consumer returns.

- ***Chapter 7: Research methodology of interviews with industry experts.*** This chapter provided the research methodology for the interviews with industry experts. Specifically, the chapter started with an overview of interviews as a research method, including a description of in-depth interviews in qualitative research, interview styles in qualitative research, roles of the researcher and participants in interviews, potential problems of interviews and motivating factors and advantage of interviews. Additionally, this chapter provided a discussion of the methodology and application of the interviews with industry experts in several steps, which included the purpose and research questions, ethical considerations, development of the interview protocol, sampling and recruitment, pre-interview planning, conducting interviews, post-interview planning, data analysis and trustworthiness. Furthermore, chapter 7 formed the foundation of achieving SRO-5, SRO-6 and SRO-7.

- ***Chapter 8: Findings of the interviews with industry experts.*** This chapter focused on the fifth, sixth and seventh secondary research objectives of the study, which were to (1) *determine consumer return types and RL processes in online retailing, based on inputs from industry experts* (SRO-5), (2) *explore and identify important RL practices for managing consumer returns in online retailing, based on inputs from industry experts* (SRO-6), and (3) *investigate and determine important factors for the effective RLM of consumer returns in online retailing* (SRO-7). Chapter 8 consisted of two parts, namely (1) presentation of interview findings for the descriptive analysis, which involved qualitative data tables (text matrices) and discussion of findings, and (2) presentation of interview findings for the reflexive thematic analysis (TA), which involved a discussion of the interview findings with embedded quotations in the text. *SRO-5* was achieved through the descriptive analysis of the interviews with industry experts, which focused on consumer return types and RL processes that can be applicable to online retailing. *SRO-6* was achieved through the reflexive TA for the interviews with industry experts, which focused on important RL practices for the management of consumer returns. *SRO-7* was achieved through the reflexive TA for the interviews with industry experts, which focused on important factors for the effective RLM of consumer returns in online retailing. Additionally, the findings of the interviews with industry experts contributed to the primary objective of the study, which formed part of Frameworks 1, 2, 4 and 5 (sections 9.4, 9.5, 9.7 and 9.8) for the effective RLM of consumer returns.

- ***Chapter 9: Framework for the effective RLM of consumer returns in online retailing and conclusion.*** This chapter focused on the primary research objective of the study, which was to *develop a framework for the effective RLM of consumer returns in online retailing*, and the overall conclusion of the study. This chapter provided an overview of the study, followed by the presentation of the final framework for the effective RLM of consumer returns in online retailing. The final framework was divided into five frameworks, which online retailers can explore and use for the effective RLM of consumer returns in online retailing. Furthermore, this chapter provided a summary of main findings, recommendations and objectives realised, contribution, limitations and future research recommendations, and concluding with the conclusion of this study.

In the next section, and overview of the framework for the effective RLM of consumer returns will be provided.

9.3 OVERVIEW OF THE RLM FRAMEWORK FOR THE EFFECTIVE RLM OF CONSUMER RETURNS

Due to the comprehensiveness of findings in this study, the final framework consists of five separate but interrelated frameworks. The framework focuses on the main themes of the study, starting with RL definitions, consumer returns and RL processes, followed by the RLM barriers and problems (referred to as RLM constraints), success factors of effective RLM, RLM propositions (referred to as RLM practices), and concluding with the significance and justifications of effective RLM. Figure 9.4 provides an overview of the main framework for the effective RLM of consumer returns in online retailing.

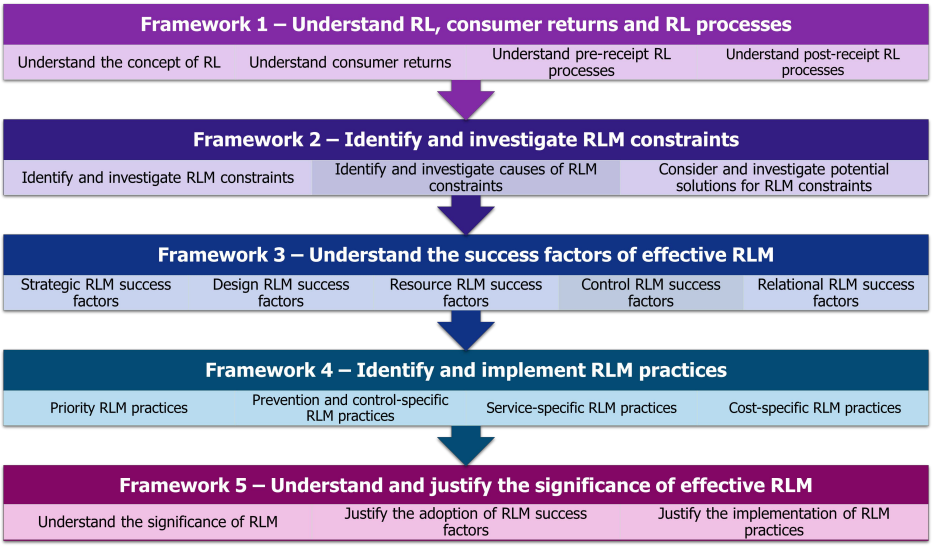


Figure 9.4 Overview of the framework for the effective RLM of consumer returns in online retailing
Source: Compiled by the researcher

The overall (main) framework for the effective RLM of consumer returns in online retailing can consist of five individual frameworks, starting with a basic understanding of RL and concluding with understanding and justifying the significance of effective RLM. Each individual framework can be applied and used separately but the most beneficial approach is to study and apply all individual frameworks for the effective RLM of consumer returns in online retailing. The respective frameworks for the effective RLM of consumer returns will be briefly described in the subsequent sections.

9.3.1 Overview of Framework 1 – Understand RL, consumer returns and RL processes

As a starting point, the first framework focuses on providing online retailers with a concise understanding of RLM, with a description of the concept of RL, consumer returns and RL processes that can take place in online retailing. Without an understanding of RL, consumer returns and RL processes in online retailing, the implementation, improvement and effective management of consumer returns would be difficult. Framework 1 was subdivided into the following four parts: Framework 1A – Understand the concept of RL that focuses on defining and describing RL (based on the literature study presented in section 2.2), Framework 1B – Understand consumer returns that focuses on describing consumer return types (based on the QCA of RL literature presented in section 4.3 and interview findings presented in section 8.3.1), Framework 1C – Understand pre-receipt RL processes that focuses on describing the pre-receipt RL processes (based on the QCA of RL literature presented in section 4.4 and interview findings presented in section 8.3.2), and Framework 1D – Understand post-receipt RL processes that focuses on describing the post-receipt RL processes (based on the QCA of RL literature presented in chapter 5 and interview findings presented in section 8.3.3). Framework 1 is presented and discussed in section 9.4.

9.3.2 Overview of Framework 2 – Identify and investigate RLM constraints

Once online retailers understand the concept of RL, consumer returns and RL processes, they can identify and investigate RLM constraints that hampers the effective RLM of consumer returns. Without identifying and investigating RLM constraints, improvement and effective management of consumer returns would be challenging. Specifically, Framework 2 involves the identification and investigation of (1) RLM constraints that represent RLM barriers, risks, pitfalls and problems (derived from the literature in section 2.3 and the interview findings in sections 8.4.1, 8.5.1 and 8.6.1), (2) causes of RLM constraints that represent RLM barriers, risks, pitfalls and problems (derived from the literature in section 2.3 and the interview findings in sections 8.4.1, 8.5.1 and 8.6.1), and (3) potential solutions for RLM constraints (derived from identified causes in Framework 2). Therefore, Framework 2 can help online retailers to identify and investigate the RLM constraints that they may experience, which can

help them identify and consider mitigating solutions. Framework 2 is presented and explained in section 9.5.

9.3.3 Overview of Framework 3 – Understand the success factors of effective RLM

As ignorance of RLM is often part of the RLM constraints (i.e. barriers, pitfalls and problems), the third framework for the effective RLM attempts to educate online retailers who lack knowledge about the success factors of effective RLM. Specifically, Framework 3 involves an understanding of the characteristics of successful RLM that represents RLM success factors (derived from the literature study in section 2.5) and RL practices (derived from the QCA of RL literature in chapter 6). Additionally, Framework 3 involves the identification of the degree and impact of the adoption of the RLM success factors, which involves the number of practices/requirements associated with the adoption of the RLM success factors (representing the degree of adoption identified from section 2.5 and chapter 6) and the number of contributions to other RLM success factors (representing the degree of impact identified from section 2.5 and chapter 6). The success factors for RLM (section 2.5) can be classified as: (1) strategic RLM success factors, (2) design RLM success factors, (3) resource RLM success factors, (4) control (operational) RLM success factors and (5) relational RLM success factors. Framework 3 is presented and explained in section 9.6.

9.3.4 Overview of Framework 4 – Identify and implement RLM practices

The fourth framework for the effective RLM of consumer returns involves the identification and implementation of RLM practices. Framework 4 mostly focus on the interview findings (reflexive TA), relating to the prevention and control, service and cost propositions, presented in chapter 8. Specifically, Framework 4 involves the identification and implementation of (1) key RLM practices (derived from the interview findings related to the key practices or key practice elements in sections 8.4.2, 8.5.2 and 8.6.2), (2) RLM practice requirements (identified as support RL practices in the interview findings and derived from the QCA findings of RL literature in chapter 6), (3) RLM practice considerations (derived from the interview findings related to key parameters in sections 8.4.2.4, 8.5.2.3 and 8.6.2.4), and (4) RLM success factors to adopt (identified from Framework 3). Furthermore, the structure of Framework 4 includes (1) priority RLM practices (key practices/elements that occurred in at least two themes), (2) prevention and control specific RLM practices (all key practices, excluding priority practices), (2) service specific RLM practices (all key practices, excluding priority practices), and (3) cost specific RLM practices (all key practices, excluding priority practices). Framework 4 is presented and explained in section 9.7.

9.3.5 Overview of Framework 5 – Understand and justify the significance of effective RLM

Since ignorance of the significance of RLM often hampers the adoption and implementation of effective RLM, the fifth framework for the effective RLM of consumer returns attempts to educate online retailers to understand the *significance of RLM* and identify the beneficial outcomes of *adopting RLM success factors* and *implementing RLM practices*. Since the significance and justification of effective RLM can be complex and comprehensive, Framework 5 was divided into three parts, including Framework 5A – Understand the significance of RLM, Framework 5B – Justify the adoption of RLM success factors, and Framework 5C – Justify the implementation of RLM practices.

Specifically, *Framework 5A* involves an *understanding of the significance of RLM* by describing the economic, competitive, social, environmental and legal significance of RLM (derived from the literature study in section 2.4). *Framework 5B* involves the *justification of RLM success factors* (presented in Framework 3) by identifying the RLM constraints addressed (derived from the literature study in section 2.3 and Framework 2) and RLM benefits realised (derived from the literature study in section 2.5 and the QCA of RL literature in chapter 6). Similarly, *Framework 5C* involves the *justification of RLM practices* (presented in Framework 4) by identifying the RLM constraints addressed (derived from the interview findings in sections 8.4.2, 8.5.2 and 8.6.2 and Framework 2), and RLM benefits realised (derived from the interview findings in sections 8.4.3, 8.5.3 and 8.6.3 and the QCA of RL literature in chapter 6). Framework 5 is presented in section 9.8.

9.4 FRAMEWORK 1 – UNDERSTAND RL, CONSUMER RETURNS AND RL PROCESSES

As mentioned in the overview of Framework 1 (section 9.3.1), the aim of Framework 1 is to help online retailers who may be unfamiliar with the concept of RL with a better understanding of RL, consumer return types and RL processes in online retailing. While the aim of this Framework is to educate new and less experienced online retailers (such as younger small-to-medium online retailers), established and larger online retailers can also benefit from understanding RL, consumer returns and RL processes. Lamba *et al.* (2020:381) found that many online retailers, especially in developing countries, hardly pay attention to RL flows and instead focus on FL flows. Zhang *et al.* (2022:192) state that it can be especially important for online retailers to recognise the reasons for consumer returns to devise optimal RLM strategies. Additionally, Eliav (2022:1) indicates that online retailers must gain a deeper understanding of the RL processes to manage returns successfully and realise various benefits (such as cost savings and consumer satisfaction). Therefore, understanding the concept of RL, consumer returns and pre- and post-return RL processes can be a helpful starting point for the effective RLM of consumer returns.

As mentioned in section 9.3.1, Framework 1 consists of four parts, including Framework 1A – Understand the concept of RL (from section 2.2), Framework 1B – Understand consumer returns (from sections 4.3 and 8.3.1), Framework 1C – Understand pre-receipt RL processes (from sections 4.4 and 8.3.2), and Framework 1D – Understand post-receipt RL processes (from chapter 5 and section 8.3.3). Figure 9.5 provides a broad overview of Framework 1.

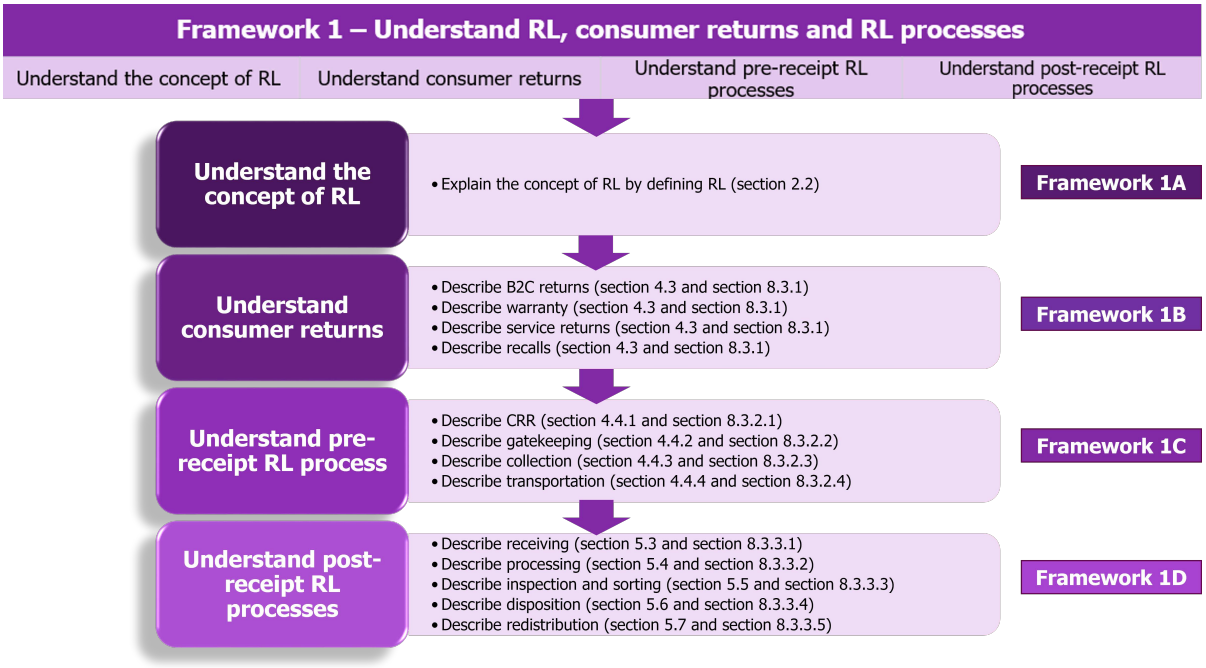


Figure 9.5 Framework 1 - Understand RL, consumer returns and RL processes
Source: Compiled by the researcher

Figure 9.5 shows the part of the main framework associated with Framework 1 (see Figure 9.4), including Framework 1A that involves understanding the concept of RL (identified from section 2.2.), Framework 1B that involves understanding consumer returns with references to the description of consumer return types (identified in chapter 4 and 8), Framework 1C that involves understanding pre-receipt RL processes (identified in chapter 4 and 8), and Framework 1D that involves understanding post-receipt RL processes (identified in chapter 5 and 8) . In the subsequent sections, Frameworks 1A, 1B, 1C and 1D will be presented and discussed.

9.4.1 Framework 1A – Understand the concept of RL

Framework 1A is the most basic part of the RLM framework, focusing on understanding the concept of RL for the effective RLM of consumer returns in online retailing. To understand the concept of RL, an explanation of the definition of RL in online retailing must be provided. In section 2.2 (from the literature study), several RL definitions from various authors/scholars were explored, which formed the foundation of understanding the concept of RL. From the various definitions, this study created a

definition for RL that can be applicable to consumer returns in online retailing. Table 9.1 provides Framework 1A, including the RL definition created for this study and a description of some of the elements of the definition for an improved understanding of the concept of RL.

Table 9.1 Framework 1A - Understand the concept of RL

RL DEFINITION	DESCRIPTION
The reverse logistics (RL) of online consumer returns is the process of managing (planning, implementing and controlling) the efficient and effective flows of returned products and information from the consumer (point of consumption) to an online retailer (point of recovery) or upstream supplier (point of origin) to recapture value, save costs, increase profits, satisfy, serve and retain online consumers, and improve economic and environmental sustainability through RL processes and practices.	• RL is a process that involves various management activities, including planning, implementing and controlling. Therefore, online retailers must view RL as both a process and as a management function, indicating that RL requires managerial and operational involvement. • Successful RL involves the efficient and effective flows of products and information from consumers to the online retailer and potentially the supplier. Online retailers must focus on efficiency and effectiveness in the RL process, ensuring efficient and effective returned product collection, transportation, receipt, processing, inspection/sorting and disposition. • It should be noted that suppliers can be involved in the process, meaning that the RL process extends to include the transfer of returned products to the suppliers. • Focus on efficient and effective information exchange is needed to ensure that proper communication can take place in the RL process. • The economic aim of RL involves recapturing of value from the returned product, including costs savings and higher profits. Therefore, online retailers must view RL as an opportunity to recapture as much value as possible from product returns, seeking measures to save costs and increase profitability • The service aim of RL involves consumer service, satisfaction and retention. Therefore, the focus should be on consumer satisfaction and optimum consumer service for the long-term retention of consumers. • The overall aim of RL includes economic and environmental sustainability, which can be realised through RL processes and practices. Therefore, online retailers can focus on establishing appropriate RL processes and identifying and implementing appropriate RL practices, ensuring long-term economic and environmental sustainability.

Table 9.1 shows the definition of RL and a description of the definition aiming at understanding the basic concept of RL. Understanding these basic elements of RL can help online retailers identify important areas to be considered for the effective RLM of consumer returns. In the next section, the next part of Framework 1 will be provided, which focuses on understanding consumer returns.

9.4.2 Framework 1B – Understand consumer returns

Framework 1B continues with understanding RL by focussing on consumer returns for the effective RLM of consumer returns in online retailing. In sections 4.3 and 8.3.1, various consumer return types and reasons were explored from the QCA of RL literature and interviews with industry experts. The consumer return types in online retailing include business-to-consumers (B2C) returns, warranty returns, service returns and recalls. While end-of-use (EoU) returns were not identified from the interviews, many examples in practise exists from online sellers encouraging EoU returns, which could become a competitive advantage in terms of environmental and social responsibility. Consequently, EoU returns will be added as a potential return type to explore.

Table 9.2 provides Framework 1B, including a description of the various return types (based on the QCA and interview findings) and explanations to help online retailers understand consumer returns for effective RLM.

Table 9.2 Framework 1B - Understand consumer returns

RETURN TYPE	DESCRIPTION	EXPLANATION
B2C returns *(sections 4.3.1 and 8.3.1.1)*	B2C returns in online retailing involve consumers returning new/unused products in good or defective/damaged condition for various reasons, including (1) consumer errors (push returns), involving, order errors, false failure returns, problems with the product, buyer's remorse or a change of minds, dissatisfaction and unwanted products, (2) organisational errors (push and pull returns), involving wrong deliveries, inaccurate quantities, defective/damaged products and quality issues, and (3) other reasons, involving lenient return policies. Depending on the condition and return reasons, B2C returns can be directly reused, repaired or shipped to the supplier.	• For B2C returns, online retailers can expect to receive products in various conditions, including new, unused and unopened, new but opened, defective and damaged • Online retailers can expect to receive B2C returns for various reasons • **Consumer error reasons** can involve the following: o *Order errors* during the purchasing of products online (such as overordering or not reading the descriptions and purchasing incompatible products) o *User errors* where the consumers mistakenly belief that a product is defective (such as purchasing an incompatible device or purchasing the correct product but finding it difficult to operate the product) o *Misperceptions* about the products (i.e. the perception of the product online is different from the product received) that causes dissatisfaction o *Unwanted* because of a change of mind about the purchase and buyer's remorse (such as regret over impulsively purchasing an expensive product) • **Organisational error reasons** can involve the following: o *FL problems* of damages due to poor handling and packaging, picking errors (i.e. picking a blue shirt instead of a red shirt) and switching orders (mislabelling the order and delivery the wrong items) o *Product problems* because of defective and poor-quality products • **Other reasons** involve *return leniency* and *lenient return policies* that cause high unnecessary and fraudulent returns • B2C returns involves various **disposition options** that depend on the return reason and product condition, including: o *Direct reuse* applicable to new and unused returned products that can be placed back in stock to be resold at the same price through the website or new but opened product that can be repackaged and resold at a discounted price through the website o *Repair* applicable to products in defective/damaged condition that can be restored to working order and resold at a discount in secondary markets o *Ship to the supplier* applicable to products in defective/damaged condition forwarded to the supplier for credit or replacement.
Warranty *(sections 4.3.3 and 8.3.1.2)*	Warranty returns in online retailing refer to consumers returning used or defective products (e.g. electronics, computers and TVs) under manufacturer warranty. Warranty returns can include various reasons, including product failures, quality failures, warranty claims, defects or false failures. Based on the reasons for warranty returns and the condition of the product, warranty returns can involve repair, ship to the supplier or return to the consumer as disposition/exit options.	• For warranty returns, online retailers can expect to receive used products in either a defective **condition** or non-defective condition • Warranty returns apply to electronics or any **product type** sold under manufacturer warranty • Online retailers can expect to receive warranty returns for **reasons** related to quality failures and defects, warranty claims and false failures • *Quality failures* and *defects* point to products failing to operate within the specified manufacturer guarantee • *Warranty claims* are based on the warranty terms and conditions for defective products • *False failure* warranty returns apply to new and non-defective products purchased under warranty that get returned because consumers mistakenly belief that a product is defective • Warranty returns involves various **disposition options** that depend on the return reason and product condition, including: o *Repair* applicable to a manufacturer that sell products online to consumers or online retailers that send products on behalf of the manufacturer for repair to be resold in secondary markets o *Ship to the supplier* applicable to online retailers that submit warranty claims and return defective products to suppliers for credit and replacement o *Return to the consumer* applicable to non-defective false failure warranty returns where the consumer receives the non-defective product under warranty back
Service *(sections 4.3.4 and 8.3.1.3)*	Service returns in online retailing involve consumers returning relatively good, used and damaged products (e.g. computers, cameras, cell phones or any electronic and device products) due to a repair service request and product	• For service returns, online retailers can expect to receive products in relatively good but in used and damaged **condition** • Service returns can apply to computers, cameras, cell phones or any electronic **product type** associated with a service option/plan • Online retailers can expect to receive service returns for **reasons** related to service return requests and damages • *Service return requests* are based on a service plan offered with the product that

	damages, involving repair as a disposition option.	enables consumers to return products for a service/maintenance • *Damages* relate to accidental user damage to a product (such as a cracked cell phone screen) that qualifies for a repair service • Service returns exclusively involve the **disposition option** of repair, which entails the fixing of a damaged product to be returned to the original consumer for reuse
Recalls *(sections 4.3.5 and 8.3.1.4)*	Product recalls in online retailing are consumer returns, initiated by online retailers or their suppliers (pull returns), which involve announcements/notifications to consumers about potential defects, quality failures and safety issues related to the consumption of certain products (e.g. electronics, toys, medicine, food, household goods or sports equipment). Online retailers issue refunds to the consumers and ship the recalled products to the manufacturer or supplier for disposition.	• Product recalls **originate** from the supply chain, either initiated by online retailers or their suppliers • Product recalls involve announcements on the website informing consumers about the recall of products for **reasons** related to quality failures, defects or safety issues that may occur during consumption/use of the product • Online retailers can expect product recalls for various **product types,** including electronics, household items and sport equipment, food, pharmaceuticals and toys, which can potentially cause possible risks related to injury, health/illness and death • Online retailers can issue full refunds to consumers upon receiving the recalled products • For online retailers, product recalls exclusively involve the **disposition option** of ship to the supplier/manufacturer for full credit
End of use (EoU) returns *(section 4.3.2)*	EoU consumer returns involve consumers returning used products, in good or defective condition (i.e. electronics, computers and cell phones) due to technological advances, product exchange programmes, incentives and product upgrades. EoU consumer returns can be initiated by organisations based on changing consumer preferences (push and pull returns). Depending on the condition of the product, EoU returns can include product reuse, repair and resale in secondary markets as disposition options.	• For EoU returns, online retailers can expect to receive used products in either a good or defective **condition** • EoU returns apply to any **product types,** like cell phones and computers, involving technology • EoU returns involve return **reasons** related to technological advances, product exchange programmes, incentives and product upgrades ○ *Technology advances* relate to products returned due to outdated technology ○ *Product exchange programmes* allow consumers to return outdated products in exchange for a newer product at a discount ○ *Incentives* allow consumers to return outdated products for credits or refunds ○ *Product upgrades* relate to the return of products purchased on a service contract that qualifies for an upgrade to a newer version • EoU returns can be initiated by both consumers choosing to return used products and organisations (i.e. online retailers or their suppliers) choosing to create take-back programmes and incentives • EoU returns can involve several **disposition options** that depend on the return product condition, including: ○ *Product reuse* applicable to used products in good and working condition that can be repurposed or repackaged to be resold at a discount on the secondary market ○ *Repair* applicable to used products in defective products that require fixing to be resold in secondary markets ○ *Secondary markets* applicable to reselling EoU product to third-party buyers or second consumers based on market demand

Source: Compiled by the researcher

Table 9.2 provides a description and explanation about consumer return types and related product conditions, product types, return reasons and disposition options, which can help online retailers to understand consumer returns for effective RLM. Specifically, understanding consumer returns can help online retailers to (1) adequately prepare for managing consumer returns, (2) identify measures to reduce unnecessary and fraudulent returns, (3) understand consumer behaviour and preferences, and (4) develop appropriate disposition strategies for recapturing maximum value. Additionally, understanding consumer returns can help online retailers to identify, implement and apply correct RL processes and activities as well as effectively consider consumer return types, product condition and product types as factors that can influence the implementation of RLM practices. Essentially, understanding consumer returns can help online retailers to implement appropriate RL processes and practices for the effective RLM of consumer returns.

9.4.3 Framework 1C – Understand pre-receipt RL processes

Framework 1C focuses on understanding pre-receipt RL process for the effective RLM of consumer returns in online retailing. In sections 4.4 and 8.3.2, the pre-receipt RL processes were explored from the QCA of RL literature and the interviews with industry experts. Pre-receipt RL processes start when a consumer notifies a retailer of a return and ends just before the retailer receives the product at a facility. Specifically, the pre-receipt RL processes in online retailing include a consumer return request (CRR), gatekeeping, collection and (initial) transportation, representing flows of information and products from the consumer to the online retailer.

Table 9.3 provides Framework 1 C, including a description of the pre-receipt RL processes (based on the QCA and interview findings) and explanations to help online retailers understand pre-receipt RL processes for effective RLM.

Table 9.3 Framework 1C - Understand pre-receipt RL processes

PROCESS	DESCRIPTION	EXPLANATION
CRR *(sections 4.4.1 and 8.3.2.1)*	The CRR process of consumer returns in online retailing can be described as the first pre-receipt RL process, starting with a consumer and the recognition of a product return. The CRR process involves costs and technology, relates to the return reasons and the return policy, and links with the gatekeeping, collection, processing and inspection processes. The CRR process involves methods and activities related to information flows, including online, telephonic or electronic communication, acknowledging the return request, recording return reasons, requesting and providing evidence, reviewing the request, initial assessment of product condition and pre-return authorisation or rejection, which can be performed by the consumer and online retailer.	• In the CRR process an online retailer gets informed about a consumer's intention to return a product • Online retailers can expect to incur CRR costs • Online retailers can use technology systems for the CRR process • The return reasons and return policy must be considered during CRR process • Online retailers can identify the links between the CRR process and other RL processes for efficiency and effectiveness • Online retailers can consider appropriate **methods** that can be implemented for the CRR process, including: o *Online method* that enables the consumer to log a request on the online platform o *Telephonic method* that enables the consumer to phone a call centre to request a return o *Electronic method* that enables the consumer to log a request via email or electronic communication platform (e.g. WhatsApp) o The CRR process involves information flow **activities**: o *Acknowledgement of the request* based on the platform (e.g. system-generated, verbal or written acknowledgement) o *Recording the return reason* can involve selecting return reasons from a drop-down list on the online platform that automatically records the return reason or capturing the return reason manually on the system by the call centre agent or consumer service representative o *Requesting and providing evidence* based on the implemented procedures/policies consumers can be requested to provide photos to establish the product condition o *Reviewing the request* to determine if the return can be accepted based on the return policy parameters, return reasons and photo evidence o *Initial assessment* of the product condition based on the photo evidence o *Pre-return authorisation or rejection* based on the review and initial assessment of the return • The CRR process include consumers and online retailers as parties • Both consumers and online retailers can share responsibilities in the CRR process
Gatekeeping *(sections 4.4.2 and 8.3.2.2)*	The gatekeeping process of consumer returns in online retailing can be described as the entry point of the RL process to determine if a product return is allowed based on the return policy. The gatekeeping process involves technology and links with other RL processes, including CRR, collection,	• In the gatekeeping process an official determination can be made if a return can be allowed based on the return policy • Online retailers can use technology systems for the gatekeeping process • The returns reasons and return policy must be considered during the gatekeeping process • Online retailers can identify the links between the gatekeeping process and other RL processes for efficiency and effectiveness • Online retailers can consider the **type** of gatekeeping to implement, including: o *Online virtual gatekeeping* performed before the returned product is collected o *Physical gatekeeping* performed once the product can be physically viewed either at

	processing, inspection and sorting processes. Gatekeeping can be performed virtually before returns are received and/or physically at the collection point, centralised facility or decentralised facility. The online retailer (or its outsourced 3PRL provider) performs the gatekeeping activities of screening, verification, decision making, return authorisation or rejection and communicating the outcomes to the consumers.	the consumer's home or at centralised or decentralised facilities ○ The gatekeeping process mostly involve information flow **activities**: ○ *Screening* and *verification* to determine the legitimacy of the return claim ○ *Decision making* based on the screening and verification to determine if a return can be accepted or rejected ○ *Return authorisation* or *rejection* based on the decision making ○ *Communication* to inform the consumer about the return authorisation or rejection • The gatekeeping process can involve consumers, online retailers and third parties as **parties** ○ *Consumers* play secondary roles in the gatekeeping process, waiting to be informed about return authorisation or rejection ○ *Online retailers* play primary roles if the gatekeeping process is conducted in-house performing all the gatekeeping activities ○ If online retailers outsource the gatekeeping process, *service providers* (such as 3PRLs) can perform the gatekeeping activities on behalf of the online retailer
Collection *(sections 4.4.3 and 8.3.2.3)*	The collection process of consumer returns in online retailing can be described as the start of product flows in the RL process, involving costs, time, technology, availability, retrieval and possession of products. Collection can be based on the product condition and return reasons and linked with various pre- and post-receipt RL processes. The collection process can include pick-up and drop-off collection methods and involve various activities, including the information flow activities of arranging, booking, notifying, verifying, signing and documenting, and product flow activities of handling, moving, loading, shipping and delivery. The collection activities can be performed by consumers, retailers and/or outsourced third parties at retail stores, collection points, warehouses, DCs, fulfilment centres or RL facilities.	• The collection process represents the start of the product flows in the RL process • Online retailers can consider the party responsible for incurring the collection costs • Time can be an important factor in the collection process that can be measured for efficiency and effectiveness • Collection may involve technology, relating to the collection activities • The condition of the product and return reasons must be considered during collection (e.g. influence the party responsible for paying the collection costs) • Online retailers can identify the links between the collection process and other RL processes for efficiency and effectiveness • Online retailers can consider the most suitable collection **methods** to implement, including: ○ *Pick-up method* the collection of a product return from the consumer's home ○ *Drop-off method* enables the consumer to drop the product at convenient locations • The collection process involves several **information flow activities**, including: ○ *Arranging* involves issuing an instruction to a driver or courier to collect a product ○ *Booking* involves contacting the consumer to arrange a convenient collection time and place ○ *Notifying* the consumer electronically about the date and time of the collection ○ *Verifying* involves matching of the waybill against the request ○ *Signing* occurs after verification either electronically or by hand on the documentation ○ *Documentation* involves providing the consumer with a waybill pickup confirmation or retrieving the signed documentation from the consumer for record • Following the information flow activities, **product flow activities** can take place, including: ○ *Handling and moving* involve the transfer of ownership from the consumer to the driver ○ *Loading* involves the physical loading of the parcel on the vehicle ○ *Shipment* involves the physical movement of the product from the consumer's premises ○ *Delivery* can be the physical drop-off of the product return by the consumer to retail stores or collection points or by the driver to online retailer facilities • The collection process can involve consumers, online retailers and third parties as **parties** ○ *Consumers* play important roles in the collection process by performing either information flow activities or physical drop-off ○ *Online retailers* may play primary roles if the collection process is conducted in-house or secondary roles (such as arranging the collection) if collection is outsourced ○ If online retailers outsource the collection process, *service providers* (such as couriers and 3PLs) can perform both information and product flow activities on behalf of the online retailer
Transport *(sections 4.4.4 and 8.3.2.4)*	The transportation process of consumer returns in online retailing can be described as important, involving product flows between locations, options, decisions, cost, time, routes and networks, lacking economies of scale and requiring efficient handling. The transportation process can be influenced by organisation size, return volume and	• The transportation process involves the physical flow and movement of a returned product from one location to another • Online retailers can select transportation options either using private fleet (in-house vehicles) or contract fleet (using carriers) • Online retailers can consider the party responsible for incurring the transportation costs • Time can be an important factor in the transportation process that can be measured for efficiency and effectiveness • Routes and networks can be planned for cost-effective transportation • Online retailer can consider the lack of scale associated with return transportation for the establishment of a cost-effective transportation process

	product condition and can link with various pre-and post-receipt RL processes. Transportation includes several product flow activities, including the movement, shipment, transfer, unloading, handling, delivery and consolidation of returned products from the point-of-origin (consumer) to the point-of-recovery (online retailer/third parties, first-tier and second-tier facilities).	• Efficient handling practices can be important to avoid in-transit damages • Online retailers can consider their size, return volume and product condition for return transport decisions and activities • Online retailers can identify the links between the transportation process and other RL processes for efficiency and effectiveness • The transportation process involves several **product flow activities,** including: o *Shipment* from a location and *movement* to another location o *Delivery* involves the physical arrival at the destination with the returned item o *Unloading* involves the physical removal of the returned parcel from the vehicle o *Transfer* involves either transfer of the product from one location to another or transfer of ownership from the driver to the receiver o *Consolidation* might occur if returned products are transported to decentralised locations before bulk transportation to centralised facilities o *Handling* occurs during the removal, transfer and consolidation activities o *Delivery* can be the physical drop-off of the product return by the consumer to retail stores or collection points or by the driver to online retailer facilities • The locations in the transportation process involves the point-of-origin, representing the consumer's home or a collection point and the point-of-recovery, representing the final destination for post-receipt RL processes

Source: Compiled by the researcher

Table 9.3 provides a description and explanation about the pre-receipt RL processes and related characteristics, methods, activities, facilities/locations and parties, which can help online retailers to understand pre-receipt RL processes for effective RLM. Specifically, understanding pre-receipt RL processes can help online retailers to (1) adequately prepare for managing consumer returns, (2) make informed decisions about appropriate procedures and practices to implement, (3) identify necessary resources and costs, (4) determine important factors to consider, (5) identify the necessary activities to perform, and (6) understand the roles and responsibilities of the parties involved in the pre-receipt RL process. Essentially, understanding the pre-receipt RL process can help online retailers to establish appropriate RL processes and practices for the effective RLM of consumer returns.

9.4.4 Framework 1D – Understand post-receipt RL processes

Framework 1D focuses on understanding post-receipt RL process for the effective RLM of consumer returns in online retailing. In chapter 5 and section 8.3.3, the post-receipt RL processes were explored from the QCA of RL literature and the interviews with industry experts. The post-receipt RL processes start once a consumer product return arrives at the facility and ends at the redistribution of returned/recovered products to various locations. Specifically, the post-receipt RL processes in online retailing include receiving, processing, inspection, sorting, disposition and redistribution processes, involving information flows, product flows and cash flows.

Table 9.4 provides Framework 1D, including a description of the post-receipt RL processes (based on the QCA and interview findings) and explanations to help online retailers understand post-receipt RL processes for effective RLM.

Table 9.4 Framework 1D - Understand post-receipt RL processes

PROCESS	DESCRIPTION	EXPLANATION
Receiving *(sections 5.3 and 8.3.3.1)*	The receiving process of consumer returns in online retailing can be *described as* the arrival and inbound flow of returned products, which can be labour intensive, time-consuming and *influenced by* product return volume. Receiving *involves* technology, documentation and costs and links with other pre- and post-receipt RL processes. The receiving process involves the (1) *information flow activities* of identification, acknowledgement of receipt, administration, registration, verification and scanning, and (2) *product flow activities* of unloading, handling, movement, unpacking and counting, which can be *performed by* the staff of online retailers or 3PRL providers at FL facilities (such as warehouses and DCs) or RL facilities (such as return facilities).	• The receiving process represents the first post-receipt RL process that signifies the arrival and inbound flows of returned products at the facility • It should be noted that receiving can be labour-intensive and time consuming especially without technology systems • Depending on the established operations, receiving can involve technology systems and documentation that relates to the activities • Online retailers can expect to incur receiving costs • Product return volume must be considered during receiving for efficiency (e.g. high product volumes requires separate receiving areas) • Online retailers can identify the links between the receiving process and other RL processes for efficiency and effectiveness • The receiving process involves several **information flow activities**, including: ○ *Identification* of the product return at arrival ○ *Acknowledgement* of receipt associates with the transfer of ownership by confirming official receipt ○ *Administration* and *registration* relate to manual documentation and updating the system ○ *Scanning* relates to the use of devices to scan products that automatically update the inventory system • The **product flow activities** in the receiving process can include: ○ *Unloading* of the item from the vehicle/pallet ○ *Handling* and *movement* occur during all stages of the receiving process ○ *Unpacking* involves the removal of the returned product from the parcel/package ○ *Counting* occurs in the absence of scanning solutions, ensuring that product quantities are correctly captured on the system • The staff of the online retailer or outsourced service provider (i.e. 3PRL provider) act as the main receiving parties, responsible for all receiving activities • Receiving can take place at standard facilities (such as warehouse and DCs) or separate return facilities
Processing *(sections 5.4 and 8.3.3.2)*	The processing process of consumer returns in online retailing can be *described as* an internal and time-consuming RL process, which (1) *requires* financial and infrastructural resources, technology, accuracy and speed, (2) *involves* costs, consumer service and accounts, (3) can be *influenced by* product type, product condition, return reasons, service levels, channel type and return policies, and (4) *links with* other pre- and post-receipt RL processes. The activities of the processing process involve (1) *information flow activities*, including credit/refund authorisation, recordkeeping, cross-verification of return authorisation, information sharing and communication, tracking and data entry/capturing, (2) *cash flow activities*, including issuing credits/refunds and settling claims, and (3) *product flow* activities, including product exchanges, handling, restocking and delivery, which can be *performed by* the staff/departments of the online retailer, other third parties (credit processing sites, couriers or 3PRL providers) or suppliers in *various facilities/locations* (stores, warehouses, DCs, fulfilment centres, decentralised points or service centres) for the benefit of the consumer.	• The processing process mostly takes place internally • It should be noted that successful processing requires resources and technology systems • The focus should be on accuracy and speed in the processing process • Online retailers can expect to incur processing costs • The customer service and finance departments can be involved in processing • Online retailers can consider the type of product, return reason, product condition and return policy for the selection of the processing outcome (e.g. exchange, refund or rejection) and related activities • The service levels and channel type can be considered for processing speed • Online retailers can identify the links between the processing process and other RL processes for efficiency and effectiveness • The processing process involves various **information flow activities**, including: ○ *Credit/refund authorisation* to accept a refund/credit claim ○ *Recordkeeping* and *data entry/capturing* to update consumer accounts and financial information ○ *Cross-verification* to determine if the information provided by the consumer during gatekeeping about the product condition is accurate ○ *Information sharing* and *communication* to inform the consumer about the processing outcomes ○ *Tracking* provides consumers with status updates (e.g. refund or replacement status) • The processing process represents the first RL process that involves **cash flow activities**, including: ○ *Issuing credit/refund* to the consumer that may involve money transfers through banks or credit transfer for future transactions ○ *Settling claims* to finalise the payment or credit transfer • The **product flow activities** in the processing process can include: ○ *Product exchanges* that represent the other processing outcome that occurs instead of a refund or credits ○ *Restocking* of new/unused condition ○ *Delivery* of the replacement product or original product (e.g. rejected refund) to the consumer responsible for returning a product for an exchange or refund • Various **parties** can be involved in the processing process: ○ *Consumers* play secondary roles, waiting to receive confirmation about the refund/exchange and accepting the credit/refund or product exchange ○ *Online retailers* may play primary roles, providing human, physical and financial

		resources for processing ○ *Staff* can include consumer service, finance and logistics, depending on the processing outcomes and activities ○ *Third parties* include credit processers (payment gateways) or 3PLs, responsible for exchange delivery ○ *Suppliers* might be involved with the processing of warranty returns (i.e. issuing a credit or ship a replacement product) • Processing can take place at retail locations, standard facilities (such as warehouse and DCs) or service centres
Inspection *(sections 5.5.1 and 8.3.3.3)*	The inspection process of consumer returns in online retailing can be *described as* an important, complex and labour-intensive RL process, which (1) *requires* skilled/trained staff and an infrastructure, (2) *involves* costs, time and options, (3) can be *influenced by* product and return type, product quality, product value and the return policy, and (4) *links* with other pre- and post-receipt RL processes. The activities of the inspection process involve the (1) *information flow activities* of verifying information and consumer communication/notifications, and (2) *product flow activities* of product evaluation, assessment, testing, grading, classification, determining disposition/ exit options, storage and handling, which can be *performed by* the staff/departments of the online retailer, 3PRL providers or manufacturers in traditional FL facilities (such as warehouses, DCs and fulfilment centres) or RL processes facilities (CRCs or dedicated RL facilities).	• The inspection process in RL should be prioritised • The inspection process can be labour intensive and requires skilled/trained staff and infrastructure for efficiency and effectiveness • Online retailers can expect to incur inspection costs • Time can be an important factor in the inspection process that can be measured for efficiency and effectiveness • Online retailers can select inspection options, including basic inspection, visual inspection and full inspection • Online retailers can consider the type of product, product quality and product value for the appropriate inspection options and activities • The return reason and return policy should be considered for appropriate inspection outcomes • Online retailers can identify the links between the inspection process and other RL processes for efficiency and effectiveness • The inspection process involves a few **information flow activities**, including: ○ *Verifying* if the product condition and return reason information provided by the consumer matches the physical condition of the product ○ *Communication* with the consumer regarding additional information about the return reason and *notifying* the consumer of the inspection outcome (e.g. return claim accepted) • The **product flow activities** in the inspection process can include: ○ *Product evaluation, assessment* and *testing* to determine the condition and quality of the product ○ *Grading* and *classing* of the product based on the quality assessment and condition ○ *Determining the disposition decision* based on the inspection outcomes ○ *Storing* the product for disposition ○ *Handling* occurs during all stages of the inspection process • Various **parties** can be involved in the inspection process: ○ *Consumers* play secondary roles by providing information if requested and waiting to receive confirmation about the outcomes of inspection ○ *Online retailers* may play primary roles, incurring costs and providing skilled human, physical and financial resources for inspection ○ *Staff/departments* play primary roles by physically performing inspection, contacting consumers and making disposition decisions ○ *Third parties*, like 3PRL providers, can perform inspection on behalf of online retailers if the RL process is outsourced ○ *Manufacturers* of luxury items might perform physical inspections on the premises of the online retailer • Inspection can take place at retail locations, collection points (e.g. consumer residences), standard facilities (warehouses and DCs) or specialised facilities (RL facilities and CRCs)
Sorting *(sections 5.5.2 and 8.3.3.4)*	The sorting process of consumer returns in online retailing can be *described as* an important, complex, labour-intensive and time-consuming RL process, which (1) *requires* skilled/trained staff, (2) involves costs, (3) can be *influenced by* product type, characteristics, condition, return type and return volume, and (4) can be *linked* with other pre- and post-receipt RL processes. The activities of the sorting process involve the (1) *information flow* activity of verifying product return information provided by consumers, and (2) *product flow* activities of product evaluation, determining disposition/exit options, product classification and	• The sorting process in RL should be prioritised • The sorting process can be complex, labour intensive, time consuming and requires skilled/trained staff for efficiency and effectiveness • Online retailers can expect to incur sorting costs • Online retailers can consider the type of product for the required skilled staff • Product condition and the return type should be considered for accurate sorting • Return volume should be considered for the feasibility of sorting operations (e.g. only high return volumes can be appropriate for sorting operations) • Online retailers can identify the links between the sorting process and other RL processes for efficiency and effectiveness • The sorting process can involve the **information flow activity** of the *verification* of product return information provided by consumers during the CRR/gatekeeping process • The **product flow activities** in the sorting process can include: ○ *Product evaluation* to determine the condition and quality of the product ○ *Determining the disposition options* based on the condition and quality of the product ○ *Grouping, classing* and *separating* products based on the disposition options

	grouping, separation, storage, handling and movement, which can be *performed by* staff of the retailer or 3PRL providers in traditional FL facilities (warehouses and DCs), RL processes facilities (sorting facilities) and recovery facilities (repair facilities).	○ *Storing* the product for sorting to increase volumes or for disposition ○ *Handling* and *movement* occur during all stages of the sorting process • A few **parties** can be involved in the sorting process: ○ *Consumers* play secondary roles by providing information that can be verified ○ *Online retailers* may play primary roles, incurring costs and providing skilled human resources for sorting ○ *Staff* play primary roles by physically performing sorting and making disposition decisions ○ *Third parties*, like 3PRL providers, can perform sorting on behalf of online retailers if the RL process is outsourced • Sorting can take place in standard facilities (warehouses and DCs) or specialised facilities (sorting facilities and repair centres)
Disposition *(sections 5.6 and 8.3.3.5)*	The disposition process of consumer returns in online retailing can be *described as* an important, complex and time-consuming RL process, which (1) *requires* skilled/trained staff, resources, technology and speed, (2) *involves* costs, time, options/alternatives, routes, channels, destinations, markets, risks, discounted/lower prices, negotiations, contracts/agreements, partnerships and information sharing, (3) can be *influenced by* industry and organisation type, product type, characteristics, condition and quality, return type/reasons, volume and policies, manufacturer specifications and legislation, and (4) *links* with other pre- and post-receipt RL processes. The disposition process can include the (1) *information flow* activities of administration, scanning, booking and communication, (2) *product flow* activities of product examination/ evaluation, disposition decisions, repackaging, restocking/return to inventory, disassembly, fixing, cleaning, treatment, packing, storage, loading, shipment, delivery and handling, and (3) *cash flow activity* of reselling, which can be *performed by* the staff/departments of online retailers or 3PRL providers in traditional FL facilities/locations (such as stores, warehouses, DCs and fulfilment centres), RL process facilities (such as CRCs) and recovery facilities (such as repair facilities and recovery/service centres). The *aim*s of the disposition process can include (1) recovery of returned products through direct reuse and repair, (2) shipment of returned/recovered products to the suppliers or original consumers, (3) reselling of returned products in primary markets, and (4) selling of returned/recovered/used products to staff or second consumers, second retailers or third-party buyers in secondary markets.	• The disposition process in RL should be prioritised • The disposition process can be complex, labour intensive and time consuming • It should be noted that that the disposition process requires skilled/trained staff, resources and technology for efficiency and effectiveness • Speed and time can be important in the disposition process for maximum value recovery • Online retailers can expect to incur disposition costs • The disposition process involves various options that can be influenced by the industry/organisation type, product type, condition and quality, return type and return volume • The disposition process associates with routes, channels and markets • Online retailers can identify the risks associated with the disposition process (e.g. brand liabilities and sales cannibalisation) • The disposition process can involve discount/lower prices based on the product condition and quality and market destination • For the disposition process, online retailers must perform negotiations, establish agreements, create partnerships and share information with suppliers and third-party buyers • Online retailers can consider manufacturer specifications and legislation for appropriate disposition decision-making • Online retailers can identify the links between the disposition process and other RL processes for efficiency and effectiveness • The disposition process involves a few **information flow activities**, including: ○ *Administration* and *booking* associate with the arrangement of recovery options (such as repair) ○ *Scanning* of products that leave the facility for disposition ○ *Communication* to arrange for repair and inform consumers about the status of their products' repair or outcomes of the disposition decisions • The **product flow activities** in the disposition process can include: ○ *Product examination/evaluation* to confirm the condition and quality of the product ○ *Disposition decisions* based on the product examination/evaluation ○ *Repackaging* for opened/damaged packaging ○ *Restock/return to inventory* for products in new and repackaged condition ○ *Disassembly and fixing* of defective electronic items ○ *Cleaning* and *treatment* of worn (i.e. for fit purposes) but new clothing ○ *Storage* of returned products for disposition to next destination ○ *Packing* and *loading* for *shipment* to the next destination ○ *Delivery* of the product destined for disposition or resale ○ *Handling* occurs during all stages of the disposition process • The disposition process can involve the **cash flow activity** of reselling of recovered/returned products either through the primary or secondary channels • The disposition process involves various **parties** responsible for performing disposition activities: ○ *Online retailers* may play primary roles, incurring costs and providing skilled human, physical and financial resources, establishing partnerships and adhering to laws for successful disposition ○ *Staff/departments* play primary roles by physically performing disposition activities, including information, product and cash flow activities ○ *Third parties*, like 3PRL providers, can perform disposition on behalf of online retailers if the RL process is outsourced • Disposition can take place in standard facilities (warehouses and DCs) or specialised facilities (CRCs, repair centres and service centres) • The disposition process involves various aims related to the disposition options, activities and other parties associated with the disposition process • The specific **aims** of the disposition process involve*:* ○ *Cost and economic value recovery* through *direct reuse* of new/unused and

		repackaged products for resale in the primary market ○ *Product recovery* through *repair* of defective/damaged products for *shipment* to consumers for reuse ○ *Cost recovery* through *shipment* of returned products *to suppliers* ○ *Economic value recovery* through *reselling* of returned/recovered products to *second consumers*, *second retailers* and *third-party buyers* in the secondary markets
Redistribute *(sections 5.7 and 8.3.3.6)*	The redistribution process of consumer returns in online retailing can be *described as* a costly and exit process in RL, which (1) *requires* speed, (2) *involves* networks and product reuse, (3) can be *influenced by* product condition and quality, return type and demand, and (4) *links* with other pre- and post-receipt RL processes. The redistribution process can include the (1) *information flow* activity of communication, (2) *product flow activities* of storage, packing, loading, shipping/dispatch and delivery, and (3) *cash flow activity* of reselling, which can be performed by online retailers, distributors and/or 3PL/3PRL providers in traditional FL facilities/locations (such as stores, warehouses and DCs), RL process facilities (such as CRCs) and market locations. The *aims* of the redistribution process include preparing of returned/recovered products for transportation to suppliers, original consumers, third-party buyers or second consumers in primary or secondary markets.	• The redistribution process represents the exit or final RL process • Redistribution can be a costly process due the transportation of returned/recovered products through networks and locations for reuse • Online retailers can consider product condition and quality, return type and demand for selecting the most appropriate redistribution destination • Online retailers can identify the links between the redistribution process and other RL processes for efficiency and effectiveness • The redistribution process can involve the **information flow activity** of *communication* relating to shipment arrangements • The redistribution process involves a few **product flow activities,** including: ○ *Storage* of returned products for redistribution to next destination ○ *Packing* and *loading* for *shipment/dispatch* and *delivery* to the final destination • The redistribution process may involve the **cash flow activity** of reselling of recovered/returned products on the primary or secondary market • A few **parties** can be involved in the redistribution process: ○ *Online retailers* can play primary roles by being responsible for the redistribution activities of communication, storage, packing, loading and reselling ○ *Third parties*, including 3PLproviders or 3PRL providers, can play primary roles either by being responsible for most redistribution activities on behalf of online retailers or for shipment and delivery activities to the markets • Redistribution can take place in standard facilities/locations (stores, warehouses and DCs) or specialised facilities (CRCs) and concludes at market locations • The redistribution process involves a few **aims** related to redistribution activities and destination parties, including: ○ Preparing products for transportation to the *original consumer* for reuse ○ Preparing sold returned/recovered products for transportation to *second consumers* or *third-party buyers* in the primary or secondary markets

Source: Compiled by the researcher

Table 9.4 provides a description and explanation for the post-receipt RL processes and related characteristics, methods, activities, facilities/locations, parties and aims (if applicable), which can help online retailers to understand post-receipt RL processes for effective RLM. Specifically, understanding post-receipt RL processes can help online retailers to make relevant decisions in this regard by (1) adequately preparing for the management of consumer returns, (2) making informed decisions about appropriate procedures and practices to implement, (3) identifying necessary requirements for efficiency and effectiveness in the process, (4) determining important factors that can influence the execution of post-receipt RL processes, (5) identifying the necessary activities to perform during the process, (6) understanding the roles and responsibilities of the parties involved in the post-receipt RL process, (7) identifying the appropriate facilities/locations associated with post-receipt RL processes, and (8) understanding the value of effective and efficient post-receipt RL processes.

Essentially, understanding RL, consumer returns and RL processes can be important for the effective RLM of consumer returns in online retailing. Therefore, online retailers can use Framework 1 as a foundation to develop an understanding about the concept of RL, consumer returns and RL processes,

which can enable the effective management of consumer returns. In the next section, Framework 2 for the effective RLM of consumer returns in online retailing will be provided.

9.5 FRAMEWORK 2 – IDENTIFY AND INVESTIGATE RLM CONSTRAINTS

The effective RLM of consumer returns require the identification and investigation of RLM constraints before solutions can be identified and implemented. According to Davidavičienė and Al Majzoub (2021:21), the RLM of consumer returns may be the most complex challenge for online retailers. The requirements of effective RLM may hamper online retailers' willingness and capability to manage consumer returns (Wang, Dang *et al.* 2021:2). However, poor RLM can lead to various problems, including high costs (Foo & A-Jalil, 2021:45; Robertson *et al.* 2020:174), operational problems (Franklin, 2022:1), a lack of internal and external information and knowledge sharing (de Araújo *et al.* 2018:346) and consumer dissatisfaction (Foo & A-Jalil, 2021:45), which can be detrimental to the online retailer's profitability, market share and corporate image (Davidavičienė, & Al Majzoub, 2021:2). Therefore, online retailers must identify and investigate RLM constraints to identify and implement countermeasures for effective RLM (Badenhorst, 2022:330; Zailani *et al.* 2017:22).

As explained in section 9.3.2, the RLM constraints represent the RLM barriers, challenges, pitfalls and problems (derived from the literature study in section 2.3 and the interview findings in sections 8.4.1, 8.5.1 and 8.6.1), which can both serve as RLM constraints and RLM constraint causes. Since the findings related to the barriers, pitfalls and problems are diverse, Framework 2 was structured according to the main RLM barriers and barrier categories identified in section 2.3. Evidently, the main RLM *constraint categories* include financial, operational, organisational and external RLM constraints, and the *specific RLM constraints* represent the various financial, operational, organisational and external RLM constraints (identified in section 2.3, excluding the risk categories) with related risks, pitfalls and problems (identified in sections 2.3, 8.4.1, 8.5.1 and 8.6.1). Additionally, the *causes* can be any barrier, risk, pitfall or problem (identified in sections 2.3, 8.4.1, 8.5.1 and 8.6.1) that contributes to the specific RLM constraints. Finally, online retailers can identify and investigate *potential solutions* for each RLM constraint, which relates to addressing the causes of the RLM constraint. Figure 9.6 provides a broad overview of Framework 2.

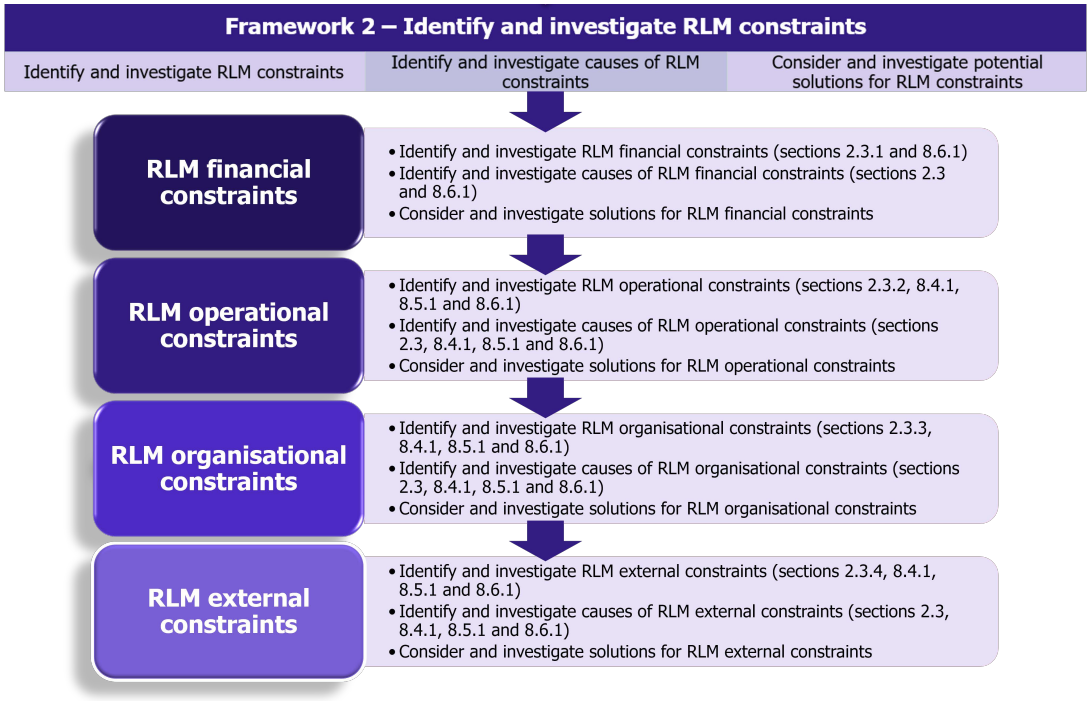


Figure 9.6 Framework 2 - Identify and investigate RLM constraints
Source: Compiled by the researcher

Figure 9.6 shows the part of the main framework associated with Framework 2 (see Figure 9.4), the RLM constraint categories, including the constraints and causes that must be identified and investigated (with references to chapters 2 and 8) and the solutions that may be considered and investigated. As a part of the investigation of RLM constraints, the framework indicates the (1) *degree of constraints*, which include the number of barriers and problems (listed in the first column of Table 9.5) for each RLM constraint and the impact on other constraints (identified from the solutions of all constraint categories listed in the third column of Table 9.5), (2) *degree of causes*, which include the number of causes related to each RLM constraint (listed in the second column of Table 9.5), and (3) *degree of solutions*, which include the number of solution focus areas that can be considered for each RLM constraint (listed in the third column of Table 9.5).

Table 9.5 provides a detailed overview of Framework 2, including the main RLM constraint categories, specific RLM constraints, including degrees of constraints, causes and solutions (first column), RLM constraint causes (second column) and solution focus areas (third column).

Table 9.5 Framework 2 - Identify and investigate RLM constraints

RLM FINANCIAL CONSTRAINTS		
RLM financial constraints	**RLM financial constraint causes**	**Solution focus areas**
Investment and costing constraints • Heavy financial investment • Lack of investment in resources • Lack of funding	***Financial causes*** •Prioritise FL investment due to a lack of awareness economic benefits of RLM •Unavailability of financial resources •Poor accounting systems	• Address investment and costing constraints • Address financial and cash constraints • Address product return and

• Financial instability, capacity and investment risks • Losing and attracting new investors • Raising additional capital • Inaccurate view of financial performance • Poor cost visibility and hidden costs • Poor pricing *(Sections 2.3.1.1 and 8.6.1)* ***Degree of constraint – 12 + 8 = 20*** ***Degree of causes – 12*** ***Degree of solutions – 7***	•Using a dual account for RL and FL processes •Failure to identify the impact of RL costs •Poor RL cost monitoring ***Organisational causes*** •Lack of management commitment and inattention to RLM •Poor RL strategic planning and procedures •Poor internal integration between departments ***External cause*** •Fraudulent return behaviours ***Other cause*** •FL inefficiencies *(Sections 2.3 and 8.6.1)*	recovery constraints • Address management constraints • Address strategic and control constraints • Address functional constraints • Address consumer and market constraints
Financial and cash constraints • High RL cost • Indirect expenses • Unnecessary expenses • Loss of money and high RL cost risks • Loss of profits and margin *(Sections 2.3.1.3. and 8.6.1)* ***Degree of constraint – 7 + 3 =10*** ***Degree of causes – 33**** ***Degree of solutions – 8****	***Financial causes*** •Additional product return transportation and handling costs •Product return uncertainties and lack of economies of scale •Hidden expenses •Using a dual account for RL and FL processes •Failure to recognise impact of RL costs •Poor RL costing and cost monitoring ***Operational causes*** •Lack of forecasting and planning •Poor RL process, inspection, disposition and transportation •Lack of appropriate IT systems •Failure to recognise value of product recovery •Inventory and product quality risks ***Organisational causes*** •Inattention to RLM and poor strategic planning •Return leniency •Restrictive, lenient and poorly planned return policies •Poor internal integration •Lack of human and IT resources ***External causes*** •Lack of SC collaboration, information sharing and integration •Lack of integrated systems and SC agreements •Opportunistic buying and fraudulent return behaviours •Reputational damage *(Sections 2.3 and 8.6.1)*	• Address financial and cash constraints • Address product return and recovery constraints • Address operational support constraints • Address management barriers • Address strategic and policy constraints • Address functional constraints • Address SC constraints • Address consumer and market constraints
RLM OPERATIONAL CONSTRAINTS		
RLM operational constraints	**RLM operational constraint causes**	**Solution focus area**
Product return and recovery constraints • Product return uncertainties • Poor product return visibility • Limited forecasting and planning • Unpredictable quality and condition of returned products • Demand and forecasting risks • Product quality risks • Inventory risks • Poor return process and RL process failures • Obsolete stock • Poor/no recovery • Loss of product, product control and product value • Contaminated and disorganised inventory • Stockpiling • Poor product return decision making *(Sections 2.3.2., 8.4.1, 8.5.1 and 8.6.1)* ***Degree of constraint 18 + 6 = 24*** ***Degree of cause – 31***	***Financial causes*** • Lack of investment in IT resources ***Operational causes*** • Complexity of product returns • Poor return inspection, transportation and disposition processes • Poor product return segregation • Unpredictable consumer return demand and return volume • Poor information systems and manual operations ***Organisational causes*** • Management inattention to RLM • Poor internal relationships and integration • Poor return policies • Poor strategic planning and procedures • Poor facility and network design • Poor gatekeeping and return leniency • Poor outsourcing decisions • Lack of resource commitment • Poor performance measurement • Lack of skilled/trained staff ***External causes*** • Lack of support from SC parties • Lack of SC information sharing • Lack of SC agreements and integration • Opportunistic buying and fraudulent return behaviours • Poor information sharing with consumers	• Address investment and costing constraints • Address product and recovery constraints • Address operational support constraints • Address management constraints • Address strategy and policy constraints • Address functional constraints • Address SC constraints • Address consumer and market constraints

Degree of solutions – 8*	***Other causes*** • Poor FL processes • Poor procurement *(Sections 2.3, 8.4.1, 8.5.1 and 8.6.1)*	
Operational support constraints • Inadequate information systems and technology • Lack of infrastructure and development • Technology and data management risks • Manual operations and poor systems *(Sections 2.3.2, 8.4.1 and 8.5.1)* ***Degree of constraint 6 + 7 = 13*** ***Degree of cause – 6*** ***Degree of solutions – 4***	***Financial causes*** • Lack of investment in resources ***Operational cause*** • Technology changes ***Organisational cause*** • Lack of top management commitment • Management inattention • Lack of strategic planning • Lack of IT resources *(Sections 2.3, 8.4.1 and 8.5.1)*	• Address investment and costing constraints • Address operational support constraints • Address management constraints • Address strategic constraints
RLM ORGANISATIONAL CONSTRAINTS		
RLM organisational constraints	**RLM organisational constraint causes**	**Solution focus area**
Management constraints • Lack of awareness about the importance of RLM • Lack of top management commitment • Management inattention • Resistance to change • Management risks • Culture risks *(Sections 2.3.3., 8.4.1, 8.5.1 and 8.6.1)* ***Degree of constraint 6 + 8 = 14*** ***Degree of cause – 7*** ***Degree of solutions – 2***	***Financial cause*** •Dismissing RL costs ***Organisational causes*** •Lack of understanding the impact of product returns •Negative management attitude •Fear of the unknown •Weak management •Lack of experienced managers •Inadequate knowledge about people's culture *(Sections 2.3 and 8.6.1)*	• Address investment and costing constraints • Address management constraints
Strategy, policy and control constraints • Lack of strategic planning • Lack of RL strategy • Lack of RL policies • Restrictive policies • Poor return policies • Poor performance measurement and management • Loss of managerial control • Poor accountability and reporting • Internal preservation and strict return conditions *(Sections 2.3.3. 8.4.1, 8.5.1 and 8.6.1)* ***Degree of constraint 11 + 7 = 18*** ***Degree of cause – 18*** ***Degree of solutions – 8****	***Financial cause*** •Lack of investment in IT resources •Lack of financial investment and high costs ***Operational causes*** •Uncertainties of product returns •Poor systems and product return visibility ***Organisational causes*** •Lack of top management commitment •Inattention to RLM •Lack of strategic planning •Poor strategic procedures (formalisation/standardisation) •Poor outsourcing decision making •Lack of resource commitment •Lack of a centralised performance measurement database •Poor internal coordination •Internal preservation and organisational-centric •Return policy design based on legislation ***External causes*** •Fear of sales cannibalisation •Competitive pressures *(Sections 2.3, 8.4.1, 8.5.1 and 8.6.1)*	• Address investment and costing constraints • Address financial and cash constraints • Address product return and recovery constraints • Address operational support constraints • Address management constraints • Address strategic, policy and control constraints • Address functional constraints • Address consumer and market constraints
Functional constraints • Lack of staff training and education • Labour risk of unskilled and untrained staff • Lack of internal coordination and integration • Silo mentality and internal autonomy • Poor internal information sharing • Poor accountability *(Sections 2.3.3, 8.4.1, 8.5.1 and 8.6.1)* ***Degree of constraint 8 + 7 = 15***	***Financial causes*** •Lack of investment in human resources ***Operational causes*** •Inadequate IT systems ***Organisational causes*** •Lack of top management commitment •Different departments capture different return information •Lack of strategic planning •Different departments get measured on different RL performance areas •Poor performance measurement •Lack of resource commitment *(Sections 2.3.3, 8.4.1, 8.5.1 and 8.6.1)*	• Address investment and costing constraints • Address operational support constraints • Address management constraints • Address strategic, policy and control constraints • Address functional constraints

Degree of constraint cause – 8 ***Degree of solutions – 5***		
RLM EXTERNAL CONSTRAINTS		
RLM external constraints	**RLM external constraint causes**	**Solution focus area**
SC constraints • Lack of support from SC parties • Lack of SC collaboration • Lack of SC information sharing • Lack of SCI • Lack of integrated systems • SC risks • Outsourcing risks • Poor return communication *(Sections 2.3.4, 8.4.1, 8.5.1 and 8.6.1)* ***Degree of constraint 8 + 4 = 12*** ***Degree of cause – 14*** ***Degree of solutions – 5***	***Financial causes*** •Lack of investment in IT resources ***Operational causes*** •Inadequate IT systems •Poor product return visibility •Manual operations ***Organisational causes*** •Lack of internal coordination and integration •Poor outsourcing decisions ***External causes*** •SC uncertainties •Shortage of data exchange and information •Poor SC coordination and collaboration •A lack of integrated systems and information sharing •Lack of SC and consumer integration *(Sections 2.3.4, 8.4.1, 8.5.1 and 8.6.1)*	• Address investment and costing constraints • Address product return and recovery constraints • Address operational support constraints • Address functional constraints • Address SC constraints
Consumer and market constraints • Opportunistic buying behaviour • Fraudulent return behaviour • Unnecessary returns • High fraudulent and ineligible returns • Poor return experience • Unmet expectations and dissatisfaction • Consumer frustration and anger • Consumer uncertainty • Poor communication • Service failures • Loss of consumer confidence and trust • Market liabilities • Brand/brand image damage • Reputational damage and risk • Loss of sales • Loss of market share • Loss of consumers *(Sections 2.3.3, 8.4.1, 8.5.1 and 8.6.1)* ***Degree of constraint 21* + 5 = 26*** ***Degree of cause – 21*** ***Degree of solutions – 8****	***Financial causes*** •Lack of investment in IT resources ***Operational causes*** •Inadequate/poor IT systems •Poor RL process •Poor return inspection, segregation and disposition •Poor return visibility ***Organisational causes*** •Inattention to RL •Return leniency and poor gatekeeping •Poor and lenient return policies •Poor strategic planning and procedures •Poor facility/network structure •Poor outsourcing decision-making •Lack of resource commitment •Poor performance measurement •Functional autonomy and poor internal integration •Internal preservation and high return restrictions ***External causes*** •Lack of SC integration and consumer integration •A lack of collaboration with 3PRL providers •Outsourcing risk •Poor pre-return information sharing with consumers ***Other causes*** •Poor FL *(Sections 2.3.4, 8.4.1 and 8.5.1)*	• Address investment and costing constraints • Address product return and recovery constraints • Address operational support constraints • Address management constraints • Address strategic, policy and control constraints • Address functional constraints • Address SC constraints • Address consumer and market constraints

Source: Compiled by the researcher

Table 9.5 shows a detailed overview of Framework 2 with the various RLM constraints, causes and solution focus areas. Online retailers can use this framework to identify and investigate (1) RLM constraints (i.e. barriers, risks, problems and pitfalls) that might be applicable to them, (2) potential causes (i.e. barriers, risks, problems and pitfalls) of their specific RLM constraints, and (3) solution focus areas relating to other RLM constraints that can be addressed as potential mitigating solutions. For example, an online retailer that lacks top management commitment can note that dismissing RL costs, a lack of understanding the impact of product returns, negative management attitudes, fear of the unknown, weak management and a lack of experienced managers might be the causes. Evidently, the solution focus areas include addressing investment constraints and management constraints.

Additionally, the online retailer can note that a lack of top management commitment can contribute to other RLM constraints, including investment and costing, operational support, strategy, policy and control and functional constraints, which might motivate them to address a lack of top management commitment for the effective RLM of consumer returns.

Moreover, online retailers can explore the degree of their RLM constraints and related causes and solutions, which can help them to investigate the most significant RLM causes, constraints and solution focus areas. Specifically, in terms of the *degree of constraints*, the framework demonstrates that consumer and market constraints (external RLM) include the highest number of barriers, risks, pitfalls and problems (degree marked with an asterisk), meaning that this RLM constraint category can be highly problematic for online retailers. Furthermore, investment and costing constraints (financial RLM) and management constraints (organisational RLM) contributes to the highest number of RLM constraints (degree marked with a red dot), meaning that online retailers must address these constraints first. Additionally, these constraints will form part of the solution focus areas of most other RLM constraints, meaning that addressing investing and costing constraints and management constraints can help address various other constraints. In terms of the *degree of causes*, financial and cash constraints (financial RLM) include the highest number of causes (degree marked with an asterisk), meaning that any RLM constraint (or poor RLM practice) can cause financial and cash constraints. In other words, poor RLM will result in high RL costs, unnecessary expenses and money, profit and margin losses, which might motivate online retailers to address RLM constraints for the effective RLM of consumer returns.

Concerning the *degree of solutions*, the framework shows that financial and cash constraints (financial), product return and recovery constraints (operational), strategy, policy and control (organisational) and consumer and market constraints (external) involve the highest number of solution focus areas (degree marked with an asterisk). Therefore, if the online retailer chooses to focus on addressing only one RLM constraint, like operational support constraints, they can also expect to lessen the degree of financial and cash, product return and recovery, strategy, policy and control and consumer and market constraints. Finally, the *most problematic RLM constraint* (highest total of barriers, risks, problems, pitfalls and causes) includes consumer and markets constraints. Consequently, online retailers can benefit from focusing on avoiding and addressing consumer and market constraints for the effective RLM of consumer returns.

While the solution focus areas can help online retailers identify and investigate potential measures to counteract the RLM constraints, they must first develop an understanding of the success factors of

effective RLM to effectively address the RLM constraints. Consequently, the next section provides Framework 3 that focuses on understanding the success factors of effective RLM.

9.6 FRAMEWORK 3 – UNDERSTAND THE SUCCESS FACTORS OF EFFECTIVE RLM

According to Lamba *et al.* (2020:398), a lack of understanding effective RLM practices can impede online retailers' ability to manage RL effectively. Consequently, online retailers can benefit from understanding the success factors of effective RLM. While the RLM constraints (Framework 2) represented "what not to do", an understanding of the RLM success factors represent "what to do" for the effective RLM of consumer returns in online retailing. Understanding effective RLM of consumer returns requires an understanding of (1) strategic RLM success factors, (2) design RLM success factors, (3) resource RLM success factors, (4) control RLM success factors and (5) relational RLM success factors. Figure 9.7 provides a broad overview of Framework 3.

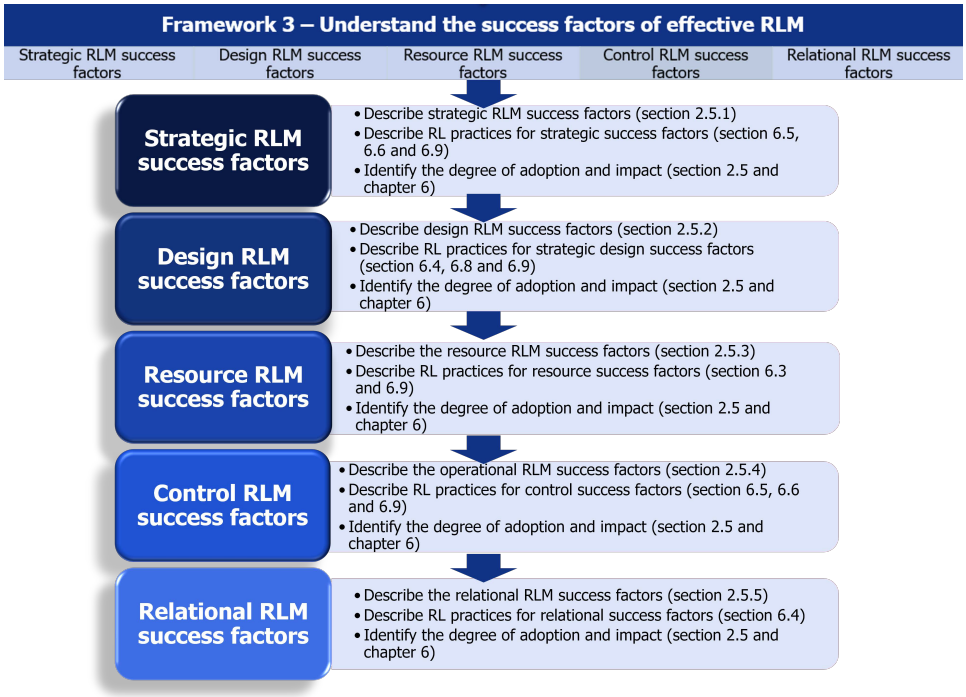


Figure 9.7 Framework 3 - Understand the success factors of effective RLM
Source: Compiled by the researcher

Figure 9.7 shows the part of the main framework associated with Framework 3 (see Figure 9.4) and the main RLM success factor categories, including RLM success factors (from section 2.5), RL practices (from chapter 6) and the degree of adoption and impact. The degree of adoption involves the number of practices/requirements (identified from section 2.5 and chapter 6) associated with the adoption of the RLM success factor (listed in the second column of Table 9.6) and the degree of impact involves the number of contributions (support) that a RLM success factor can provide to other RLM success factors

(identified from the third column of Table 9.6). This can help online retailers identify both the requirements (costs of adoption) and the value (benefits of adoption) of key RLM success factors for the effective RLM of consumer returns. A total of fifteen key RLM success factors were identified from the success factors for RLM (section 2.5) and RL practices (chapter 6).

Table 9.6 provides a detailed overview of Framework 3, including the main RLM success factor categories, fifteen key RLM success factors, including the degree of adoption and impact, and the description and impact of each RLM success factor (with references to chapters 2 and 6).

Table 9.6 Framework 3 - Understand the success factors of effective RLM

STRATEGIC RLM SUCCESS FACTORS		
Key strategic success factors	**Description of strategic RLM success factors**	**Impact on other RLM success factors**
Strategic importance of and commitment to RLM ***Degree of adoption – 5*** ***Degree of impact – 13***	• RLM orientation with management commitment and resource support • Holistic view of RLM to direct RLM strategies • Well-developed understanding of RLM significance • Regard RLM as a strategic asset for consumer acquisition and retention, understanding consumer behaviour and recognising the impact of RLM on the triple bottom line • Senior management involvement to provide a clear RLM vision, strategic and tactical plans, control over the RL function and access to the board of directors for corporate RL decision making *(Sections 2.5.1.1 and 6.9.4)*	• Enables strategic implementation of RLM • Important for well-developed RL strategies and systems • Supports a well-designed return policy and RL process • Enables appropriate and sufficient resources and IT • Contributes to skilled and trained staff • Important for well-developed RL performance management • Supports consumer-centric return prevention • Important for well-controlled RL costs and risks • Enhances well-established functional, SC and consumer relationships *(Section 2.5 and chapter 6)*
Strategically implemented RLM ***Degree of adoption – 7*** ***Degree of impact – 7***	• Strategic implementation of inhouse RLM represents full control over RL based on cost-benefit analysis and identification of strategic implications and requirements of outsourcing • Strategic implementation of RLM through outsourcing based on cost-benefit analysis, identification of strategic implications, requirements and degree of RL outsourcing, identification of types of services, RL processes and types of third parties for RL outsourcing, and strategic selection of the most suitable outsourced partner *(Sections 2.5.1.2 and 6.5)*	• Important for well-developed RL strategies and systems • Enables a well-designed RL process and network • Supports appropriate and sufficient resources • Enables appropriate IT • Promotes well-established SC and consumer relationships *(Section 2.5 and chapter 6)*
Well-developed RL strategies and systems ***Degree of adoption – 5*** ***Degree of impact – 6***	• Well-developed strategic plan for RL integrated with the strategic plan of the organisation • Well-planned RL strategy focused on RL and marketing interface, return policy, disposition, recovery and stakeholders • Well-developed disposition strategy based on well-developed reuse, product recovery and secondary markets and strategies and strategic understanding and analysis of disposition decision factors • Well-developed RL strategies incorporated into overall organisational strategies • Well-planned RL system focused on RL process efficiency and cost effectiveness *(Sections 2.5.1.3, 6.6.1 and 6.9.4)*	• Important for a well-designed return policy and RL process • Directs well-developed performance management • Enables well-controlled RL costs and risks • Supports well-established functional and consumer relationships *(Section 2.5 and chapter 6)*
DESIGN RLM SUCCESS FACTORS		
Key design success factors	**Description of design RLM success factors**	**Impact on other RLM success factors**
Well-designed return policy ***Degree of adoption – 5*** ***Degree of impact – 6***	• Return policy aligned with RL strategies • Return policy with clear terms and conditions • User-friendly return policy enables consumers to understand their roles and responsibilities • Return policy based on consumer behaviour and impact of RL performance • Return policy based on well-considered level of leniency and strictness through a cost/benefit analysis *(Sections 2.5.2.1, 6.4.2 and 6.9.3)*	• Facilitates a well-designed RL process • Supports skilled and trained staff • Important for well-developed performance management • Directs consumer-centric return prevention • Enables well-established SC and consumer relationships *(Section 2.5 and chapter 6)*
Well-designed RL process	• Formalised RL process designed by an experienced manager • Formalised RL process with written policies, SOPs, manuals, job	• Enables appropriate IT • Supports skilled and trained staff

Degree of adoption – 4 ***Degree of impact – 8***	descriptions and flow charts that enables staff to understand their roles and responsibilities • Clear and consumer-centric RL process focused on user-friendliness, minimal effort, speed and convenience • Streamlined RL process based on pre-receipt RL process automation *(Sections 2.5.2.2 and 6.9.4)*	• Directs well-developed performance management • Important for consumer-centric return prevention • Important for well-controlled RL costs and risks • Promotes well-established functional, SC and consumer relationships *(Section 2.5 and chapter 6)*
Well-designed RL network ***Degree of adoption – 4*** ***Degree of impact – 7***	• Robust, integrated, technology-enabled, consumer-centric and flexible RL network • Well-considered network design type through cost-benefit analysis and strategic decisions • Well-considered facility locations through cost-benefit analysis and strategic decisions • Well-considered facility types through cost-benefit analysis and strategic decisions *(Sections 2.5.2.3 and 6.8.1)*	• Facilitates strategic implementation of RLM • Important for a well-designed RL process • Supports a well-developed performance management • Enables well-controlled RL costs and risks • Promotes well-established functional, SC and consumer relationships *(Section 2.5 and chapter 6)*
RESOURCE RLM SUCCESS FACTORS		
Key resource success factors	**Description of resource RLM success factors**	**Impact on other RLM success factors**
Appropriate and sufficient resources ***Degree of adoption – 8*** ***Degree of impact – 8***	• Prioritised resource commitment • Appropriate and sufficient financial resources • Consistent devotion of capital resources • Appropriate and sufficient commitment and investment in IT resources • Investment in an appropriate RLM infrastructure • Appropriate and sufficient commitment and investment in human resources • Appropriate and sufficient RL process resources • Establish a dedicated function *(Sections 2.5.3.1, 6.9.1 and 6.9.4)*	• Enables a well-designed RL process and network • Important for appropriate IT • Important for skilled and trained staff • Supports well-developed performance management • Important for well-controlled RL costs and risks • Enables well-established functional and consumer relationships *(Section 2.5 and chapter 6)*
Appropriate IT ***Degree of adoption – 6*** ***Degree of impact – 9***	• Prioritise IT for RLM • Established IT infrastructure • State-of-the art with tracking and tracing and information management and analysis capabilities • Appropriate IT enables integration, communication and real-time information sharing • Appropriate IT supports decision-making, performance measurement, gatekeeping and return avoidance • Well-considered IT types with continuous IT development *(Sections 2.5.3.2 and 6.3.1)*	• Directs strategic implementation of RLM • Enables a well-designed RL process and network • Important for well-developed performance management • Supports consumer-centric return prevention • Facilitate well-controlled RL costs and risks • Important for well-established functional, SC and consumer relationships *(Section 2.5 and chapter 6)*
Skilled and trained staff ***Degree of adoption – 4*** ***Degree of impact – 8***	• Skilled staff can facilitate product returns, disposition, and speedy returns processing, practice gatekeeping and service recovery and analyse product return data and assess RL performance • Well-developed staff training and education programmes in RL • Continued skills development and training initiatives • Staff trained on consumer communication, RL processes, consumer service and satisfaction, gatekeeping, IT use and consumer behaviour *(Sections 2.5.3.3 and 6.9.5)*	• Directs strategic implementation of RLM • Important for a well-designed RL process • Supports appropriate IT • Supports well-developed performance management • Important for consumer-centric return prevention • Enables well-controlled RL costs and risks • Supports well-established SC and consumer relationships *(Section 2.5 and chapter 6)*
CONTROL RLM SUCCESS FACTORS		
Key control success factors	**Description of control RLM success factors**	**Impact on other RLM success factors**
Well-developed performance management ***Degree of adoption – 7*** ***Degree of impact – 8***	• Well-developed performance management framework and measurement system • Performance focused on consumers, service performance, efficiency, costs, strategies, return policy and RL process design • Well-developed KPIs and metrics capable of measuring, tracking and evaluating RL performance • Standardised and centralised performance measurement • Constant monitoring and evaluation based on return data, consumer feedback and performance audit • Reported RL performance to senior management and perform annual performance evaluation and examination of RL metrics • Developed reward systems and incentives *(Sections 2.5.4.1 and 6.7.1)*	• Supports well-developed RL strategies and systems • Facilitates a well-designed RL process and network • Important for consumer-centric return prevention • Important for well-controlled RL costs and risks • Enables well-established functional, SC and consumer relationships *(Section 2.5 and chapter 6)*
Consumer-centric return prevention ***Degree of adoption – 4***	• Well-informed consumer and support during online shopping • FL efficiency and quality management and control • Well-developed gatekeeping function • Use and share consumer feedback and return data for	• Promotes skilled and trained staff • Informs a well-developed performance management • Important for well-controlled RL costs and risks • Important for well-established functional, SC and

Degree of impact – 6	improvements *(Sections 2.5.4.2 and 6.9.3)*	consumer relationships *(Section 2.5 and chapter 6)*
Well-controlled RL costs and risks ***Degree of adoption – 6*** ***Degree of impact – 8***	• Total cost approach and well-understood RL costs • Well-developed accounting systems and costing techniques for RL • Implemented cost strategies, policies and control • Well-defined RL risks • Well-developed RL risk classification and assessment system • Well-developed RL risk mitigation strategies *(Sections 2.5.4.3 and 6.9.2)*	• Important for strategic implementation of RLM • Supports well-developed RL strategies and systems • Motivates appropriate IT • Motivates skilled and trained staff • Enables a well-developed performance management • Enables consumer-centric return prevention • Enables well-established functional and SC relationships *(Section 2.5 and chapter 6)*
RELATIONAL RLM SUCCESS FACTORS		
Key relational success factors	**Description of relational RLM success factors**	**Impact on other RLM success factors**
Well-established functional relationships ***Degree of adoption – 6*** ***Degree of impact – 8***	• Supportive culture • Clear functional roles and responsibilities in RL • Integrated departmental functions • Common goals and centralised IT system • Cross-functional information and knowledge sharing • Cross-functional collaboration, cooperation and communication *(Sections 2.5.5.1 and 6.4.3)*	• Important for a well-designed return policy • Promotes appropriate and sufficient resources • Supports skilled and trained staff • Enables well-developed performance management • Important for consumer-centric return prevention • Important for well-controlled RL costs and risks • Enables well-established SC and consumer relationships *(Section 2.5 and chapter 6)*
Well-established SC relationships ***Degree of adoption – 5*** ***Degree of impact – 10***	• Established collaborative agreements, partnerships or alliances • Shared goals, processes, policies, responsibilities, resources, costs and risks • SC information and knowledge sharing • Integrated IT and SC partners • SC collaboration, coordination, cooperation and communication *(Sections 2.5.5.2 and 6.4.1)*	• Supports strategic implementation of RLM • Enables well-developed RL strategies and systems • Important for a well-designed RL process and network • Supports appropriate and sufficient resources and IT • Directs well-developed performance management • Supports consumer-centric return prevention • Important for well-controlled RL costs and risks • Enables well-established consumer relationships *(Section 2.5 and chapter 6)*
Well-established consumer relationships ***Degree of adoption – 5*** ***Degree of impact – 10***	• Adoption of a consumer-centric approach and focus on consumer experience, expectations, interests and value • Established consumer support system • Consumer integration and participation • Consumer information sharing and communication • Consumer relationship and service management systems *(Sections 2.5.5.3 and 6.4.2)*	• Motivates strategic importance and commitment to RLM • Directs strategic implementation of RLM • Motivates well-designed return policy, RL process and RL network • Enables appropriate IT and skilled and trained staff • Directs well-developed performance management • Important for consumer-centric return prevention • Enables well-established SC relationships *(Section 2.5 and chapter 6)*

Source: Compiled by the researcher

Table 9.6 shows a detailed overview of Framework 3 with the key RLM success factors and related description and impact on other RLM success factors. This framework can be used as a benchmark for online retailers to compare their current RL practices, processes and procedures to further identify shortcomings or potential sources to improve effectiveness in RLM, and the compound effect of the success factors on other success factors. For example, the online retailer can determine if the functional relationships within their organisation can be characterised as being supportive, having clear functional roles and responsibilities for RL, having integrated, common goals and systems, having cross-functional information and knowledge sharing and having cross-functional collaboration, cooperation and communication. Consequently, online retailers can focus on adopting these specific success factor characteristics as well as other RLM success factors, including strategic importance and commitment to RLM, well-developed RL strategies and systems, a well-designed RL process, a well-designed RL network, appropriate and sufficient resources, appropriate IT, well-developed performance

management, consumer-centric return prevention and well-controlled RL costs and risks as support for the establishment of functional relationships for the effective RLM of consumer returns. Additionally, the online retailer can identify that well-established functional relationships can support or enable other RLM success factors, including a well-designed return policy, appropriate and sufficient resources, skilled and trained staff, well-developed performance management, consumer-centric return prevention, well-controlled RL costs and risks and well-established SC and consumer relationships, which may further motivate them to adopt well-established functional relationships for the effective RLM of consumer returns.

Furthermore, online retailers can explore the degree of adoption and impact of the fifteen identified key success factors, which can help them understand the requirements of adoption and importance of each. Regarding the degree of adoption and impact, the framework illustrates that the most important RLM success factor includes strategic importance and commitment to RLM (strategic RLM success factor) in terms of the degree of adoption (5) and degree of impact (13). Evidently, online retailers can prioritise the adoption of strategic importance and commitment to RLM for the effective RLM of consumer returns. Following, strategic importance and commitment, well-established SC and consumer relationships (relational RLM success factors) can be significant in terms of the degree of adoption (5) and impact (10), demonstrating that well-established external relationships must be a priority for online retailers. Nevertheless, the true significance of adopting the success factors of effective RLM can only be understood through the support of RLM practices (see the conclusion of section 9.7) and justification of adoption through the number of RLM constraints addressed and benefits realised (Framework 5 presented in section 9.8).

Essentially, Framework 3 can help online retailers to shift focus and understand the key success factors (or benchmarks) for the effective RLM of consumer returns. In the next section, Framework 4 that associates with the identification and implementation of effective RLM practices, will be presented.

9.7 FRAMEWORK 4 – IDENTIFY AND IMPLEMENT RLM PRACTICES

According to Ratchford *et al.* (2022:170), with an increase in competition in the online retail industry, effective RLM of consumer returns must be a key strategic focus area for retailers. However, Eriksson and Käck (2023:1) found that RLM in online retailing can be multifaceted, complex and costly, requiring various initiatives for efficiency and effectiveness. Consequently, the purpose of Framework 4 is to help online retailers identify and implement suitable RLM practices for the effective RLM of consumer returns.

As explained in section 9.3.4, Framework 4 consist of (1) key RLM practices (key practices from sections 8.4.2, 8.5.2 and 8.6.2), (2) requirements (support RL practices from sections 8.4.2, 8.5.2 and 8.6.2 and chapter 6), (3) considerations (key parameters in sections 8.4.2.4, 8.5.2.3 and 8.6.2.4), and (4) RLM success factors to adopt (identified from Framework 3). The structure of the RLM practices in Framework 4 include *priority RLM practices* (most significant key practices in terms of occurring in more than one theme from sections 8.4.2, 8.5.2 or 8.6.2), *prevention and control specific RLM practices* (section 8.4.2), *service specific RLM practices* (section 8.4.3), and (3) *cost specific RLM practices* (section 8.4.4). Figure 9.8 provides a broad overview of Framework 4.

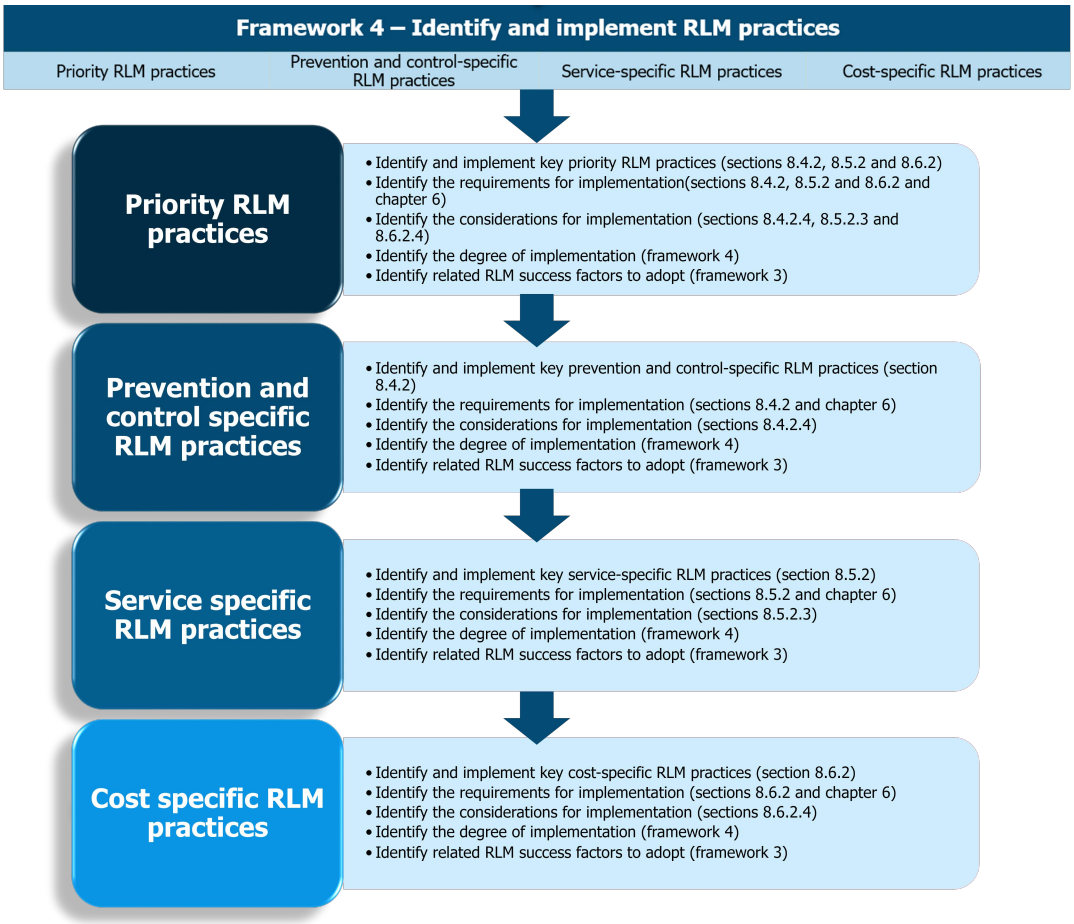


Figure 9.8 Framework 4 - Identify and implement RLM practices
Source: Compiled by the researcher

Figure 9.8 shows the part of the main framework (see Figure 9.4) associated with Framework 4, and the RLM practice categories, including the key RLM practices, requirements and considerations (identified from sections 8.4.2, 8.5.2 and 8.6.2 and chapter 6) for identification and implementation, and the degree of implementation (identified in Framework 4) and RLM success factors to adopt (from Framework 3). The degree of implementation represents the number of elements (repeated throughout) the description, requirements and considerations (first number in Table 9.7) of each key RLM practice

and the number of success factors to adopt (second number in Table 9.7). This provides an indication as the potential effort or complexity of implementing specific key RLM practices.

Additionally, the framework includes the proposition categories from chapter 8 (interview findings) associated with the key RLM practices. The proposition categories included abbreviations, which will be referenced in Framework 4 for presentation purposes. The specific propositions referenced in the framework include the (1) proactive return prevention (PRP) categories of pre-sales PRP and post-sales PRP, (2) reactive return prevention (RRP) categories of RRP examination and RRP interventions, (3) reverse logistics control (RLC) categories of operational RLC and managerial RLC, (4) service-oriented return (SOR) categories of SOR communication and processes, (5) return service performance (RSP) categories of RSP evaluation, RSP improvement and RSP management, (6) return cost evaluation (RCE) categories of RCE tools and RCE execution, (7) cost-orientated return (COR) categories of COR processes and COR recovery, and (8) return cost management (RCM) categories of RCM mitigation and RCM execution (see sections 8.4.2, 8.5.2 and 8.6.2).

Table 9.7 provides a detailed overview of Framework 4, including the main RLM practice categories of priority RLM practices, prevention and control specific RLM practices, service specific RLM practices and cost specific RLM practices (headings in table 9.7). The *key RLM practices* are presented in the first column (in **bold**, *italics* and underlined) with references to the relevant sections in chapter 8. Also presented under key RLM practices (first column) are the *associated key practices* (or proposition categories), and the degree of implementation. In the second column the *description* (same reference as the key RLM practice), *requirements* (with references to chapter 6) and *considerations for implementation* of the key RLM practices (with references to chapter 8) are presented. In the final column, the related RLM success factors (identified from Framework 3) can be found.

Table 9.7 Framework 4 - Identify and implement RLM practices

PRIORITY RLM PRACTICES		
Key priority RLM practices	**Description, requirements and considerations for implementation**	**Related RLM success factors**
Pre-return inspection *(sections 8.4.3.2.1, 8.5.2.1.2 and 8.6.2.2.1)* ***Associated key practices*** • RL process optimisation for operational RLC • SOR inspection • COR inspection ***Degree of implementation 6 + 4 = 10***	***Description*** • Dedicated staff to inspect products at consumer homes enables the prevention of unnecessary false failure or fraudulent returns, enhances consumer service and enable cost savings by avoiding unnecessary transportation, receiving, processing and redistribution processes. ***Requirements*** • Consumer-centric RL processes, consumer service and support initiatives and interacting with consumers *(section 6.4.2)* • Human resource commitment *(section 6.9.1)* ***Considerations*** *(sections 8.4.2.4, 8.5.2.3 and 8.6.2.4)* • Pre-return inspection feasible for high return regions • Pre-return inspection appropriate for technology, electronics and appliances with higher chances of false failure returns • Consider consumer protection legislation to ensure that pre-return inspection is feasible	• Well-developed system • Well-designed RL process • Appropriate and sufficient resources • Well-established consumer relationships *(See Framework 3)*
Optimised RL process* *(sections 8.4.3.2.1 and 8.5.2.1.2)*	***Description*** • Optimising the RL process through the implementation of various practices and initiatives (see requirements) to improve the control of product returns and RL processes and provide	• Strategic importance and commitment to RL

Associated key practices • RL process optimisation for operational RLC • SOR process optimisation ***Degree of implementation 15 + 10* = 25***	consumers with a lenient, hassle-free and an efficient return process ***Requirements*** • State-of-the-art IT and IT with integrated functionalities for RL *(section 6.3.1)* • Consumer-centric return policies and RL processes, consumer service and support initiatives and interacting with consumers *(section 6.4.2)* • Cross-functional teams, functional relationships and collaborating, cooperating and coordinating between functions *(section 6.4.3)* • Deciding on the degree and type of 3Ps for RL outsourcing and selecting a 3PRL provider *(section 6.5.1)* • Performance measurement for RL and performance monitoring and review *(section 6.7.1)* • Centralised facilities for RL *(section 6.8.4)* • Financial, IT and infrastructure, RL process and human resource commitment *(section 6.9.1)* • Strategic approach and perspective for strategic planning in RL and integrating strategic plans for RL with organisational strategic plans *(section 6.9.4)* • Establish a RL function, implement RL staff training and education and produce skilled and well-trained staff *(section 6.9.5)* ***Considerations*** *(sections 8.4.2.4 and 8.5.2.3)* • Consider product characteristics for the training of staff to handle returns efficiently • Consider capabilities to invest in financial resources, use facility resources, develop appropriate integrated IT and staff capabilities for optimised RL process • Consider the resource capabilities and willingness of 3PRL providers to integrate • Consider the cost of investment versus the benefits of an optimised RL process • Consider consumer protection legislation for more leniency in the return process	• Strategic implementation of RLM • Well-developed RL strategies and systems • Well-designed RL process • Well-designed RL network • Appropriate and sufficient resources • Appropriate IT • Skilled and trained staff • Well-developed RL performance management • Well-established functional relationships *(See Framework 3)*
Streamlined return logging *(sections 8.5.2.1.2 and 8.6.2.2.1)* ***Associated key practices*** • SOR request • COR request ***Degree of implementation 5 + 3 = 8***	***Description*** • Online web-based system for self-service return request that enables both a consumer-centric and cost-effective return logging ***Requirements*** • Online return capabilities and using the Internet and website for RL *(section 6.3.2)* • Consumer-centric RL processes *(section 6.4.2)* ***Considerations*** *(sections 8.5.2.3 and 8.6.2.4)* • Consider IT capabilities to establish self-service return request portal • Consider capabilities of consumers to use self-service return logging on the platform	• Well-developed system • Well-designed RL process • Appropriate IT *(See Framework 3)*
Online authorisation *(sections 8.4.2.1.2, 8.6.2.2.1 and 8.6.2.3.1)* ***Associated key practices*** • Gatekeeping for post-sales PRP • COR request and gatekeeping • Return regulation for RCM mitigation ***Degree of implementation 6 + 3 = 9***	***Description*** • Digitise the return policy and transmit it into the online functionality to automatically reject product returns outside the return policy parameters • Online authorisation not only facilitate with the prevention of ineligible and fraudulent returns but also enables cost-effective gatekeeping and control of return costs ***Requirements*** • Online return capabilities and using the Internet and website for RL *(section 6.3.2)* • Implement gatekeeping practices *(section 6.9.3)* ***Considerations*** *(sections 8.4.2.4 and 8.6.2.4)* • Consider capabilities to establish an online authorisation system • Online authorisation can be important for electronics and technology type of products to avoid acceptance of obsolete products	• Well-designed return policy • Well-designed RL process • Appropriate IT *(See Framework 3)*
Efficient return collection *(Sections 8.5.2.1.2 and 8.6.2.2.1)* ***Associated key practices*** • SOR collection • COR collection ***Degree of implementation 10 + 6 = 16***	***Description*** • Simultaneous return pick-up and replacement/exchange drop-off reduce waiting time and improves consumer service • Convenient return drop-off points that enable both a consumer-centric and cost-effective return collection • Outsourcing to a 3PRL provider enables a fast, cost-effective and consumer-centric return collection ***Requirements*** • Cross-functional teams, functional relationships and collaborating, cooperating, coordinating and information sharing between functions *(section 6.4.3)* • Deciding on the type of RL service and third party for RL outsourcing *(section 6.5.1)* • Decentralised retail locations and multiple/flexible locations for RL *(section 6.8.4)* ***Considerations*** *(sections 8.5.2.3 and 8.6.2.4)* • Online-only retailers can use convenience stores or third-party drop-off locations • Multi/omnichannel retailers can use stores • Consider RL process capabilities for efficient return collection • Consider the capabilities of the 3PRL provider to integrate and resources for efficient collection	• Strategic implementation of RLM • Well-developed system • Well-designed RL process • Well-designed RL network • Well-established functional relationships • Well-established SC relationships *(See Framework 3)*
Effective product disposition and recovery •	***Description*** • Disposition management enables the management and control of returned products in the disposition process, which can involve supplier engagement, training of disposition staff,	• Strategic importance and commitment to RLM

(sections 8.4.2.1.1 and 8.6.2.2) ***Associated key practices*** • Product disposition management for operational RLC • COR disposition • COR recovery ***Degree of implementation 24 + 8 = 32***	maintaining internal disposition control or using specialist 3PRL providers • The establishment of a cost-effective and speedy disposition process involves the use of decentralised locations fast disposal or specialist 3PRL providers • Effective product and cost recovery involves a recovery strategy, dedicated department/function that includes recovery staff and a dedicated manager, and SC agreements • The most valuable recovery approach includes reselling directly through the website or if products require repackaging at a discounted price on the website, which can be enhanced through a traditional facility (DC) or return facility next to the main facility for fast restocking • SC agreements with third-party buyers of product returns enable cost-effective recovery through secondary channels • Agreements with suppliers and the use of dedicated staff to engage with supplier enable the transfer of RL costs/expenses of consumer returns to suppliers for full cost recovery ***Requirements*** • SC collaboration, coordination and communication, SC contract and agreements, and information, risks and responsibilities sharing *(section 6.4.1)* • RL in/outsourcing decisions, decide the type of RL processes, services and 3Ps for RL outsourcing, and select 3PRL provider *(section 6.5.1)* • Focus on benefit-driven disposition options, prepare for disposition strategy implementation, establish disposition rules and policies, develop reuse, product recovery and secondary market strategies and implement a formal disposition strategy *(section 6.6.1)* • Use a separate facility at a single location for RL *(section 6.8.2)* • Use a standard facility/location for RL *(section 6.8.3)* • Decentralise specific RL processes *(section 6.8.5)* • Commit human resources *(section 6.9.1)* • Full-time RL manager portfolio and assign an experienced manager to RL *(section 6.9.5)* • Establish a RL function, implement and conduct RL staff training and education initiatives, and produce well-skilled staff for RL *(section 6.9.5)* ***Considerations*** *(sections 8.4.2.4 and 8.6.2.4)* • The product type must be considered for the training of disposition staff • Consider capabilities for effective disposition and recovery, which can help with the decision of using a 3PRL provider and alternative recovery operations • Consider the capabilities of 3PRL providers to perform effective disposition and willingness to integrate and share information • Consider compliance requirements with environmental policies, which can help with the decision of using a 3PRL provider • High return volume might be more appropriate for recovery through the secondary markets to avoid sales cannibalisation • Consider the type of return and product condition for the best recovery option • For perishable products consider fast disposal using decentralised locations • Consider supplier return policies for suitable recovery operations • Consider consumer protection legislation when selling repacked items at a discount through the website	• Well-developed RL strategies and systems • Well-designed RL process • Well-designed RL network • Appropriate and sufficient resources • Skilled and trained staff • Well-controlled RL costs and risks • Well-established SC relationships *(See Framework 3)*
Clearly communicated return policies *(Sections 8.4.2.1.1 and 8.5.2.1.1)* ***Associated key practices*** • Return restrictions for pre-sales PRP • Initial SOR communication ***Degree of implementation 5 + 3 = 8***	***Description*** • Clear communication of the return policy, procedures and conditions means that the return policy must be easy-accessible on the website (e.g. clear link) and understandable (e.g. without legal terms), and the return conditions must be clearly presented both in the return policy and on the product page, which can be important for consumer service and prevention of unnecessary returns ***Requirements*** • Consumer communication and information sharing *(section 6.4.2)* • Clear return policies and return restrictions for return prevention *(section 6.9.3)* • Defining roles and responsibilities in RL, standardising RL processes and publishing accessible strategic procedures for RL *(section 6.9.4)* ***Considerations*** • None	• Well-designed return policy • Consumer-centric return prevention • Well-established consumer relationships *(See Framework 3)*
Return charges and penalties *(Sections 8.4.2.1.1, 8.4.2.2.2 and 8.6.2.3.1)* ***Associated key practices*** • Return restrictions for pre-sales PRP • Party interventions for RRP • Return charges and penalties for RCM	***Description*** • Increasing return restrictions by charging for returns can help reduce high returns and mitigate financial losses due to high returns • With the help of SC metrics and integration, monetary penalties can be given to couriers/3PLs that damage products during delivery, which helps prevent unnecessary damaged product returns, recover costs and minimise monetary losses ***Requirements*** • Return restrictions for return prevention *(section 6.9.3)* • SC agreements, integration and information sharing and cost and risk sharing *(section 6.4.1)* • Appropriate KPIs and performance monitoring and review *(section 6.7.1)* ***Considerations*** *(sections 8.4.2.4 and 8.6.2.4)* • Consider the benefits of charging return fees against the potential costs of losing consumers	• Well-developed RL performance management • Well-controlled RL costs and risks • Well-established SC relationships *(See Framework 3)*

mitigation ***Degree of implementation 10 + 3 = 13***	• Consider charging consumers for unwanted returns but cover the return costs for damaged/defective products • Consider charging consumers delivery fees if the return eliminates the qualification of the free delivery threshold • Market share must be considered before charging for returns, if penetration is low, return charging might be damaging • Consider consumer protection legislation to determine if return charges can be applied	
Preventative gatekeeping • *(sections 8.4.2.1 and 8.6.2.3)* ***Associated key practices*** • Gatekeeping for post-sales PRP • Return regulation for RCM mitigation ***Degree of implementation 7 + 4 = 11***	***Description*** • Requesting photo evidence from consumers as a gatekeeping measure enables the prevention of unnecessary or fraudulent returns and mitigate the financial losses of accepting ineligible returns • Managers can be valuable gatekeepers to ensure that correct gatekeeping decisions are made to avoid unnecessary returns ***Requirements*** • Consumer communication, information sharing and interaction *(section 6.4.2)* • Gatekeeping practices for return prevention *(section 6.9.3)* • Assign experienced managers to RL *(section 6.9.5)* ***Considerations*** *(sections 8.4.2.4 and 8.6.2.4)* • Consider consumer protection legislation for effective implementation of preventative gatekeeping measures • Focus on determining the product condition during the review of photographs for appropriate gatekeeping decisions	• Strategic importance and commitment to RLM • Consumer-centric return prevention • Well-controlled RL costs and risks • Well-established consumer relationships *(See Framework 3)*
Preventative inspection *(sections 8.4.2.1, 8.6.2.2 and 8.6.2.3)* ***Associated key practices*** • Inspection for post-sales PRP • COR inspection • Return regulation for RCM mitigation ***Degree of implementation 11 + 6 = 17***	***Description*** • Manufacturer inspections on the premises can be used to prevent counterfeit returns • Appoint educated inspectors and train inspection staff to (1) understand the return policy for detection of fraudulent returns, (2) test for false failures, (3) identify product abuse, (4) identify illegitimate claims and (5) avoid making emotional decisions, which enables effective return prevention, cost savings and avoid large financial losses associated with return claims • Use disposition staff tasked with cleaning and packaging of products to spot signs of wear or use ***Requirements*** • SC collaboration, cooperation and sharing of responsibilities and costs *(section 6.4.1)* • Human resource commitment *(section 6.9.1)* • Establish a RL function, develop RL skills/knowledge and staff training and education programmes, provide formal training and produce well-trained and skilled staff for RL *(section 6.9.5)* ***Considerations*** *(sections 8.4.2.4 and 8.6.2.4)* • Consider asking suppliers to train inspectors on their products at their costs for effective inspection • Consider the product type and condition for the allocation of appropriate disposition/recovery staff • Consider product value and returned product characteristics, like luxury consumer goods, for using manufacturer inspections • Consider capabilities to implement preventative inspection • Consider SC partners willingness to collaborate and integrate	• Well-designed return policy • Well-designed RL process • Appropriate and sufficient resources • Skilled and trained staff • Well-controlled RL costs and risks • Well-established SC relationships *(See Framework 3)*
Consumer feedback, complaints and product return data *(Sections 8.4.2.1.1, 8.5.2.2.1 and 8.5.2.2.2)* ***Associated key practices*** • Information usage and analysis for RRP examination • RSP evaluation data sources • RSP improvement preparation • RSP improvement execution ***Degree of implementation 15 + 7 = 22***	***Description*** • Establish robust consumer feedback loops to use and analyse consumer feedback and complaints data to identify problems in the FL process and procurement that leads to high returns and evaluate service performance for improvement initiatives • Product return data from AI and predictive analytics software or 3PRL providers can be used to identify problems with products or brands associated with high returns and evaluate service performance • Create platforms to attain input from consumers with open-ended questions for service improvement preparation • Managers can be used to analyse consumer feedback and complaints data and product data to perform a root cause analysis for return reasons, evaluate service performance and help prepare for and execute return service improvements • Create platforms to attain input from consumers with open-ended questions for service improvement preparation ***Requirements*** • Use IT with information management capabilities *(section 6.3.1)* • Attain consumer input and participation *(section 6.4.2)* • Select appropriate 3PRL providers *(section 6.5.1)* • Commit IT and human resources *(section 6.9.1)* • Identify product return drivers and use return analytics for return avoidance (section 6.9.3) • Assign experienced managers to RL *(section 6.9.5)*	• Strategic importance and commitment to RLM • Strategic implementation of RLM • Appropriate and sufficient resources • Appropriate IT • Consumer-centric return prevention • Well-established SC relationships • Well-established consumer relationships *(See Framework 3)*

	Considerations *(sections 8.4.2.4 and 8.5.2.3)* • Consider complaints volume for the evaluation of service performance, the need for improvement plans and appropriate improvement executions • Consider the product condition and type for the effective analysis of product data for reactive return prevention • Consider IT and information management capabilities for product return data, which might help the decision if a 3PRL provider can be used • Consider the information sharing capabilities of a 3PRL provider • Consider privacy legislation for obtaining consumer feedback and complaints data	
PREVENTION AND CONTROL-SPECIFIC RLM PRACTICES		
Key RLM practices	**Description, requirements and considerations for implementation**	**Related RLM success factors**
Logistics excellence and information sharing initiatives for pre-sales PRP *(section 8.4.2.1.1)* ***Degree of implementation 8 + 2 = 10***	***Description*** • Logistics excellence for return prevention involves an efficient logistics process, quality management, picking and dispatch control measures, packaging solutions and training of logistics staff to understand the impact of poor logistics on returns • Information sharing initiatives for return prevention involves accurate meta-data (e.g. size guides) on website for product descriptions, detailed and informative product descriptions, in-house photography for improved product pictures, product videos, showrooming, consumer reviews or any other initiatives to help consumers make better purchase decisions ***Requirements*** • Consumer education initiatives for consumer integration *(section 6.4.2)* • Consumer support and product-related initiatives for return avoidance *(section 6.9.3)* • RL training and education programmes *(section 6.9.5)* ***Considerations*** *(section 8.4.2.4)* • Consider the type of product for the suitable information sharing initiative • Consider the costs of implementing effective procurement and inbound inspection against the benefits of preventing consumer returns • Consider the costs of uploading photographs and providing detailed description of products against the benefits of avoiding consumer returns	• Consumer-centric return prevention • Well-established consumer relationships *(See Framework 3)*
Metrics, product experts and abuse investigations for RRP examination *(section 8.4.2.2)* ***Degree of implementation 12 + 3 = 15***	***Description*** • Appropriate metrics for reactive return prevention examination can include returns versus sales percentage to identify and examine causes of high product returns and return reasons and SC metrics to examine logistics failures that cause high and unnecessary returns • Product experts in the RL department can help investigate return causes related to problematic products as a targeted return prevention initiative • Investigate individual return abusers as a targeted return prevention initiative ***Requirements*** • Appropriate KPIs and evaluate and analyse performance results *(section 6.7.1)* • Commit human resources and RL process resources *(section 6.9.1)* • Classify consumers, develop a consumer database and implement return avoidance strategies *(section 6.9.3)* • Establish a RL function *(section 6.9.5)* ***Considerations*** *(section 8.4.2.4)* • Consider product return volume for return prevention examination • Consider the product condition for the return prevention examination using product return reasons and SC metrics • Consider the product type for the allocation of appropriate product experts for targeted investigations • Consider consumer behaviour for the investigation of individual abusers since some consumers might be uncertain about their purchases (because of poor information sharing on the website) without engaging in abusive behaviour • Consider consumer rights for the investigation of return abuse	• Appropriate and sufficient resources • Well-developed RL performance management • Consumer-centric return prevention *(See Framework 3)*
Product interventions, supplier exit and account suspensions for RRP intervention *(section 8.4.2.2.2)* ***Degree of implementation 11 + 4 = 15***	***Description*** • Product interventions as reactive return prevention initiatives involve sharing information with procurement and suppliers to consider product or packaging redesign to reduce defective/damage returns, contacting manufacturers with unusually high defective returns to consider a product recall and share information with procurement to discontinue selling products associated with high returns • Using appropriate metrics, supplier contracts can be cancelled based on the percentages of defects • Consumer accounts can be suspended based on the outcomes of return abuse investigations ***Requirements*** • SC collaboration and knowledge, information, cost and risk sharing *(section 6.4.1)* • Functional collaboration and knowledge and information sharing *(section 6.4.3)* • Appropriate KPIs and evaluate and analyse performance results *(section 6.7.1)* • Product initiatives and account suspensions for return avoidance *(section 6.9.3)*	• Well-developed RL performance management • Consumer-centric return prevention • Well-established functional relationships • Well-established SC relationships *(See Framework 3)*

	Considerations *(section 8.4.2.4)* • Consider the product condition for the redesign of packaging and cancelling of supplier contracts • Consider the product type for the ability to redesign products • Consider consumer behaviour before closing accounts since some consumers might be uncertain about their purchases • Consider consumer rights for the investigation of return abuse	
Product return visibility, segregation and inventory management for operational RLC • *(section 8.4.2.3.1)* ***Degree of implementation 22 + 6 = 28***	***Description*** • Through the investment in or use of third parties for appropriate and integrated IT systems, product return visibility can be enhanced for control over product returns and RL processes • Product return segregation for operational control involves the physical separation of returned products and RL processes from new products and FL operations through space allocation, facility layout design for RL processes, a dedicated RL department or a separate RL facility • Product return inventory management involves the use of appropriate systems, like an end-to-end inventory management system, dedicated return inventory staff and a RL manager or a 3PRL provider to control returned products and minimise inventory risks ***Requirements*** • Develop online return capabilities and integrate Internet/web-based IT with other IT *(section 6.3.2)* • Customise and use WMS, use existing ERPs and ordering systems for RL *(section 6.3.3)* • Product return IT and software *(section 6.3.5)* • SC collaboration, cooperation and coordination, and information and IT integration and sharing *(section 6.4.1)* • Decide on the type of RL processes, services and 3Ps for RL outsourcing, select a 3PRL partner and develop outsourcing terms *(section 6.5.1)* • Use separate facilities, separate a single facility for RL and FL, and separate RL and FL processes *(section 6.3.8)* • Commit IT, human, financial and infrastructure resources *(section 6.9.1)* • Develop standard operating procedures (SOPs) for RL *(section 6.9.4)* • Create a full-time RL manager portfolio *(section 6.9.5)* • Create a RL function *(section 6.9.5)* ***Considerations*** *(section 8.4.2.4)* • Consider return volume and organisation type (online only or multichannel) for product return segregation and appointing of a dedicated RL manager • Consider the condition of returned products to determine the need for return segregation • Consider the value of inventory for the selection of a 3PRL provider • Consider the size of the organisation for the level of management involvement • Consider information and IT capabilities for product return visibility and inventory management • Consider the cost of redesigning the facility or creating a separate return facility against the benefits of product return segregation • Consider the 3PL/3PRL providers capabilities and willingness to share information • Consider market demand for directing returned inventory to appropriate locations • Consider environmental compliance for the use of a 3PRL provider with the capabilities to correctly manage and disposition returned inventory	• Strategic importance and commitment to RLM • Strategic implementation of RLM • Well-designed RL network • Appropriate and sufficient resources • Appropriate IT • Well-controlled RL costs and risks *(See Framework 3)*
Control mechanisms, dedicated resources, standards, guidelines and maintenance for Managerial RLC* *(section 8.4.2.3.2)* ***Degree of implementation 18 + 8* = 26***	***Description*** • Internal control mechanisms involve the use of a centralised RL facility and performance measurement of staff and external management control involves the use of 3PRL providers with the capability to manage the RL function • Dedicated resources involve the allocation of dedicated staff and managers and the use of a separate RL facility for managerial control or the selection of a 3PRL provider with appropriate human resources for managerial control • Standardise return processes, use return policies as guidelines and centralisation of the RL function ensure that RL staff follow the same standards, rules and procedures for managerial control • Maintaining managerial control enables effective monitoring of the return function to control return volume and trends, processes and products through RL performance measurement, a standard centralised facility and a dedicated RL department ***Requirements*** • RL in/outsourcing decisions, decide on the degree of outsourcing and select a 3PRL provider *(section 6.5.1)* • Use appropriate metrics, standardise and implement performance measurement, create feedback mechanisms and conduct performance monitoring and review *(section 6.7.1)* • Use a separate facility for RL *(section 6.3.8)* • Use a centralised return system and a centralised facility for RL *(section 6.8.4)* • Use a centralised return centre (CRC) *(section 6.8.5)* • Sufficient and appropriate resources for RL and human resource commitment *(section 6.9.1)*	• Strategic importance and commitment to RLM • Strategic implementation of RLM • Well-designed return policy • Well-designed RL process • Well-designed RL network • Appropriate and sufficient resources • Well-developed RL performance management • Well-controlled RL costs and risks *(See Framework 3)*

	• Define formal rules and controls for RL, develop SOPs and manuals, standardise RL processes, publish RL standards and formally implement strategic procedures *(see section 6.9.4)* • Maintain management and staff initiatives, create a full-time RL manager portfolio and assigning a RL manager *(section 6.9.5)* • Establish a RL function *(section 6.9.5)* ***Considerations*** *(section 8.4.2.4)* • Consider return volume for the appropriate dedicated resources to use (such as RL manager or a manager with dual roles) and monitoring return volumes through metrics • Consider the size of the organisation for the level of management involvement • Consider network design for managerial control initiatives • Compare the benefits of using a centralised facility for managerial control against the cost of losing cost efficiency • Consider a 3PRL provider's capabilities and willingness to share information	
SERVICE-SPECIFIC RLM PRACTICES		
Key RLM practices	**Description, requirements and considerations for implementation**	**Related RLM success factors**
Platforms, streamlining and personalisation for SOR communication *(section 8.5.2.1.1)* ***Degree of implementation 18 + 6 = 22***	***Description*** • Establish a telephonic communication platform through human resources, well-established IT systems or outsourcing of the contact centre and establish an electronic communication platform through integrated and well-established IT systems for information sharing via the Internet, website, online system, SMS, WhatsApp and/or emails • Streamlined communication involves continuous updates, speed, consistency, accuracy and proactive information sharing through (1) standardised return communication for correct information about return timeframes and status updates, (2) systems-based communication for real-time return tracking and sharing of status updates and (3) collaborative communication through integrated IT systems with suppliers to share warranty/repair return information • Personalised telephonic communication by providing consumers with assistance to log a return, arranging return collection, informing the consumer about the refund and using a manager to apologise about complaints in the delivery process that resulted in a return ***Requirements*** • Integrative, real-time and responsive IT and IT with information management capabilities *(section 6.3.1)* • Web-based systems for RL, use the Internet and website for RL, integrate Internet and web-based IT with other IT, use collaborative web-based IT and integrate web-based IT with SC partner IT systems *(section 6.3.2)* • Integrate and use ERP, logistics information management systems, ordering systems and CRM systems for RL *(section 6.3.3)* • Use barcode IT for RL *(section 6.3.4)* • Consumer service and support initiatives and communication, information sharing and interaction with consumers *(section 6.4.2)* • Decide on the degree of RL outsourcing, type of RL activities to outsource and type of service providers to select *(section 6.5.1)* • Commit IT, infrastructure and human resources for RL *(section 6.9.1)* • Develop SOPs and manuals for RL, standardise RL processes and implement strategic procedures in RL *(section 6.9.4)* • Assign an expert manager for RL *(section 6.9.5)* ***Considerations*** *(section 8.5.2.3)* • Consider the type of return and product for the use of collaborative communication with suppliers • Consider the size of the organisation for using outsourced contact centres • Consider human resources and IT capabilities for service-orientated RL communication • Consider IT integration capabilities and integration willingness of couriers and suppliers for streamlined communication • Consider consumer regions and preferences for appropriate communication platforms • Consider privacy laws for the feasibility of telephonic and electronic communication	• Strategic importance and commitment to RLM • Well-designed RL process • Appropriate and sufficient resources • Appropriate IT • Well-established SC relationships • Well-established consumer relationships *(See Framework 3)*
SOR processing for a SOR process *(section 8.5.2.1.2)* ***Degree of implementation 6 + 2 = 8***	***Description*** • Instant replacement/exchange dispatch before return receipt demonstrates trust and commitment • Fast/instant refunds to address consumer uncertainties and keep consumers on the shopping site for new purchases ***Requirements*** • Implement a consumer-centric RL processes and consumer service and support initiatives *(section 6.4.2)* ***Considerations*** *(section 8.5.2.3)* • Consider the type of product return (such as wrong delivery due to picking errors) for instant exchange dispatch • Consider the costs of providing instant refunds and exchange dispatch against the benefits of retaining sales/consumers	• Well-designed RL process • Well-established consumer relationships *(See Framework 3)*

	• Consider consumer types for issuing fast refunds since some consumers might be less confident to hand a product return parcel over to a courier driver, not knowing if the product will arrive at the online retailer's facility for a refund	
Preparation, metrics, tools and mystery shopper data for RSP evaluation *(section 8.5.2.2.1)* ***Degree of implementation 14 + 8 = 22***	***Description*** • Prepare for service performance evaluation in RL through standardising RL processes and guidelines for standardised performance measures, training of staff and internal and external systems integration • Use operational and SC metrics with timestamping as a tool to measure return cycle time and consumer metrics with experience measuring toolkits, surveys and managers as tools to measure consumer experience and satisfaction • Use mystery shoppers as data sources to share information about shopping and return experience for evaluating return service performance ***Requirements*** • Use integrative and compatible IT systems *(section 6.3.1)* • Integrating and sharing of IT with SC partners *(section 6.4.1)* • Attain consumer input *(section 6.4.2)* • Coordination and information sharing between functions (section 6.4.3) • Benchmarking, use appropriate KPIs and metrics, establish standardised performance measures, performance monitoring and review, create feedback mechanisms and evaluate performance results *(section 6.7.1)* • Develop SOPs and manuals, standardise RL processes and publish RL standards *(section 6.9.4)* • Assign experienced managers to RL *(section 6.9.5)* • Implement RL training and education *(section 6.9.5)* ***Considerations*** *(section 8.5.2.2.3)* • Consider complaints volume for the use of consumer metrics and tools • Consider IT capabilities for service performance evaluation • Consider IT integration capabilities and integration willingness of SC partners and supplier service level agreements (SLAs) to evaluate return service performance	• Strategic importance and commitment to RLM • Well-designed RL process • Appropriate IT • Skilled and trained staff • Well-developed RL performance management • Well-established functional relationships • Well-established SC relationships • Well-established consumer relationships *(See Framework 3)*
RSP improvement preparation and execution *(section 8.5.2.2.2)* ***Degree of implementation 17 + 10 = 27***	***Description*** • Preparation of return performance service improvements involve staff training and appropriate IT to understand consumer behaviour and experience, appropriate software to capture and share service failures and cross-functional collaborative brainstorming for improvement plans and formalising return procedures and processes • Use various practices and initiatives (see requirements) to execute return service performance improvement focussing on enhancing consumer experience, improving consumer service and improving return processes ***Requirements*** • Appropriate state-of-the-art, integrative, compatible and capable IT for RL *(section 6.3.1)* • Use CRM software for RL *(section 6.3.3)* • Cross-functional teams and functional collaboration, cooperation, coordination, communication and knowledge and information sharing *(section 6.4.3)* • RL in/outsourcing decisions and selection of a 3PRL provider *(section 6.5.1)* • Establish facilities close to the markets and use decentralised facilities for RL *(section 6.8.5)* • Allocate sufficient and appropriate resources for RL and commit financial, IT and human RC in RL *(section 6.9.1)* • Integrate the strategic plan for RL with organisational strategic plans *(section 6.9.4)* • Define RL processes, practices, roles and responsibilities, standardise RL processes and implement strategic procedures *(section 6.9.4)* • Establish a dedicated RL function, implement RL training and education programmes and produce skilled and well-trained staff *(section 6.9.5)* ***Considerations*** *(section 8.5.2.2.3)* • Consider return volume for appropriate return service improvement practices • Consider product type for RL process improvement initiatives • Consider the size of the organisation for using third parties to improve service performance • Consider resource, IT and RL process capabilities for RSP improvement initiatives • Consider the investment requirements for RSP improvement against the benefits of improving return service performance • Consider the resource capabilities and willingness of 3PRL providers to integrate	• Strategic importance and commitment to RLM • Strategic implementation of RLM • Well-developed RL strategies and systems • Well-designed RL process • Well-designed RL network • Appropriate and sufficient resources • Appropriate IT • Skilled and trained staff • Well-established functional relationships • Well-established SC relationships *(See Framework 3)*
Formalisation, service standards and agreements, and service failure reduction for RSP management *(section 8.5.2.2.3)* ***Degree of implementation***	***Description*** • Formalisation for RSP management involves benchmarking RL service standards against FL service standards, creating consumer-focused RL service standards, establishing a consumer service strategy and policy based on RL service standards, establishing SLAs with SC partners based on RL service standards and capturing of service agreements on systems • Managing and monitoring service standards and agreements can be achieved through integrative IT, a database to record service events and monitor compliance, performance measures, RL insourcing to manage service agreements with suppliers, and dedicated resources and centralised facilities to consistently maintain service standards	• Strategic importance and commitment to RLM • Strategic implementation of RLM • Well-developed RL strategies and systems

20 + 10 = 30	• Managing service failures focus on reducing the impact of occurrence of service failures through integrated systems to capture and share service failures internally and externally, RL insourcing and staff training on consumer behaviour, people management and complaints resolutions ***Requirements*** • Use integrative and compatible IT *(section 6.3.1)* • Use WMS and CRM software for RL *(section 6.3.3)* • SC agreements, sharing goals and objectives and integrating IT with SC partners *(section 6.4.1)* • Develop consumer service elements and initiatives, consumer communication, information sharing and interaction, and customer service management *(section 6.4.2)* • Organisational considerations for RL in/outsourcing decisions *(section 6.5.1)* • Performance monitoring and review *(section 6.7.1)* • Use a centralised facility for RL *(section 6.8.4)* • Establish and use a CRC facility *(section 6.8.6)* • Sufficient and appropriate resources for RL and financial, IT and human resource commitment in RL *(section 6.9.1)* • Develop RL strategies *(section 6.9.4)* • Develop formal SOPs and manuals for RL, publish strategic procedures in RL and formally implement strategic procedures in RL *(section 6.9.4)* • Assign experienced managers to RL *(section 6.9.5)* • Implement RL training and education and produce well-managed, -skilled and -trained staff in RL *(section 6.9.5)* ***Considerations*** *(section 8.5.2.3)* • Consider resource, IT and information management capabilities for the implementation of RSP management • Consider the costs of investing in various resources against the benefits of effectively managing service performance in RL • Consider the resource, IT integration capabilities, integration willingness and service agreements of SC partners for effective RSP management • Consider consumer region and preference for the management of service failures since some consumers might prefer human communication for resolving service failures	• Well-designed RL network • Appropriate and sufficient resources • Appropriate IT • Skilled and trained staff • Well-developed RL performance management • Well-controlled RL costs and risks • Well-established SC relationships • Well-established consumer relationships *(See Framework 3)*
COST-SPECIFIC RLM PRACTICES		
Key RLM practices	**Description, requirements and considerations for implementation**	**Related RLM success factors**
Cost determination and understanding RCE tools *(section 8.6.2.1.1)* ***Degree of implementation 12 + 6 = 18***	***Description*** • Cost determination RCE tools involve the use of various measures/tools, including appropriate cost metrics (e.g. handling cost per product return), adding disposition decisions to strategic planning, ring-fencing return costs through accounting separation and sophisticated accounting systems with separate return modules, to effectively determine RL costs • Cost understanding RCE tools to understand the financial impact of RL costs can include appropriate cost metrics (e.g. return rate versus sales percentage), internal information sharing through IT systems and a dedicated manager for greater cost visibility, and capable 3PRL providers with specialised return software ***Requirements*** • Integrative IT and IT with information management capabilities *(section 6.3.1)* • Special return software *(section 6.3.5)* • Information sharing and communication between functions *(section 6.4.3)* • Decide on the types of 3Ps for RL outsourcing and select a 3PRL provider *(section 6.5.1)* • Link disposition strategies to RL strategies *(section 6.6)* • Establish and use appropriate metrics *(section 6.7)* • Use appropriate accounting techniques and systems for RL, understand RL costs, identify RL costs and implement cost measures *(section 6.9.2)* • Integrate strategic plans for RL with organisational strategic plans *(section 6.9.4)* • Assign a RL expert manager *(section 6.9.5)* ***Considerations*** *(section 8.6.2.4)* • Consider IT and accounting capabilities for identifying the appropriate RCE tools	• Strategic implementation of RLM • Well-developed RL strategies and systems • Appropriate IT • Well-developed RL performance management • Well-controlled RL costs and risks • Well-established functional relationships *(See Framework 3)*
Cost identification and assessment for RCE execution *(section 8.6.2.1.2)* ***Degree of implementation 11 + 3 = 14***	***Description*** • Cost identification for the execution of return cost evaluation involves the identification of standard RL costs and hidden costs using RCE tools • Cost assessment focuses on assessing the cost implications of RL practices, including the cost assessments of free returns versus fee returns (return charges) through cost metrics, return leniency through cost tracking, accepting returns for inexpensive products through RCE tools and performing disposition/recovery activities through RCE tools ***Requirements*** • Understand the economic factors for disposition decisions and assessing disposition options *(section 6.6.1)* • Use appropriate metrics for RL *(section 6.7)*	• Well-developed RL strategies and systems • Well-developed RL performance management • Well-controlled RL costs and risks *(See Framework 3)*

	• Perform RL cost estimations and cost/benefit analyses, consider factors that can influence RL costs, identify RL costs and identify hidden RL costs *(section 6.9.2)* ***Considerations*** *(section 8.6.2.4)* • Consider the return and sales volume for assessing the costs of return leniency • Consider the type of product for the identification of disposition costs and cost assessment for return acceptance • Consider the product value for assessing the cost of return acceptance and disposition options • Consider organisation type for the identification of RL costs (e.g. multichannel retailers can use stores to eliminate collection and transport costs) • Consider product disposition capability for the cost assessment of disposition options • Consider courier types and charges for the return transport cost identification and cost assessment for return acceptance	
COR transportation for COR processes *(section 8.6.2.2.1)* ***Degree of implementation 13 + 4 = 17***	***Description*** • Cost-orientated return transportation involves economies of scale through bulk/volume transportation using 3PLs and integrated transport management systems with transporters • Cost-orientated return transportation involves cost saving through appropriate network design, decentralised facilities for shorter distances, a separate RL facility next to the main facility or a centralised facility for fewer trips. ***Requirements*** • Use TMS for RL *(section 6.3.3)* • Integrate and share information and IT with SC partners *(section 6.4.1)* • Decide on the type of RL service and third party for RL outsourcing *(section 6.5.1)* • Use a separate facility at a single location *(section 6.8.2)* • Use a central facility/location for RL *(section 6.8.4)* • Establish a decentralised network, use decentralised facilities for RL and decentralise specific RL processes *(section 6.8.5)* ***Considerations*** *(section 8.6.2.4)* • Consider return volume for the selection of appropriate COR transportation initiatives • Consider product margin to select the appropriate network structure • Consider IT capabilities for bulk transportation initiatives • Consider facility/location strategies for the implementation of COR transportation • Consider the impact of environmental disruptions (such as Covid) on the network design for COR transportation	• Well-designed RL network • Appropriate IT • Well-controlled RL costs and risks • Well-established SC relationships *(See Framework 3)*
Return avoidance and cost absorption for RCM mitigation *(section 8.6.2.3.1)* ***Degree of implementation 7 + 3 = 10***	***Description*** • Return avoidance for RCM mitigation focusses on avoiding RL costs through a zero-return strategy, involving a no-collection return if the return cost exceeds the refund value of an inexpensive product, and a zero-inventory inventory strategy, involving a 4PL strategy by selling products on behalf of suppliers without carrying the stock and the RL costs of returns • Cost absorption for RCM mitigation involves the avoidance of RL costs by absorbing RL costs into the selling price of products through activity-based costing and a separate account for RL to effectively gauge return transportation costs ***Requirements*** • SC communication and information sharing *(section 6.4.1)* • Use costing techniques for RL, perform cost value estimations and identify RL costs *(section 6.9.2)* • Develop and implement return avoidance strategies *(section 6.9.3)* ***Considerations*** *(section 8.6.2.4)* • Consider courier types and charges for the implementation of a zero-return strategy • Consider consumer protection laws for the feasibility of a zero-return strategy	• Consumer-centric return prevention • Well-controlled RL costs and risks • Well-established SC relationships *(See Framework 3)*
Formalisation, accounting and cost monitoring for RCM execution *(section 8.6.2.3.2)* ***Degree of implementation 13 + 6 = 19***	***Description*** • Formalisation for the management and control of RL costs involves the (1) prioritisation of RLM by including RL in the design of logistics processes, developing policies and procedure for RLM and appointing a dedicated RL manager, (2) development of a cost control strategy and (3) development of cost control standards by benchmarking RL costs and identifying an acceptable ratio of RL costs per total logistics costs • Accounting for RCM execution involves accounting separation initiatives, like a dedicated RL department and ring-fencing of RL costs, to manage RL costs and the use of 3PRL providers with accounting expertise to perform account reconciliation for return claims • RL cost monitoring can be performed through appropriate cost metrics, regular cost/benefit analysis to ensure that the benefits of RL practices (e.g. economies of scale through 3PL transportation) outweigh the costs (of outsourcing) and the use of cost aggregation software ***Requirements*** • Decide on the type of RL service and third party for RL outsourcing, and select a 3PRL provider *(section 6.5.1)* • Strategic benchmarking, develop performance objectives and appropriate metrics, standardise performance measures, monitor performance and evaluate performance results *(section 6.7.1)* • Use financial and accounting statements for RL, apply accounting techniques and systems for	• Strategic importance and commitment to RLM • Strategic implementation of RLM • Well-developed RL strategies and systems • Appropriate and sufficient resources • Well-developed RL performance management • Well-controlled RL costs and risks *(See Framework 3)*

	RL, perform cost/benefit analyses, implement cost policies, controls and measures *(section 6.9.2)* • Develop strategic plans and strategies for RL and integrate RL strategic plans and strategies with organisational strategic plans strategies *(see section 6.9.4)* • Prioritise strategic procedures in RL, develop a formalisation strategy and develop formal rules and controls for RL *(see section 6.9.4)* • Establish sufficient leadership for RL, create a full-time RL manager portfolio and assign experienced managers to RL *(section 6.9.5)* • Establish a dedicated RL function *(section 6.9.5)* ***Considerations*** *(section 8.6.2.4)* • Consider return volume for the cost/benefit analyses of RL practices • Consider return and sales volume and network design for establishing appropriate RL cost benchmarks • Consider IT capabilities for cost aggregation software and accounting capabilities for accounting cost management initiatives	

Source: Compiled by the researcher

Table 9.7 shows a detailed overview of Framework 4 with the key RLM practices and the related description, requirements, considerations and RLM success factors. The framework can be used by online retailers to identify priority RLM practices, key prevention and control specific RLM practices, key service specific RLM practices and key cost specific RLM practices, which they can implement for the effective RLM of consumer returns. Additionally, online retailers can determine key aspects of each RLM practice (given in the description), requirements (support RL practices), considerations (parameters), and related RLM success factors (from Framework 3) for the successful implementation of the key RLM practice. For example, an online retailer can see that the implementation of the priority RLM practice of preventative gatekeeping (marked with a blue dot for ease of reference) involves (1) the descriptions of requesting photo evidence and using a manager for sound gatekeeping decisions, (2) the requirements of consumer communication, information sharing and interaction, gatekeeping practices for prevention of returns and the assignment of an experienced manager, and (3) the considerations of consumer protection legislation and product condition. Furthermore, the online retailer can note the related RLM success factors of strategic importance and commitment to RLM, consumer-centric return prevention, well-controlled RL costs and risks and well-established consumer relationships for successful preventative gatekeeping.

Other key observations can be made from the framework, which online retailers can consider for the implementation of RLM practices. In terms of the priority RLM practices, most key practices associate with the prevention and control and cost themes, showing a strong correlation between return prevention and control practices and cost practices. Most priority RLM practices relate to the RL process, demonstrating the significance of understanding RL processes for the effective RLM of consumer returns (see Framework 1 in section 9.4). Furthermore, the most significant priority RLM practice include pre-return inspection, which associate with prevention and control, service and cost practices (first practice presented in Table 9.7). Therefore, online retailers can prioritise the implementation of pre-return inspection but should first identify the requirements and considerations to

determine the feasibility of implementing pre-return inspection. Regarding specific RLM practices, online retailers can implement key RLM practices associated with prevention and control, service or cost to address specific RLM constraints and adoption of appropriate RLM success factors.

For the degree of implementation per RLM practice category, the framework illustrates that the *most complex RLM priority practice* (and overall, most complex RLM practice) includes *effective product disposition and recovery* (marked with a red dot), involving multiple descriptions, requirements, considerations and RLM success factors. Therefore, online retailers need to identify various initiatives, requirements and considerations and adopt several RLM success factors before product disposition and recovery can be implemented successfully. Furthermore, from the priority RLM practices, an *optimised RL process* associates with the *most RLM success factors* (shown with an asterisk), indicating that online retailers need to develop an understanding of effective RLM before attempting the optimisation of the RL process.

Concerning the degree of key *prevention and control specific RLM practices*, the framework demonstrates that *product return visibility, segregation and inventory management* for operational RLC (marked with a purple dot) can be the *most complex* key RLM practice to implement. Therefore, online retailers need to identify and implement various practices, requirements and considerations for operational RLC. However, *control mechanisms, dedicated resources, standards and guidelines and maintenance* for managerial RLC associates with the *most RLM success factors* (marked with an asterisk), indicating that online retailers need to develop an understanding of the requirements of effective RLM before attempting to implement managerial RLC practices.

For the *service specific RLM practices*, the framework shows that most key service RLM practices can be complex. However, the *most complex* key service RLM practice involves the *formalisation, standards and agreements and service failure reduction* for RSP management (marked with a purple dot), meaning that online retailers need to identify various initiatives, requirements and considerations and adopt several RLM success factors before effective RSP management can be implemented successfully. The *most complex key cost specific RLM practice* includes *formalisation, accounting and cost monitoring* for RCM execution (marked with a purple dot). Evidently, online retailers should identify and implement various practices, requirements and considerations, and adopt various RLM success factors for effective RCM execution.

In Framework 3 (section 9.5) it was mentioned that RLM success factors can also be important in terms of facilitating the implementation of RLM practices. Therefore, from the findings presented in Table 9.7, the most important RLM success factors for the implementation of twelve key RLM practices,

included a well-designed RL process, appropriate and sufficient resources, well-controlled RL costs and risks and well-established SC relationships, which means online retailers can also take these RLM success factors into consideration for the effective RLM of consumer returns. Nevertheless, before online retailers consider RLM success factors based on the degree of support and implement RLM practices based on the degree of implementation, they can benefit from understanding and justifying the significance of effective RLM, which will be provided in Framework 5 next.

9.8 FRAMEWORK 5 – UNDERSTAND AND JUSTIFY THE SIGNIFICANCE OF EFFECTIVE RLM

Since the adoption of RLM success factors (Framework 3) and implementation of RLM practices (Framework 4) requires substantial effort and commitment, online retailers might be reluctant to adopt and implement effective RLM. In fact, Wang, Dang *et al.* (2021:2) mentioned that due to the complexity of RLM, many online retailers refrain from adopting and implementing RLM. However, effective RLM can be vital for the survival of online retailers (Anderson, 2020:11). Despite the significance of effective RLM, many online retailers still fail to recognise the importance of RL and RLM, and view consumer returns as a cost and necessary evil to normal business (Bozzi *et al.* 2022:27; Chen *et al.* 2017:252; Dobson, 2023:2; Schooling, 2023:1). Therefore, understanding and justifying the effective RLM of consumer returns can be critical for the adoption and implementation of effective RLM, which Framework 5 aims to achieve. As mentioned in section 9.3.5, Framework 5 consists of three parts, including Framework 5A – Understand the significance of RLM, Framework 5B – Justify the adoption of RLM success factors, and Framework 5C – Justify the implementation of RLM practices. Figure 9.9 provides a broad overview of Framework 5.

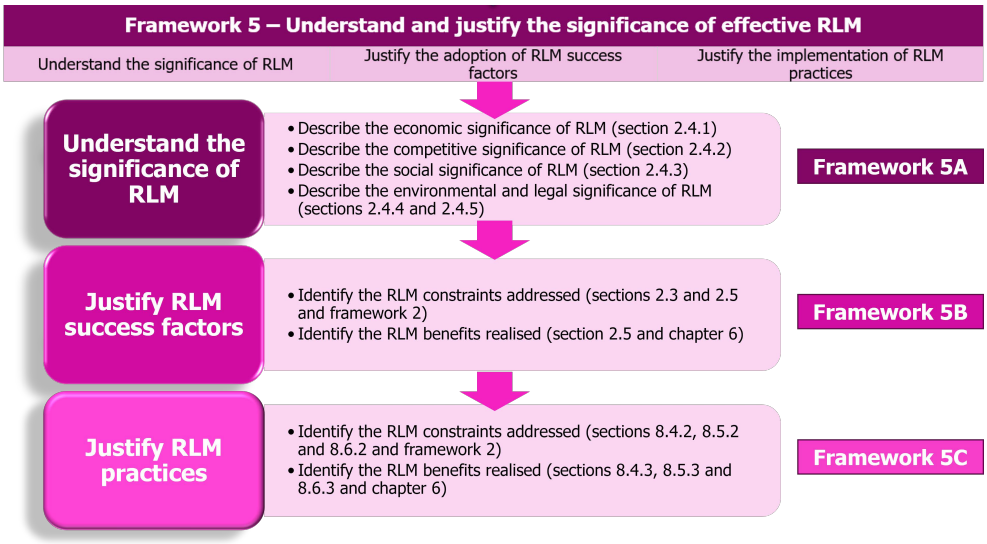


Figure 9.9 Framework 5 - Understand and justify the significance of effective RLM
Source: Compiled by the researcher

Figure 9.9 shows the part of the main framework (see Figure 9.4) associated with Framework 5, which consists of three sub-frameworks, including Framework 5A that involves understanding the *significance of RLM* with related descriptions and references, Framework 5B that involves the *justification of RLM success factors* with references to the RLM constraints addressed and RLM benefits realised, and Framework 5C that involves the *justification of RLM practices* with references to the RLM constraints addressed and RLM benefits realised. In the subsequent sections, Frameworks 5A, 5B and 5C will be presented and discussed.

9.8.1 Framework 5A – Understand the significance of RLM

Framework 5A focuses on providing online retailers with a greater understanding of the significance of RLM, which might motivate them to pay more attention to the RLM of consumer returns. Specifically, Framework 5A involves descriptions of the economic, competitive, social, environmental and legal *significance factors* of RLM (identified in section 2.4) that generally motivate organisations to pay attention to and implement RL processes and practices. The framework includes (1) an explanation of the different significance factors, (2) the impact on other factors in terms of enhancing/enabling other significance factors, and (3) the focus areas in terms of other frameworks to focus on for a greater understanding of the significance factor.

Table 9.8 provides a detailed overview of Framework 5A, including the RLM significance factors and the description of the RLM significance factors.

Table 9.8 Framework 5A - Understand the significance of RLM

RLM SIGNIFICANCE FACTORS	DESCRIPTION OF RLM SIGNIFICANCE FACTORS
Economic significance •Capture economic value •Financial gains •Increase profits •Cost savings •Increase economic power •Improve the overall bottom line *(section 2.4.1)*	***Explanation*** •Understanding the economic value of RLM motivates the adoption of RLM to recapture economic value •Financial gains and profits can be increased by product disposition and product recovery activities •Cost savings can be realised through product/material reuse •Economic power can be increased through the adoption of a circular economy approach that associates with the reuse of resources •The overall bottom line can be improved through the adoption and implementation of disposition and product recovery activities ***Impact on other factors*** •Contributes to the competitive significance by bringing a competitive advantage •Contributes to the environmental significance by reducing resource usage and waste ***Focus areas*** •Understand RL definition and the disposition process (Framework 1) •Identify and investigate RLM financial constraints (Framework 2) •Understand strategic RLM success factors (Framework 3) •Identify priority and cost specific RLM practices (Framework 4) •Confirm economic significance in Frameworks 5B and 5C
Competitive significance •Competitiveness •Consumer satisfaction •Improve consumer service •Increase consumer trust and loyalty	***Explanation*** •Competitiveness associates with improved consumer satisfaction and service in RL •Providing consumers with a better service through RLM can discourage new entrants to the market and provide competitive advantage •Improving consumer satisfaction levels through RLM increase consumer retention

• Discourage future entrants to the market • Increase market share • Competitive pressure • Consumer retention and confidence • Competitive advantage • Prevent competitor access *(section 2.4.2)*	• RLM can positively impact consumer buying behaviour and improve market share • Competitive pressures and consumer satisfaction motivates the adoption of return leniency • RLM enables the implementation of consumer-centric processes and practices that increase competitiveness, consumer confidence and consumer satisfaction • Focus on product disposition and recovery for a competitive advantage in the secondary markets ***Impact on other factors*** • Contributes to the economic significance by increasing profits • Contributes to the social significance by improving consumer relationships • Contributes to the legal significance by avoiding non-compliance of laws • Contributes to the environmental significance by enhancing sustainability, reducing environmental damage and improving a green image ***Focus areas*** • Understand RL definition, pre-receipt RL processes and post-receipt RL processes (Framework 1) • Identify and investigate RLM external constraints (Framework 2) • Understand strategic, design, control and relational RLM success factors (Framework 3) • Identify service specific RLM practices (Framework 4) • Confirm competitive significance in Frameworks 5B and 5C
Social significance • Consumer pressure • Corporate social responsibility (CSR) • Corporate citizenship • Consumer requirements and awareness rights • Consumer expectations and awareness of the environment • Demonstrate commitment and respect for environment and society • Align ethical values with environmentally conscious consumers *(section 2.4.3)*	***Explanation*** • Understanding consumer requirements can enhance the implementation of effective RLM • Due to legislation, like the CPA (consumer protection act), consumers are more aware about their rights to return products • Consumers expect socially responsible practices and consumer-centric processes and practices • Implementing lenient return policies can demonstrate CSR • Consumers expect of environmentally responsible practices • Adopting environmentally responsible practices through RLM can increase corporate citizenship • Corporate citizenship involves social responsibility by meeting of economic, ethical and legal values of stakeholders • RLM adoption shows commitment to society and the environment ***Impact on other factors*** • Contributes to the competitive significance by satisfying consumer demand • Contributes to the legal significance by complying with laws • Contributes to the environmental significance by reducing waste ***Focus areas*** • Understand consumer returns, pre-receipt RL processes and post-receipt RL processes (Framework 1) • Identify and investigate RLM external constraints (Framework 2) • Understand strategic and relational RLM success factors (Framework 3) • Identify priority and service specific RLM practices (Framework 4) • Confirm social significance in Frameworks 5B and 5C
Legal significance • Regulation to implement RL • Government and juridical regulations for product take-back, recovery and recycling • Strict environmental laws • Extended producer responsibility mandates to accept products and engage in recover • Recycling quotas and packaging laws • Consumer protection laws to accept product returns • Compliance and respect for regulations and laws *(section 2.4.4)*	***Explanation*** • Legislation represents an external factor that motivates RLM adoption • Governments can impose legislation that drives product recovery and take-back programmes • Legislation that drives RLM adoption associates with the environment and consumer rights • Consumer right laws enable online consumers to return or cancel orders that drive online retailers to implement RLM • Adopting RLM demonstrates compliance and respect for legislation ***Impact on other factors*** • Contributes to the economic significance by avoiding legal costs • Contributes to the competitive significance by enhancing competitiveness • Contributes to the social significance by improving brand image • Contributes to the environmental significance by protecting the environment ***Focus areas*** • Understand RL definition, consumer returns and the disposition process (Framework 1) • Identify and investigate RLM operational and managerial constraints (Framework 2) • Understand strategic, design and control RLM success factors (Framework 3) • Identify priority, and prevention and control specific RLM practices (Framework 4) • Confirm legal significance in Frameworks 5B and 5C
Environmental significance • Concerns with the environment • Sustainable development • Reduce impact on the environment • Green innovation • Reduce waste • Reduce environmental damage • Conserve natural resources	***Explanation*** • Concerns with the environment motivates organisations to explore product recovery initiatives • RLM enables the reduction of waste and harm to the environment • RLM enables adoption of a circular economy to reduce resource consumption • Environmentally sustainable practices through RLM adoption improve environmental performance and image and avoid environmental sanctions and penalties ***Impact on other factors*** • Contributes to the economic significance by reducing costs

• Improve green image • Environmentally sustainability • Avoid environmental penalties *(section 2.4.5)*	• Contributes to the competitive significance by bringing a competitive advantage • Contributes to the social significance by enhancing CSR performance • Contributes to the legal significance by complying with legislation ***Focus areas*** • Understand RL definition, consumer returns and the disposition process (Framework 1) • Identify and investigate RLM operational and managerial constraints (Framework 2) • Understand strategic, design, resource and control RLM success factors (Framework 3) • Identify priority RLM practices (Framework 4) • Confirm environmental significance in Frameworks 5B and 5C

Source: Compiled by the researcher

Table 9.8 shows a detailed overview of Framework 5A with the RLM significance factors and related description, which include an explanation of the significance, impact on other significance factors and focus areas from other frameworks. The framework can help online retailers appreciate the economic, competitive, social, legal and environmental significance of RLM, which can drive them to understand RL, consumer returns and RL processes (Framework 1 in section 9.4), identify and investigate specific RLM constraints (Framework 2 in section 9.5), understand various RLM success factors (Framework 3 in section 9.6) and identify and implement specific RLM practices (Framework 4 in section 9.7). Additionally, online retailers can confirm the economic, competitive, social, legal and environmental significance of RLM by exploring the justification of RLM success factors (Framework 5B in section 9.8.2) and justification of RLM practices (Framework 5C in section 9.8.3)

Subsequently, Framework 5A forms a foundation for the motivation of RLM aiming on creating more awareness of the importance of RLM. In the next section, the justification of the adoption of RLM success factors will be provided.

9.8.2 Framework 5B – Justify the adoption of RLM success factors

Framework 5B focuses on providing online retailers with the justification of adopting RLM success factors, emphasising the importance of RLM success factors for the effective RLM of consumer returns. The RLM success factors relate to Framework 3 (section 9.6), which included strategic, design, resource, control and relational RLM success factors (identified from section 2.5 and chapter 6). The justification for the adoption of RLM success factors entails the (1) mitigation of RLM constraints, including financial, operational, organisational and external constraints (identified from sections 2.3 and 2.5, chapter 6 and Framework 2), and (2) realisation of RLM benefits, including economic, operational, organisational, environmental, social, market and SC benefits (representing the outcomes identified from section 2.5 and chapter 6) through the adoption of the RLM success factors. Furthermore, the framework shows the total number of RLM constraints addressed and benefits realised with the adoption of a specific success factor, which not only confirms the importance (degree of importance in Table 9.9) of adopting the RLM success factors but also help online retailers identify

the most beneficial RLM success factors. Additionally, the framework can enable online retailers that identified specific RLM constraints to identify appropriate RLM success factors that they can adopt for the effective RLM of consumer returns.

Table 9.9 presents a detailed overview of Framework 5B, including the RLM success factors (with references and degree of importance), RLM constraints addressed and RLM benefits realised.

Table 9.9 Framework 5B - Justify the adoption of RLM success factors

JUSTIFICATION OF ADOPTING STRATEGIC RLM SUCCESS FACTORS				
RLM success factors	**RLM constraints addressed**		**RLM benefits realised**	
Strategic importance and commitment to RLM *(Sections 2.3, 2.5.1.1 and 6.9.5.2 and Framework 2)* ***Degree of importance – 35 + 23 = 58*** *(the first number represents the number of constraints addressed and the second number represents the number of benefits realised)*	***Financial constraints*** •Heavy financial investment •Lack of investment in resources •Lack of funding •Financial instability, capacity and investment risks •Losing and attracting new investors •Raising additional capital •Inaccurate view of financial performance •High RL cost •Loss of profits ***Operational constraints*** •Limited forecasting and planning •Poor return process and RL process failures •Poor product return decision making •Product quality problems and risks •Inadequate information systems and technology •Lack of infrastructure and development	***Organisational constraints*** •Lack of awareness about the importance of RLM •Lack of top management commitment •Management inattention •Resistance to change •Management risks •Culture risks •Lack of strategic planning •Lack of RL strategy •Lack of RL policies •Poor performance measurement and management •Loss of managerial control •Poor accountability and reporting •Lack of staff training and education •Lack of internal coordination and integration •Labour risk of unskilled and untrained staff ***External constraints*** •Lack of support from SC parties •Lack of SC collaboration •Opportunistic buying behaviour •Fraudulent return behaviour •SC risks	***Economic benefits*** • Improve profits • Realise cost savings • Improved bottom line ***Operational benefits*** • RL process efficiency and effectiveness • Enable successful RL processes • Improve forecasting ***Organisational benefits*** • Facilitate strategic decision-making • Facilitate successful implementation of RLM • Establish a successful RL function • Enable the development of RL capabilities and expertise • Facilitate skills enhancement • Facilitate functional integration	• Facilitate commitment of resources • Facilitate performance monitoring and evaluation • Improve RL performance ***Social benefits*** • Enhance social responsibility • Enhances corporate image ***Market-related benefits*** • Increase sales • Increase consumer satisfaction and loyalty • Improve consumer relationships • Provide a competitive advantage ***SC benefits*** • Enhance SC competitiveness • Facilitate management of SC relationships
Strategically implemented RLM *(Sections 2.3 2.5.1.2 and 6.5 and Framework 2)* ***Degree of importance – 42+ 44 = 86***	***Financial constraints*** •Heavy financial investment •Lack of investment in resources •Financial instability, capacity and investment risks •Losing and attracting new investors •Raising additional capital •High RL cost •Poor cost visibility and hidden costs •Loss of money ***Operational constraints*** •Poor product return visibility •Limited forecasting and planning •Unpredictable quality and condition of returned products •Demand and forecasting risks •Product quality risks •Inventory risks •Inadequate information systems and technology •Lack of infrastructure and	***Organisational constraints*** •Lack of awareness about the importance of RLM •Lack of top management commitment •Management inattention •Resistance to change •Management risks •Culture risks •Lack of strategic planning •Lack of RL strategy •Lack of RL policies •Poor accountability and reporting •Lack of staff training and education •Labour risk of unskilled and untrained staff •Lack of internal coordination and integration •Silo mentality and internal autonomy ***External constraints*** •Lack of support from SC parties •Lack of SC collaboration •Outsourcing and SC risks •Poor return experience	***Economic benefits*** • Cost savings/reduction • Cost effectiveness and efficiency • Profitability • Lower investment costs • Reduce assets • Cost and asset recovery • Economies of scale ***Operational benefit*** • Reduce product return uncertainty • Improve product return visibility • RL process efficiency and speed • Simplify the RL process • Facilitate operational planning • Improve operational efficiency • Enable FL/RL integration ***Organisational benefits*** • Enable RL implementation	• Improve information management • Support facility/location strategies ***Environmental benefits*** • Environmental protection • Compliance of laws ***Social benefits*** • Improve corporate and green image • Stakeholder satisfaction ***Market benefits*** • Increase sales and market share • Consumer satisfaction • Competitive advantage • Consumer service and responsiveness • Enhance consumer loyalty and retention • Improve consumer relationships ***SC benefits*** • Improve SC relationships

	development •Technology and data management risks •Manual operations and poor systems	•Unmet expectations and dissatisfaction •Consumer frustration and anger •Consumer uncertainty •Service failures •Reputational damage and risk •Loss of sales	• Improve RL expertise and capabilities • Focus on core competency • Reduce resources and risks • Enable strategic control	and communication • Facilitate SCM and integration • Improve SC collaboration, visibility, transparency and efficiency
Well-developed RL strategies and systems *(Sections 2.3, 2.5.1.3, 6.6.1 and 6.9.4 and Framework 2)* ***Degree of importance – 40 + 38 = 78***	***Financial constraints*** •Lack of investment in resources •Lack of funding •High RL cost •Loss of profits ***Operational constraints*** •Poor return process and RL process failures •Obsolete stock •Poor/no recovery •Loss of product, product control and product value •Contaminated and disorganised inventory •Inventory risks •Stockpiling of returns •Poor product return decision making •High and unnecessary returns •Inadequate information systems and technology •Lack of infrastructure and development	***Organisational constraints*** •Lack of awareness about the importance of RLM •Lack of top management commitment •Management inattention •Resistance to change •Management and culture risks •Lack of strategic planning •Lack of RL strategy •Lack of RL policies •Restrictive policies •Poor return policies •Poor performance measurement •Loss of managerial control •Poor accountability and reporting •Lack of internal coordination and integration •Silo mentality and internal autonomy ***External constraints*** •Lack of SC collaboration •Lack of SC information sharing •SC risks •Market liabilities •Brand/brand image damage •Reputational damage and risk	***Economic benefits*** • Economic benefits and performance • Increase budget & funding • Increase revenue/profits • Cost savings • Cost efficiencies and effectiveness • Cost and asset recovery • Improve bottom line ***Operational benefit*** • Improve operational performance, flexibility and efficiency • Enhance RL process efficiency, speed and effectiveness • Reduce inventory ***Organisational benefit*** • Improve RL performance and capabilities • Reduce resource requirements • Facilitate RL implementation and standardisation • Enable return prevention	***Environmental benefits*** • Improve environmental performance and protection • Reduce raw material use and waste • Enhance sustainability • Compliance with laws ***Social benefits*** • Enhance corporate image and reputation • Improve social performance ***Market benefits*** • Increase market share, sales and opportunities • Competitive advantage • Enhance consumer service & responsiveness • Consumer satisfaction • Brand protection • Increase consumer relationships ***SC benefits*** • Facilitate SC integration • Improve SC performance

JUSTIFICATION OF ADOPTING DESIGN RLM SUCCESS FACTORS

RLM success factors	RLM constraints addressed		RLM benefits realised	
Well-designed return policy *(Sections 2.5.2.1, 6.4.2 and 6.9.3 and Framework 2)* ***Degree of importance – 25 + 19 = 44***	***Financial constraints*** •Loss of money and high RL cost risks •Loss of profits and margin •Loss of sales ***Operational constraints*** •Poor product return visibility •Limited forecasting and planning •Unpredictable quality and condition of returned products •Demand and forecasting risks •Product quality risks •Poor return process and RL process failures	***Organisational constraints*** •Lack of RL policies •Restrictive policies •Poor return policies •Internal preservation and strict returns ***External constraints*** •Opportunistic buying behaviour •Fraudulent return behaviour •High fraudulent and ineligible returns •Poor return experience •Unmet expectations and dissatisfaction •Loss of consumer confidence and trust •Loss of sales, market share and consumers	***Economic benefit*** • Higher profits • Cost reduction advantages ***Operational benefits*** • RL process efficiency • Reduce RL process cycle time • Reduce fraudulent returns ***Organisational benefit*** • Improve RL performance • Facilitate return prevention and avoidance ***Social benefit*** • Good reputation • Enhance corporate/brand image	***Market benefits*** • Increase sales and demand • Improve consumer service and experience • Competitive advantage • Enhance consumer satisfaction • Enhance consumer retention, loyalty and trust • Demand satisfaction • Enhance consumer relationship management
Well-designed RL process *(Sections 2.5.2.2, and 6.9.4 and Framework 2)* ***Degree of importance – 34 + 38 = 72***	***Financial constraints*** •Raising additional capital •High RL cost •Indirect expenses •Loss of money and high RL cost risks •Loss of profits and margin •Loss of sales ***Operational constraints*** •Product return uncertainties •Poor product return visibility •Limited forecasting and planning	***Organisational constraints*** •Lack of awareness about the importance of RLM •Lack of top management commitment •Management inattention •Lack of internal coordination and integration •Silo mentality and internal autonomy •Poor internal information sharing ***External constraints*** •Lack of SC collaboration	***Economic benefit*** • Realise cost savings • Enhance cost effectiveness • Higher profits • Financial control and minimise losses ***Operational benefits*** • Increase return visibility • RL process and operational efficiency and effectiveness • Speedy return process • Reduce returns and	• Support internal integration • Facilitate return prevention and avoidance ***Environmental benefits*** • Reduce environmental impact • Improve environmental performance and responsibility ***Social benefits*** • Enhance green image

	•Poor return process and RL process failures •Demand and forecasting risks •Inadequate information systems and technology •Manual operations and poor systems •Lack of infrastructure and development	•Lack of SC information sharing •Lack of SCI •Opportunistic buying behaviour •Fraudulent return behaviour •High fraudulent and ineligible returns •Poor return experience •Unmet expectations and dissatisfaction •Consumer frustration and anger •Consumer uncertainty •Loss of consumer confidence and trust	uncertainties • Increase operational flexibility and control • Simplify and support RL processes • FL/RL integration ***Organisational benefit*** • Facilitate RL system development • Enable RL innovation initiatives • Enable RL function control • Improve RL performance • Facilitate RL decision making	***Market benefits*** • Competitive advantage • Increase consumer satisfaction and sales • Increase consumer loyalty and trust • Consumer retention • Improve consumer service and integration ***SC benefits*** • Enhance SC visibility and information sharing • Reduce SC uncertainties • Improve SC performance and integration
Well-designed RL network *(Sections 2.5.2.3 and 6.8.1 and Framework 2)* ***Degree of importance – 29 + 25 = 54***	***Financial constraints*** •High RL cost and risks •Loss of money •Loss of profits ***Operational constraints*** •Poor product return visibility •Product return uncertainties •Product quality risks •Inventory risks •Poor return process and RL process failures •Obsolete stock •Poor/no recovery •Loss of product, product control and product value •Contaminated and disorganised inventory •Stockpiling	•Poor IT systems •Lack of infrastructure and development ***Organisational constraints*** •Management inattention •Loss of managerial control •Poor performance measurement and management •Lack of staff training and education •Labour risk of unskilled and untrained staff ***External constraints*** •Lack of SC collaboration •Lack of SC information sharing •SC risks •Consumer uncertainty •Poor communication	***Economic benefits*** • Realise cost savings • Higher profits • Enhance cost effectiveness • Economies of scale • Optimised value recovery ***Operational benefits*** • Reduce product return uncertainty • Improve RL and operational efficiency • Speedy returns and shorter lead times • Increase RL flexibility • Optimise facility capacity • Optimise network design • Increase network control	***Organisational benefits*** • Improve performance evaluation • Enable RL implementation • Support decision making ***Environmental benefits*** • Reduce pollution ***Market benefits*** • Consumer convenience and satisfaction • Enhance consumer responsiveness • Consumer coordination and communication ***SC benefits*** • Improve SC information sharing and SCM

JUSTIFICATION OF ADOPTING RESOURCE RLM SUCCESS FACTORS

RLM success factors	RLM constraints addressed		RLM benefits realised	
Appropriate and sufficient resources *(Sections 2.5.3.1, 6.9.1, 6.9.5 and Framework 2)* ***Degree of importance – 33 + 41 = 74***	***Financial constraints*** •Heavy financial investment •Lack of investment in resources •Lack of funding •Raising additional capital ***Operational constraints*** •Product return uncertainties •Poor visibility and forecasting •Poor IT systems •Lack of infrastructure and development •Technology and data management risks •Manual operations and poor systems •Unpredictable quality and condition of returned products •Poor/no recovery •Poor return process and RL process failures •Demand and forecasting risks •Product quality risks •Inventory risks	***Organisational constraints*** •Lack of commitment •Management inattention •Lack of staff training and education •Labour risk of unskilled and untrained staff •Management risks •Lack of internal coordination and integration ***External constraints*** •Lack of SC collaboration •Lack of SC information sharing •Lack of SCI •SC risks •Poor communication •Service failures •Loss of consumer confidence and trust •Unmet expectations and dissatisfaction •Reputational damage and risk	***Economic benefits*** • Support financial resources • Increase funding • Cost savings • Investment reductions • Increase revenue/profits • Increase cost control • Increase asset recovery • Reduce investment in inventory • Improve economic performance • ***Operational benefits*** • RL process efficiency and effectiveness • Facilitate IT implementation • Support RL processes • Enhance product return visibility • Reduce product returns • Improve operational performance • Improve RL process • Facilitate FL/RL integration	***Organisational benefits*** • Support human resources • Improve RL performance, innovation and capabilities • Internal communication and integration • Improve FM • Successful RL function • Enable RL implementation • Support skills and training • Clear roles/responsibilities ***Environmental benefits*** • Environmental protection • ***Social benefits*** • Improve corporate image ***Market benefits*** • Attain a competitive advantage • Improve consumer service & responsiveness • Increase consumer satisfaction & loyalty • Facilitate CI ***SC benefits*** • SC trust, integration and transparency • Improve SC efficiency
Appropriate IT *(Sections 2.5.3.2 and 6.3.1 and*	***Financial constraints*** •High RL cost •Indirect expenses	***Organisational constraints*** •Lack of awareness about the importance of RLM	***Economic benefits*** • Realise cost savings • Improve cost effectiveness	• Improve information management • Improve internal

Framework 2) ***Degree of importance – 43 + 50 = 93******	•Unnecessary expenses •Loss of money and high RL cost risks •Loss of profits and margin ***Operational constraints*** •Product return uncertainties •Poor product return visibility •Limited forecasting and planning •Unpredictable quality and condition of returned products •Poor return process and RL process failures •Loss of product and product control •Poor product return decision making •Demand and forecasting risks •Poor IT systems •Manual operations and poor systems	•Lack of top management commitment •Management inattention •Resistance to change •Poor performance measurement and management •Lack of internal coordination and integration •Poor internal information sharing ***External constraints*** •Lack of support from SC parties •Lack of SC collaboration •Lack of SC information sharing •Lack of SCI •SC risks •Lack of integrated systems •Poor return communication •Opportunistic buying behaviour •Fraudulent return behaviour •Unnecessary returns •High fraudulent and ineligible returns •Unmet expectations and dissatisfaction •Consumer frustration and anger •Consumer uncertainty •Poor return experience •Service failures •Loss of consumer confidence and trust	• Improve financial performance • Improve profitability ***Operational benefits*** • RL process efficiency and effectiveness • Speedy returns and disposition • Improve inventory management and reduce pilferage • Improve product return visibility, forecasting and tracking • Product return reduction, control and monitoring • Support RL processes • Improve operational flexibility, efficiency and planning • Simplify RL transactions ***Organisational benefits*** • Support RL design, implementation and innovation • Successful RL programme • Improve RL performance, capabilities and competencies • Improve RL decision making	coordination and information sharing • Improve performance measurement • Support facility/location strategies ***Environmental benefits*** • Environmental protection ***Social benefits*** • Enhance social responsibility ***Market benefits*** • Attain a competitive advantage • Meet consumer needs • Improve consumer service, satisfaction and retention • Enhance consumer experience • Improve consumer information sharing and relationships ***SC benefits*** • Improve SCM • Improve SC coordination and collaboration • Improve SC communication and information sharing • Improve SC visibility and transparency
<u>Skilled and trained staff</u> *(Sections 2.5.3.3 and 6.9.5 and Framework 2)* ***Degree of importance – 37 + 31 = 68***	***Financial constraints*** •Lack of investment in resources •High RL cost •Indirect expenses •Unnecessary expenses •Loss of money •Loss of profits ***Operational constraints*** •Product return uncertainties •Product quality risks •Inventory risks •Poor return process and RL process failures •Poor product return decision making •Poor/no recovery ***Organisational constraints*** •Lack of awareness about the importance of RLM •Lack of top management commitment •Management inattention •Resistance to change	•Culture risks •Poor performance measurement and management •Lack of staff training and education •Labour risk of unskilled and untrained staff •Lack of internal coordination and integration •Silo mentality and internal autonomy ***External constraints*** •Lack of support from SC parties •Lack of SC collaboration •Opportunistic buying behaviour •Fraudulent return behaviour •Unnecessary returns •High fraudulent and ineligible returns •Poor return experience •Poor communication •Service failures •Market liabilities •Reputational damage and risk •Loss of sales and market share	***Economic benefits*** • Enhance economic performance • Cost savings • Increase profits • Improve asset recovery ***Operational benefits*** • Facilitate, support and improve RL processes • RL process efficiency and effectiveness • Enable a successful RL process • Speedy RL process • Reduce return lead time • Reduce product returns • Reduce fraudulent returns ***Organisational benefits*** • Improve performance measuring • Improve staff compliance • Facilitate RL system development • Facilitate successful RL implementation	• Successful RL function • Develop RL capabilities and expertise • Improve staff skills and competence • Facilitate functional integration • Facilitate resource commitment ***Environmental benefits*** • Enhance environmental performance ***Market benefits*** • Competitiveness and competitive advantage • Increase sales • Consumer satisfaction and responsiveness • Enhance consumer experience, service, communication and relationships ***SC benefits*** • Facilitate SCI and SC relationships

JUSTIFICATION OF ADOPTING CONTROL RLM SUCCESS FACTORS

RLM success factors	RLM constraints addressed		RLM benefits realised	
<u>Well-developed performance management</u> *(Sections 2.5.4.1 and 6.7 and Framework 2)*	***Financial constraints*** •Heavy financial investment •Poor cost visibility and hidden costs •High RL cost •Loss of money •Loss of profits and margin ***Operational constraints***	•Lack of strategic planning •Lack of RL strategy •Poor performance measurement and management •Loss of managerial control •Poor accountability and reporting •Lack of staff training and education •Lack of internal coordination and	• ***Economic benefits*** • Cost savings • Cost effectiveness and efficiency • Improve financial control • Increase financial performance and success	• Improve internal coordination • Improve FM • Enables goal attainment • Facilitate facility/location strategies • Facilitate formalisation

Degree of importance – 38 + 44 = 82	•Product return uncertainties •Unpredictable quality and condition of returned products •Product quality risks •Inventory risks •Contaminated and disorganised inventory •Poor return process and RL process failures •Poor/no recovery •Poor return decision making •Inadequate information systems and technology ***Organisational constraints*** •Lack of awareness about the importance of RLM •Lack of top management commitment •Management inattention	integration •Poor accountability ***External constraints*** •Lack of support from SC parties •Lack of SCI •Opportunistic buying behaviour •Fraudulent return behaviour •High fraudulent and ineligible returns •Reputational damage and risk •Loss of sales •Unmet expectations and dissatisfaction •Loss of consumer confidence and trust	• High value recovery • Increase profits/revenue ***Operational benefits*** • RL process efficiency • Improve RL processes • Reduce RL cycle time and increase speedy returns • Reduce fraudulent returns • Monitor operational performance • Improve transportation & inventory management ***Organisational benefits*** • Organisational and RL improvement • Improve RL performance • Facilitate RL planning, implementation, innovation, decision making and control • Enhance performance measurement, monitoring and management	• Facilitate return prevention ***Environmental benefits*** • Determine and monitor environmental performance and compliance • Environmental protection ***Social benefits*** • Meet society needs • Improve corporate image ***Market benefits*** • Increase competitiveness • Understand consumer behaviour • Meet consumer needs • Consumer responsiveness • Enhance consumer satisfaction and loyalty ***SC benefits*** • Monitor and manage SC performance • Facilitate SCI and SCM • Increase SC efficiency
<u>Consumer-centric return prevention</u> *(Sections 2.5.4.2 and 6.9.3 and Framework 2)* ***Degree of importance – 36 + 41 = 77***	***Financial constraints*** •Heavy financial investment •Financial instability, capacity and investment risks •High RL cost •Unnecessary expenses •Loss of money and high RL cost risks •Loss of profits and margin ***Operational constraints*** •Product return uncertainties •Poor product return visibility •Limited forecasting and planning •Unpredictable quality and condition of returned products •Demand and forecasting risks •Product quality risks •Poor/no recovery •Inadequate information systems and technology •Technology and data management risks •Manual operations and poor systems	***Organisational constraints*** •Lack of awareness about the importance of RLM •Management inattention •Lack of RL policies •Poor return policies •Lack of staff training and education •Labour risk of unskilled and untrained staff •Lack of internal coordination and integration •Silo mentality and internal autonomy ***External constraints*** •Lack of SC collaboration •Lack of SC information sharing •Opportunistic buying behaviour •Fraudulent return behaviour •Unnecessary returns •High fraudulent and ineligible returns •Poor return experience •Unmet expectations and dissatisfaction •Service failures •Loss of sales	***Economic benefits*** • Cost savings & reduction • Enable cost avoidance • Cost effectiveness • Increase profitability • Improved financial performance • Maximum asset recovery ***Operational benefits*** • Support RL processes • RL process and operational efficiency • Increase RL process speed • Enhance product return visibility and forecasting • Improve inventory management • Reduce unnecessary and fraudulent returns • Improve logistics • Determine return reasons • Reduce and control product return volume ***Organisational benefits*** • Improve RL performance and decision making • Improve information management	• Successful RL programmes • Improve internal communication, information sharing and collaboration • Improve information management ***Environmental benefits*** • Environmental sustainability and performance • Reduce waste & pollution ***Social benefits*** • Improve reputation ***Market benefits*** • Understand return behaviour • Increase consumer satisfaction, service, experience and loyalty • Improve consumer engagement • Enhance consumer value and relationships ***SC benefits*** • Improve SC information sharing and collaboration
<u>Well-controlled RL costs and risks</u> *(Sections 2.5.4.3 and 6.9.2 and Framework 2)* ***Degree of importance – 48 + 39 = 87***	***Financial constraints*** •Heavy financial investment •Lack of funding •Financial instability, capacity and investment risks •Losing and attracting new investors •Raising additional capital •Inaccurate view of financial performance •Poor cost visibility and hidden costs •Poor pricing •High RL cost •Indirect expenses •Unnecessary expenses	•Loss of product, product control and product value •Contaminated, disorganised inventory and stockpiling ***Organisational constraints*** •Lack of awareness about the importance of RLM •Lack of top management commitment •Management inattention •Resistance to change •Poor return policies •Poor performance measurement •Lack of staff training and education •Labour risk of unskilled and untrained staff	***Economic benefits*** • Identify and understand true RL costs • Cost savings, reduction and effectiveness • Increase profits • Higher recovery value • Reduce capital expenditure and financial loss • Enhance cost visibility • Improve accounting • Improve cost management and control • Profitability • Facilitate RL cost allocation	***Organisational benefits*** • Support RL effective implementation • Sustainable RL function • Improve RL decision making • Improve FM • Facilitate performance measurement • Support resource commitment • Support facility/location strategies ***Environmental benefits*** • Improve environmental performance

	•Loss of money and high RL cost risks •Loss of profits and margin ***Operational constraints*** •Poor product return visibility •Limited forecasting and planning •Inadequate information systems and technology •Demand and forecasting risks •Inventory risks •Poor return process and RL process failures •Obsolete stock & no recovery	•Silo mentality and internal autonomy ***External constraints*** •Lack of SC collaboration •Lack of SC information sharing •Opportunistic buying behaviour •Fraudulent return behaviour •Unnecessary returns •High fraudulent and ineligible returns •Unmet expectations and dissatisfaction •Loss of consumer confidence and trust and consumers	***Operational benefits*** • Support RL processes • RL process efficiency and effectiveness • Enhance product return visibility and tracking • Improve inventory management • Reduce pilferage • Reduce fraudulent and product returns • Identify operational effectiveness	***Market benefits*** • Increase sales and market share • Increase competitive advantage • Increase consumer service, loyalty and retention • Facilitate consumer relationship management ***SC benefits*** • Improve SC communication and information sharing • Improve SC collaboration
JUSTIFICATION OF ADOPTING RELATIONAL RLM SUCCESS FACTORS				
RLM success factors	**RLM constraints addressed**		**RLM benefits realised**	
Well-established functional relationships *(Sections 2.5.5.1 and 6.4.3 and Framework 2)* ***Degree of importance – 29 + 33 = 62***	***Financial constraints*** •Poor cost visibility •High RL costs •Unnecessary expenses ***Operational constraints*** •Product return uncertainties •Poor product return visibility •Limited forecasting and planning •Unpredictable quality and condition of returned products •Demand and forecasting risks •Product quality risks •Poor return process •Poor/no recovery •Inadequate information systems and technology •Poor return decision making	***Organisational constraints*** •Lack of top management commitment •Poor performance measurement and management •Poor accountability and reporting •Lack of internal coordination and integration •Silo mentality and internal autonomy •Poor internal information sharing •Poor culture ***External constraints*** •Lack of SC collaboration •Lack of SC information sharing •Lack of SCI •Poor communication •SC risks •Poor return experience •Unmet expectations and dissatisfaction •Reduce unnecessary returns •Service failures	***Economic benefits*** • Cost savings & reduction • Enable cost avoidance • Maximum value recovery ***Operational benefits*** • Improve RL process effectiveness and efficiency • Increase product return visibility and tracking • Reduce product returns and uncertainty • Improve operational performance ***Organisational benefits*** • Improve RL performance • Improve RL planning, control and decision making • Improve information management • Increase RL capabilities and innovation	• Successful RL programme • Improve internal coordination and communication • Facilitate FM and control • Improve return prevention ***Environmental benefits*** • Increase environmental performance ***Social benefits*** • Improve corporate image ***Market benefits*** • Increase consumer satisfaction, sales and service • Meet consumer needs • Increase consumer convenience • Competitive advantage ***SC benefits*** • Improve SC coordination and communication • Facilitate SCI
Well-established SC relationships *(Sections 2.5.5.2 and 6.4.1 and Framework 2)* ***Degree of importance – 45 + 47 = 92******	***Financial constraints*** •Heavy financial investment •Lack of investment in resources •Lack of funding •High RL cost •Indirect expenses •Unnecessary expenses •Loss of money •Loss of profits and margins ***Operational constraints*** •Product return uncertainties •Poor product return visibility •Limited forecasting and planning •Unpredictable quality and condition of returned products •Demand and forecasting risks •Product quality risks •Inventory risks •Poor return process and RL process failures •Obsolete stock •Poor/no recovery •Loss of product, product control and product value	•Poor return decision making •Inadequate information systems and technology •Lack of infrastructure and development •Technology and data management risks •Manual operations and poor systems ***Organisational constraints*** •Lack of awareness about the importance of RLM •Lack of strategic planning •Poor performance measurement and management ***External constraints*** •Lack of support from SC parties •Lack of SC collaboration •Lack of SC information sharing •Lack of SCI •Lack of integrated systems •SC and outsourcing risks •Opportunistic buying behaviour •Fraudulent return behaviour •Unnecessary returns •High fraudulent and ineligible returns	***Economic benefits*** • Cost savings/reduction • Enhance financial performance • Higher economic value and asset recovery • Reduce investment and asset requirements • Economies of scale • Improve profitability ***Operational benefits*** • Improve operational and RL process efficiency and effectiveness • Enhance product return visibility, forecasting and tracking • Enhance RL process speed • Reduce returns and uncertainties • Support RL processes • Improve inventory control • ***Organisational benefits*** • Improve RL performance • Facilitate RL planning, design and development	• Focus on competencies • Facilitate RL innovation • Improve decision making • Improve information management • Enable return prevention ***Environmental benefits*** • Improve environmental performance and sustainability ***Social benefits*** • Enhance corporate image ***Market benefits*** • Competitive advantage • Market growth and sales • Consumer satisfaction and service • Meet consumer expectations ***SC benefits*** • Improve SC communication and information sharing • Improve SC relationships • Enhance SC visibility, trust and performance • SC coordination, collaboration and

		•Unmet expectations and dissatisfaction •Loss of sales and market share	• Enable RL implementation • Successful RL function	integration
Well-established consumer relationships *(Sections 2.5.5.3 and 6.4.2 and Framework 2)* ***Degree of importance – 36 + 37 = 73***	***Financial constraints*** •Lack of investment in resources •Lack of funding •High RL cost •Indirect expenses •Unnecessary expenses •Loss of money •Loss of profits ***Operational constraints*** •Product return uncertainties •Poor product return visibility •Limited forecasting and planning •Unpredictable quality and condition of returned products •Demand and forecasting risks •Product quality risks •Poor/no recovery •Poor RL process and RL process failures ***Organisational constraints*** •Lack of internal coordination and integration	•Internal preservation and strict returns •Silo mentality and internal autonomy ***External constraints*** •Lack of SCI •Opportunistic buying behaviour •Fraudulent return behaviour •Unnecessary returns •High fraudulent and ineligible returns •Poor return experience •Unmet expectations and dissatisfaction •Consumer frustration and anger •Consumer uncertainty •Poor communication •Service failures •Loss of consumer confidence and trust •Market liabilities •Brand/brand image damage •Reputational damage and risk •Loss of sales •Loss of market share •Loss of consumers	***Economic benefits*** • Cost reduction and control • Increase profitability • Increase economic value recovery ***Operational benefits*** • RL process efficiency and effectiveness • Support RL processes • Increase RL process speed • Improve forecasting and visibility • Reduce product return uncertainties • Reduce returns ***Organisational benefits*** • Improve RL performance • Facilitate RL implementation • Improve RL function • Facilitate return prevention ***Environmental benefits*** • Enhance environmental performance, responsibility and protection	***Social benefits*** • Enhance corporate image • Enhance green image • Enhance reputation • Improve social responsibility ***Market benefits*** • Improve consumer service • Increase sales and demand • Competitive advantage • Meet consumer needs • Improve consumer responsiveness • Enhance consumer satisfaction • Enhance consumer loyalty and retention • Enhance consumer trust • Enhance consumer experience and convenience • Improve consumer relationship management and integration ***SC benefits*** • Improve SC coordination

Source: Compiled by the researcher

Table 9.9 shows a detailed overview of Framework 5B with the RLM success factors and the related RLM constraints that can be addressed and RLM benefits realised through the adoption of the success factors. The framework enables online retailers to justify the adoption of RLM success factors by identifying the number of RLM constraints addressed and the number of RLM benefits realised. Additionally, the framework can be used to identify the (1) specific RLM constraints and RLM benefits associated with the adoption of a specific RLM success factor, (2) most significant RLM success factor in terms of addressing RLM constraints and realising RLM benefits, (3) most valuable RLM success factor in terms of addressing RLM constraints, (4) most beneficial RLM success factor in terms of realising RLM benefits, (5) least beneficial RLM success factor in terms of addressing RLM constraints and realising RLM benefits, (6) specific RLM constraints that can be addressed through the adoption of RLM success factors and (7) specific RLM benefits that can be realised through the adoption of RLM success factors.

Specifically, the framework demonstrates that *appropriate IT* can be the *most significant RLM success factor* in terms of addressing RLM constraints and realising RLM benefits. Therefore, the effective RLM of consumer returns in online retailing would be unattainable without appropriate IT and systems. Evidently, online retailers can prioritise the adoption of appropriate IT as a RLM success factor. However, the RLM success factor of well-established SC relationships was significant both in the

support of other characteristics (see Framework 3 in section 9.3.3) as well as the second most significant in terms of addressing RLM constraints and realising RLM benefits. Evidently, the effective RLM of consumer returns would be unachievable without well-established SC relationships. Although strategic importance and commitment to RLM is less important in terms of addressing constraints and realising benefits, online retailers must be mindful that this characteristic supports most other RLM success factors (see Framework 3 in section 9.3.3), which means that strategic importance and commitment can include various indirect constraints addressed and benefits realised. Therefore, online retailers must still prioritise the adoption of strategic importance and commitment to RLM.

The RLM success factor of *well-controlled RL costs and risks* was the *most significant* key success factor in terms of *addressing RLM constraints*. Therefore, online retailers that experience various RLM constraints can prioritise the adoption of well-controlled RL costs and risks for the effective RLM of consumer returns. Additionally, the *most beneficial* RLM success factor in terms of *realising RLM benefits* include *appropriate IT*, reemphasising the justification of adopting appropriate IT for the effective RLM of consumer returns in online retailing. Other important key success factors that online retailers can focus on include strategically implemented RLM and well-developed performance management, showing the importance of appropriate RL insourcing and outsourcing decisions and performance measurement for effective RLM. The *least significant* RLM success factor in terms of addressing RLM constraints and realising RLM benefits include a *well-designed return policy*. However, a well-designed return policy can be important for the support of other success factors (Framework 3) and implementation of RLM practices (Framework 4), which means that online retailers can still justify the adoption of a well-designed return policy.

Regardless, online retailers that identified and investigated *specific RLM constraints* can use the framework to identify *specific RLM success factors* that they can adopt. For example, if a lack of investment in resources (financial) was identified as the most significant RLM constraint, the online retailer can change its priorities and consider adopting the RLM success factors of (1) strategic importance and commitment to RLM, (2) strategically implemented RLM, (3) well-developed strategies and systems, (4) appropriate and sufficient resources, (5) skilled and trained staff, (6) well-established SC relationships, and (7) well-established consumer relationships as RLM success factors. Furthermore, online retailers might be interested in *realising specific benefits*, which can help them identify relevant RLM success factors to adopt. For example, if an online retailer seeks to improve consumer relationships, the online retailer can consider adopting strategic importance and commitment to RLM, strategically implemented RLM, well-developed strategies and systems, a well-designed

return policy, appropriate IT, skilled and trained staff, consumer-centric return prevention, and well-established consumer relationships as RLM success factors.

Essentially, all RLM success factors can be justified through the various RLM constraints that can be addressed and numerous RLM benefits that can be realised. Therefore, adopting RLM success factors will help online retailers to effectively manage consumer returns. While effective RLM can be justified through the adoption of RLM success factors, the implementation of appropriate RLM practices requires further justification, ensuring that online retailers can realise the importance of implementing RLM practices. In the next section, the justification of implementing RLM practices will be provided.

9.8.3 Framework 5C - Justify the implementation of RLM practices

Framework 5C focuses on providing online retailers with the justification of implementing appropriate RLM practices, emphasising the importance of RLM practices for the effective RLM of consumer returns. The RLM practices relate to Framework 4 (section 9.7), which included priority RLM practices, prevention and control specific RLM practices, service specific RLM practices, and cost specific RLM practices. The justification of RLM practices associate with the key RLM practices (identified from sections 8.4.2, 8.5.2 and 8.6.2) and the requirements of the key RLM practices (support RL practices from sections 8.4.2, 8.5.2 and 8.6.2 and chapter 6).

The justification for the implementation of RLM practices entails the number of (1) RLM constraints, including financial, operational, organisational and external constraints and causes of the constraints (identified from sections 8.4.2, 8.5.2 and 8.6.2, chapter 6 and Framework 2) that can be addressed, and (2) RLM benefits, including economic, operational, organisational, environmental, social, market and SC benefits (identified from sections 8.4.3, 8.5.3 and 8.6.3 and chapter 6) that can be realised. Furthermore, the framework shows the total RLM constraints addressed and benefits realised against the *degree of implementation* of the different RLM practices (identified in Framework 4), which not only confirms the *importance* of implementing the different RLM practices but also help online retailers identify the most beneficial RLM practices. Additionally, the framework can enable online retailers that identified specific RLM constraints to identify appropriate RLM practices that they can implement for the effective RLM of consumer returns.

Table 9.9 presents a detailed overview of Framework 5C, including the key RLM practices (with references, degree of importance, overall importance against the degree of implementation and the RLM practice requirement categories), RLM constraints addressed and RLM benefits realised.

Table 9.10 Framework 5C - Justify the implementation of RLM practices

JUSTIFICATION OF PRIORITY RLM PRACTICES				
Key priority RLM practices	**RLM constraints addressed**		**RLM benefits realised**	
Pre-return inspection *(sections 8.4.3.2.1, 8.5.2.1.2, 8.6.2.2.1, 8.4.3, 8.5.3 and 8.6.3, chapter 6 and Framework 2)* ***Degree of importance – 26 + 28 = 54 54 – 10 = +44*** *(54 represents the number of constraints addressed and benefits realised, and the 10 represents the degree of implementation from framework 4)* ***Requirements*** •*CI* •*RC*	***Financial constraints*** •Lack of investment in resources •Unnecessary expenses •High RL costs •Loss of money ***Operational constraints*** •Poor return processes •Product return uncertainties •Poor product return visibility •Poor return decision making •Poor inspection ***Organisational constraints*** •Organisational preservation •Poor gatekeeping •Lack of resource commitment	***External constraints*** •Poor consumer integration •Opportunistic buying behaviour •Fraudulent return behaviour •Unnecessary returns •High fraudulent and ineligible returns •Poor return experience •Unmet expectations and dissatisfaction •Consumer frustration •Consumer uncertainty •Poor communication •Service failures •Loss of sales •Brand/brand image damage •Reputational damage and risk	***Economic benefits*** • Cost savings • Cost avoidance and control ***Operational benefits*** • Increase RL process speed and effectiveness • Improve product return visibility • Reduce product return uncertainties • Support RL processes • Improve operational performance • ***Organisational benefits*** • Successful RL function • Improve RL performance • Facilitate return prevention • Facilitate FM • Facilitate resource commitment	• Enable RL implementation • Improve RL decision making ***Environmental benefits*** • Environmental protection and responsibility ***Social benefits*** • Enhance brand image ***Market benefits*** • Improve consumer satisfaction and service • Increase sales • Competitive advantage • Consumer responsiveness • Enable consumer retention • Enhance consumer loyalty and trust • Improve consumer relationships • Facilitate CI
Optimised RL process *(sections 8.4.3.2.1 and 8.5.2.1.2, 8.4.3, 8.5.3 and 8.6.3, chapter 6 and Framework 2)* ***Degree of importance – 53 + 57 = 110 110 – 25 = +85*** ***Requirements*** •*IT* •*CI* •*CFI* •*RL in/outsourcing* •*PM* •*Centralised F/L* •*RC* •*Strategic plan* •*RL staff*	***Financial constraints*** •Heavy financial investment •Lack of investment in resources •Lack of funding •Raising additional capital ***Operational constraints*** •Poor product return visibility •Limited forecasting and planning •Unpredictable quality and condition of returned products •Demand and forecasting risks •Product quality risks •Poor return decision making •Loss of product, product control and product value •Contaminated and disorganised inventory •Stockpiling returns •Poor systems •Poor return process and RL process failures •Inadequate information systems and technology •Lack of infrastructure and development ***Organisational constraints*** •Lack of awareness about the importance of RLM	•Management inattention •Resistance to change •Poor strategic planning and procedures •Poor return policy •Poor facility and network design •Lack of resources •Poor performance measurement •Lack of staff training and education •Labour risk of unskilled and untrained staff •Function autonomy •Internal preservation •Loss of managerial control •Poor accountability ***External constraints*** •Lack of SC information sharing and SC risks •Poor consumer integration •Unnecessary returns •High fraudulent and ineligible returns •Brand image damage •Market liabilities •Poor return experience •Unmet expectations & dissatisfaction •Consumer frustration •Consumer uncertainty •Service failures •Loss of consumer confidence and trust •Loss of sales, consumers and market share	***Economic benefits*** • Cost savings and control • Improve profitability and turnover • Maximum value recovery • Economies of scale • Cost efficiency and effectiveness ***Operational benefits*** • Improve RL processes • Improve forecasting, visibility and tracking • Reduce/avoid unnecessary returns • Reduce fraudulent returns • Improve product return control • Improve RL process speed and efficiency • Reduce product return uncertainty • Improve and monitor operational performance • Facilitate IT implementation • ***Organisational benefits*** • Facilitate RL system development and implementation • Improve RL function • Improve RL performance • Facilitate and improve RLM • Improve standardisation • Improve decision making • Successful RL programme • Facilitate return prevention	• Increase RL capabilities, expertise and innovation • Improve internal coordination and communication • Facilitate FM • Facilitate resource commitment ***Environmental benefits*** • Improve environmental protection ***Social benefits*** • Enhance brand image • Improve corporate image ***Market benefits*** • Increase competitiveness and sales • Improve consumer satisfaction and service • Enable consumer retention • Improve consumer experience and responsiveness • Enhance consumer loyalty, trust and confidence • Meet consumer needs • Enhance consumer service and relationships ***SC benefits*** • Facilitate SCI • SC trust, integration and transparency • Improve SC efficiency and relationships
Streamlined return logging *(sections 8.5.2.1.2, 8.6.2.2.1, 8.4.3, 8.5.3 and 8.6.3, chapter 6 and Framework 2)* ***Degree of importance – 34 + 38 = 72***	***Financial constraints*** •Lack of investment in resources •Hidden costs •High RL costs •Loss of money •Loss of profits	•Manual operations and poor systems •Loss of product control ***Organisational constraints*** •Organisational preservation ***External constraints*** •Poor consumer integration	***Economic benefits*** • Cost savings and reduction • Increase profitability • Reduce asset requirements ***Operational benefits*** • Reduce product return uncertainties	• Facilitate RL implementation • Improve RL function • Facilitate return prevention • Improve information management ***Market benefits*** • Facilitate CI

72 – 8 = +64 ***Requirements*** •*IT* •*CI*	***Operational constraints*** •Product return uncertainties •Poor product return visibility •Unpredictable quality and condition of returned products •Limited forecasting and planning •Demand and forecasting risks •Poor return process and RL process failures •Poor IT systems •Lack of infrastructure and development	•Poor return experience •Unmet expectations & dissatisfaction •Consumer frustration and anger •Consumer uncertainty •Service failures •Loss of consumer confidence and trust •Loss of sales, consumers and market share •Market liabilities •Brand/brand image damage •Reputational damage and risk	• RL process efficiency and effectiveness • Support RL processes • Increase RL process speed and flexibility • Improve product return visibility, forecasting and tracking • Improve RL process • Reduce/avoid unnecessary & fraudulent returns • Improve product return control • Reduce operational errors and inconsistencies • ***Organisational benefits*** • Reduce resources • Improve RL performance	• Improve consumer return experience • Improve consumer service • Increase sales and demand • Attain a competitive advantage • Improve consumer responsiveness and integration • Enhance consumer satisfaction • Enhance consumer loyalty and retention • Enhance consumer trust • Meet consumer needs ***SC benefits*** • Improve SC visibility
Online authorisation *(sections 8.4.2.1.2, 8.6.2.2.1, 8.6.2.3.1, 8.4.3, 8.5.3 and 8.6.3, chapter 6 and Framework 2)* ***Degree of importance – 27 + 23= 50*** ***50 – 9 = +41*** ***Requirements*** •*IT* •*RPA*	***Financial constraints*** •Lack of investment in IT resources •High RL costs •Unnecessary expenses •Loss of money •Loss of profits & margins ***Operational constraints*** •Poor return process and RL process failures •Poor return decision making •Obsolete stock •Poor/no recovery •Loss of product and product value •Poor IT systems	•Lack of infrastructure and development •Manual operations ***Organisational constraints*** •Poor gatekeeping and return leniency •Poor return prevention ***External constraints*** •Opportunistic and fraudulent behaviours •Unnecessary returns •High fraudulent and ineligible returns •Poor return communication •Unmet expectations and dissatisfaction •Loss of sales	***Economic benefits*** • Cost savings and reduction • Cost avoidance • Cost effectiveness • Improve cost control • Reduce asset requirements ***Operational benefits*** • RL process efficiency and effectiveness • Improve RL processes • Reduce/avoid unnecessary & fraud returns • Reduce operational errors and inconsistencies • Support RL processes • RL process flexibility and speed	• Control product return volume • ***Organisational benefits*** • Improve RL performance • Improve information management • Reduce resources • Improve FM ***Environmental benefits*** • Environmental sustainability and performance ***Market benefits*** • Enhance consumer satisfaction and conveniences
Efficient return collection *(Sections 8.5.2.1.2, 8.6.2.2.1 8.4.3, 8.5.3 and 8.6.3, chapter 6 and Framework 2)* ***Degree of importance – 34 + 42 = 76*** ***76 – 16 = +60*** ***Requirements*** •*CFI* •*RL in/outsourcing* •*Decentralised F/L*	***Financial constraints*** •Lack of investment in resources •Poor cost visibility and hidden costs •Unnecessary expenses •High RL costs •Loss of money •Loss of profits and margins ***Operational constraints*** •Poor return process and RL process failures •Loss of product control •Lack of infrastructure ***Organisational constraints*** •Lack of internal coordination and integration •Silo mentality and internal autonomy •Poor internal information sharing	•Poor accountability •Poor outsourcing decisions •Poor facility/network design ***External constraints*** •Lack of support from SC parties •Lack of SC collaboration •Lack of SC information sharing •Lack of SCI •SC risks •Poor CI •Poor return experience •Unmet expectations & dissatisfaction •Consumer uncertainty •Loss of consumer confidence and trust •Service failures •Loss of consumer and sales	***Economic benefits*** • Cost savings • Cost avoidance • Improve cost control • Maximum value recovery • Improve profitability ***Operational benefits*** • RL process efficiency and effectiveness • Improve RL process speed • Product return control • Improve operational performance and efficiency • Facilitate and simplify RL process • Facilitate operational planning • ***Organisational benefits*** • Facilitate RL implementation • Improve internal integration and information sharing • Facilitate RC and reduce resources • Improve FM	• Improve RL performance • Improve RL planning and decision making • Increase RL capabilities and innovation • Facilitate facility/location practices ***Market benefits*** • Competitive advantage • Market expansion and increase in sales • Consumer responsiveness • Improve consumer return experience • Enhance consumer satisfaction and service • Enhance consumer loyalty and retention • Meet consumer needs ***SC benefits*** • Facilitate SCI • Improve SC relationships and communication • Improve SC visibility transparency & efficiency
Effective product disposition and recovery *(sections 8.4.2.1.1, 8.6.2.2, 8.4.3, 8.5.3 and 8.6.3, chapter 6 and Framework 2)*	***Financial constraints*** •Heavy financial investment •Lack of investment in resources •Raising additional capital •Lack of funding	***Organisational constraints*** •Lack of awareness about the importance of RLM •Management inattention •Poor strategic planning and procedures •Lack of RL strategy	***Economic benefits*** • Cost savings • Cost avoidance • Cost and asset recovery • Financial returns and profitability	• Clear roles/responsibilities ***Environmental benefits*** • Improve environmental performance, protection and sustainability • Reduce raw material use and waste

Degree of importance – 47 + 55 = 102 102 – 32 = +70 ***<u>Requirements</u>*** • *SCI* • *RL in/outsourcing* • *Disposition* • *PM* • *Separate F/L* • *Decentralised F/L* • *Integrate F/L* • *RC* • *RL manager* • *RL staff*	•Unnecessary expenses •High RL costs •Loss of money •Loss of profits & margins ***Operational constraints*** •Poor return process and RL process failures •Poor return decision making •Product quality risks •Inventory risks •Obsolete stock •Poor/no recovery •Loss of product, product control and product value •Contaminated and disorganised inventory •Stockpiling •Lack of infrastructure and development •Failure to recognise value of product recovery •Poor disposition processes •Poor product return segregation	•Resistance to change •Loss of managerial control and poor accountability •Lack of resource commitment •Lack of staff training and education •Labour risk of unskilled and untrained staff •Poor internal information sharing ***External constraints*** •Lack of support from SC parties •Lack of SC collaboration •Lack of SC information sharing •Lack of SCI •Poor return communication •SC risks •Market liabilities •Brand/brand image damage •Loss of sales and market share	• Cost effectiveness ***Operational benefits*** • Support RL processes • Improve RL process speed • RL process efficiency and effectiveness • Improve operational efficiency and performance • Product return control • Facilitate product recovery • Improve inventory control • Improve inventory management and security • ***Organisational benefits*** • Facilitate RLM • Improve RL capabilities and expertise • Enable RL implementation • Successful RL function • Facilitate RL innovation • Improve RL performance • Improve decision making • Improve information management • Internal communication and integration	***Social benefits*** • Improve corporate image • Improve social performance ***Market benefits*** • Improve brand protection and management • Competitive advantage • Market growth and sales increase • Meet consumer expectations • Improve consumer satisfaction, service, responsiveness, retention and relationships • Avoid sales cannibalisation ***SC benefits*** • Facilitate SC collaboration and integration • Improve SC information sharing and communication • Improve SC relationships • Enhance SC visibility, trust and performance
<u>Clearly communicated return policies</u> *(Sections 8.4.2.1. 8.5.2.1., 8.4.3, 8.5.3 and 8.6.3, chapter 6 and Framework 2)* ***Degree of importance – 18 + 18= 36 38 – 8 = +28*** ***<u>Requirements</u>*** • *CI and RPA* • *Strategic procedure*	***Financial constraints*** •High RL cost •Unnecessary expenses •Loss of money •Loss of profits ***Organisational constraints*** •Poor return policies •Poor strategic procedures ***External constraints*** •Opportunistic buying behaviour •Fraudulent return behaviour	•High and unnecessary returns •Poor consumer integration •Poor return experience •Unmet expectations & dissatisfaction •Consumer frustration and uncertainty •Poor pre-return information sharing with consumers •Poor return communication •Loss of sales	***Economic benefits*** • Cost avoidance • Cost savings & reduction • Financial control and minimise losses ***Operational benefits*** • Support RL processes • Reduce and avoid unnecessary returns • Reduce fraudulent returns • Control product return volume • ***Organisational benefits*** • Facilitate return prevention	***Environmental benefits*** • Enhance environmental performance, responsibility and protection ***Market benefits*** • Enhance consumer trust and confidence • Increase sales • Increase consumer satisfaction • Improve consumer information sharing and integration
<u>Return charges and penalties</u> *(Sections 8.4.2.1.1, 8.4.2.2.2, 8.6.2.3.1, 8.4.3, 8.5.3 and 8.6.3, chapter 6 and Framework 2)* ***Degree of importance – 32 + 34 = 68 68 – 13 = +55*** ***<u>Requirements</u>*** • *SCI (integration)* • *PM* • *RPA*	***Financial constraints*** •Poor cost visibility and hidden costs •High RL cost •Unnecessary expenses •Loss of money and high RL cost risks •Loss of profits and margins ***Operational constraints*** •Product return uncertainties •Unpredictable quality and condition of returned products •Product quality risks •FL failures •Contaminated and disorganised inventory •Loss of products •Poor/no recovery •RL process failures	***Organisational constraints*** •Poor return policies •Poor strategic procedures •Poor performance measurement •Poor accountability •Poor return prevention ***External constraints*** •Lack of SCI •Opportunistic buying behaviour •Fraudulent return behaviour •High and unnecessary returns •Increase in fraudulent returns •Service failures •Consumer uncertainty and dissatisfaction •Market liabilities •Brand/brand image damage •Loss of sales	***Economic benefits*** • Cost avoidance • Cost savings • Cost effectiveness • Increase profitability • Improve financial control • Increase financial performance and success ***Operational benefits*** • Support RL processes • Reduce and avoid unnecessary returns • Reduce fraudulent returns • Reduce uncertainties • Improve logistics • Determine return reasons • Control product return volume • Improve transportation • ***Organisational benefits*** • Improve RL performance • Facilitate return prevention	• Enhance performance measurement ***Environmental benefits*** • Improve environmental performance and sustainability ***Social benefits*** • Enhance corporate image ***Market benefits*** • Increase consumer satisfaction, service, experience and loyalty • Meet consumer expectations ***SC benefits*** • Improve SC communication and information sharing • SC coordination, collaboration and integration • Improve SC performance • Monitor and manage SC performance
<u>Preventative gatekeeping function</u> *(sections 8.4.2.1,*	***Financial constraints*** •Lack of investment in resources •High RL cost	•Poor return process and RL process failure ***Organisational constraints*** •Lack of awareness about the	***Economic benefits*** • Cost avoidance • Cost effectiveness • Increase profitability	• Clear roles/responsibilities • Improve RL decision making ***Environmental benefits*** • Improve environmental

8.6.2.3, 8.4.3, 8.5.3 and 8.6.3, chapter 6 and Framework 2) ***Degree of importance – 32 + 25 = 57*** ***57 – 11 = +46*** ***Requirements*** •*CI* •*RPA* •*RL manager* •	•Unnecessary expenses •Loss of money and high RL cost risks •Loss of profits and margins ***Operational constraints*** •Product return uncertainties •Poor product return visibility •Poor return decision making •Limited forecasting and planning •Unpredictable quality and condition •Demand and forecasting risks •Product quality risks	importance of RLM •Management inattention •Resistance to change •Loss of managerial control and poor accountability •Lack of resources •Poor gatekeeping and return leniency ***External constraints*** •Opportunistic buying behaviour •Fraudulent return behaviour •High and unnecessary returns •Increase in fraudulent returns •Consumer uncertainty and dissatisfaction •Poor return communication and information sharing	• Improve financial control ***Operational benefits*** • Support RL processes • RL process efficiency and effectiveness • Reduce and avoid unnecessary returns • Reduce fraudulent returns • Determine return reasons • Control product return volume ***Organisational benefits*** • Improve RL performance • Facilitate RL implementation • Improve RL function • Facilitate return prevention • Successful RL function	performance and sustainability ***Market benefits*** • Understand return behaviour • Improve consumer information sharing and integration • Increase consumer satisfaction and service
Preventative inspection *(sections 8.4.2.1, 8.6.2.2, 8.6.2.3, 8.4.3, 8.5.3 and 8.6.3, chapter 6 and Framework 2)* ***Degree of importance – 41+ 35 = 76*** ***76 – 17 = +59*** ***Requirements*** •*SCI* •*RC* •*RL staff*	***Financial constraints*** •Heavy financial investment •Lack of investment in resources •Lack of funding •Inaccurate view of financial performance •Poor cost visibility and hidden costs •Poor pricing •Unnecessary expenses •High RL costs & risks •Loss of money •Loss of profits & margins ***Operational constraints*** •Poor return processes and RL process failures •Poor return decision making •Poor inspection •Contaminated inventory •Obsolete stock •Poor/no recovery •Loss of product, product control and product value	***Organisational constraints*** •Lack of awareness about the importance of RLM •Resistance to change •Lack of staff training and education •Lack of resources •Poor gatekeeping and return leniency •Poor accountability ***External constraints*** •Lack of support from SC parties •Lack of SC collaboration and information sharing •Lack of SCI & SC risks •Fraudulent return behaviour •Unnecessary returns •High fraudulent and ineligible returns •Loss of sales •Market liabilities •Brand/brand image damage •Reputational damage	***Economic benefits*** • Cost savings • Cost avoidance and control ***Operational benefits*** • Increase RL process speed and effectiveness • Improve RL processes • Support RL processes • Improve operational efficiency • Reduce and avoid unnecessary returns • Reduce fraudulent returns • ***Organisational benefits*** • Successful RL function • Improve RL performance • Facilitate return prevention • Improve FM • Facilitate RLM • Support skills and training • Clear roles/responsibilities • Develop RL capabilities and expertise • Improve staff skills and competence • Facilitate RC	• Enable RL implementation • Improve RL planning and decision making ***Environmental benefits*** • Improve environmental performance and sustainability • Environmental protection • ***Social benefits*** • Improve corporate image ***Market benefits*** • Competitive advantage ***SC benefits*** • Improve SC communication and information sharing • Improve SC relationships and trust • Improve SC collaboration and integration
Consumer feedback, complaints and product return data *(Sections 8.4.2.1.1, 8.5.2.2.1, 8.5.2.2.2, 8.4.3, 8.5.3 and 8.6.3, chapter 6 and Framework 2)* ***Degree of importance – 47 + 47 = 94*** ***94 – 22 = +72*** ***Requirements*** •*IT* •*CI* •*RL in/outsourcing* •*RC* •*RPA* •*RL manager*	***Financial constraints*** •Heavy financial investment •Lack of investment in resources •High RL cost •Unnecessary expenses •Loss of money •Loss of profits and margin ***Operational constraints*** •Unpredictable quality and condition of returned products •Poor return process and RL process failures •Inadequate information systems and technology •Technology and data management risks •Manual operations and poor systems •FL failures	•Lack of internal integration •Lack of internal information sharing •Poor outsourcing decisions •Lack of resources ***External constraints*** •Lack of SC support •Lack of SC collaboration •Lack of SC information sharing and integrated systems •Lack of SCI and SC risks •Lack of consumer integration •Unnecessary returns •Poor return communication •Poor return experience •Poor consumer information sharing •Unmet expectations and dissatisfaction •Consumer uncertainty •Consumer frustration and anger •Loss of consumer confidence and trust	***Economic benefits*** • Cost savings & reduction • Cost effectiveness • Improve financial performance & profitability ***Operational benefits*** • Support RL processes • Improve RL processes • RL process and operational efficiency and effectiveness • Increase RL process speed • Reduce unnecessary and fraudulent returns • Operational flexibility • Operational planning • Improve operational performance ***Organisational benefits*** • Improve organisational performance • Support RL design, innovation and implementation	• Facilitate RLM • Internal integration and information sharing ***Environmental benefits*** • Environmental sustainability and performance ***Social benefits*** • Improve corporate image ***Market benefits*** • Attain a competitive advantage • Meet consumer needs • Understand return behaviour • Increase consumer satisfaction, service, experience and loyalty • Enhance consumer trust and confidence • Improve consumer communication and CI • Improve consumer engagement

	Organisational constraints •Lack of awareness about the importance of RLM •Management inattention •Resistance to change •Lack of staff training and education •Labour risk of unskilled and untrained staff	•Service failures •Loss of consumers, market share and sales •Brand/brand image damage •Reputational damage	• Successful RL programme and function • Improve RL performance, capabilities and decision making • Improve information management	• Enhance consumer value and relationships • ***SC benefits*** • Improve SC information sharing and collaboration • Improve SC visibility and transparency • Improve SCI
JUSTIFICATION OF PREVENTION AND CONTROL-SPECIFIC RLM PRACTICES				
Key RLM practices	**RLM constraints addressed**		**RLM benefits realised**	
Logistics excellence and information sharing initiatives for pre-sales PRP *(sections 8.4.2.1.1 and 8.4.3, chapter 6 and Framework 2)* ***Degree of importance – 26 + 20 = 46*** ***46 - 10 = +35*** ***Requirements*** •*CI and RPA* •*RL staff*	***Financial constraints*** •High RL cost •Unnecessary expenses •Loss of money and high RL cost risks •Loss of profits and margin ***Operational constraints*** •FL failures •Contaminated inventory ***External constraints*** •High returns •High fraudulent and ineligible returns •Consumer frustration and anger	•Poor pre-return information sharing with consumers •Consumer dissatisfaction and uncertainty •Brand/brand image damage •Service failures •Loss of consumer confidence and trust •Market liabilities •Brand/brand image damage •Reputational damage and risk •Loss of consumers, market share and sales	***Economic benefits*** • Cost reduction and control • Increase profitability • Enable cost avoidance • Cost effectiveness • Increase profitability ***Operational benefits*** • Reduce unnecessary and fraudulent returns • Improve logistics • Control product return volume	***Environmental benefits*** • Enhance environmental performance and protection ***Market benefits*** • Increase sales and demand • Attain a competitive advantage • Improve consumer service • Enhance consumer satisfaction • Enhance consumer loyalty and retention • Enhance consumer trust
Metrics, product experts and abuse investigations for RRP examination *(sections 8.4.2.2 and 8.4.3, chapter 6 and Framework 2)* ***Degree of importance – 36 + 38 = 74*** ***74 – 15 = +59*** ***Requirements*** •*PM* •*RC* •*RPA* •*RL staff*	***Financial constraints*** •Lack of investment in resources •Poor cost visibility and hidden costs •High RL cost •Unnecessary expenses •Loss of money •Loss of profits and margin ***Operational constraints*** •FL failures •RL process failures •Loss of product •Contaminated inventory •Poor return process and RL process failures •Poor/no recovery •Poor return decision making ***Organisational constraints*** •Poor performance measurement •Loss of managerial control •Poor accountability	•Lack of resources •Lack of staff training and education •Labour risk of unskilled and untrained staff ***External constraints*** •Lack of SCI •Lack of SC information sharing •SC risks •Opportunistic buying behaviour •Fraudulent return behaviour •High fraudulent and ineligible returns •High and unnecessary returns •Loss of consumer confidence and trust •Unmet expectations and dissatisfaction •Consumer dissatisfaction •Loss of sales	***Economic benefits*** • Cost savings • Cost effectiveness and efficiency • Enable cost avoidance • Increase profitability • Improve financial control • Increase financial performance and success ***Operational benefits*** • Reduce unnecessary and fraudulent returns • Control product return volume • Monitor and improve operational performance • Support RL processes • ***Organisational benefits*** • Improve RL performance • Improve organisational performance • Enhance performance measurement, monitoring and management • Facilitate return prevention	• Support human resources • Improve RL innovation and capabilities • Successful RL function • Enable RL implementation • Improve RL decision making ***Environmental benefits*** • Environmental protection ***Social benefits*** • Improve corporate image ***Market benefits*** • Increase competitiveness • Understand consumer behaviour • Meet consumer needs • Consumer satisfaction and loyalty ***SC benefits*** • Improve SC information sharing, integration and communication • Monitor and manage SC performance • Increase SC efficiency
Product interventions, supplier exit and account suspensions for RRP intervention *(sections 8.4.2.2.2 and 8.4.3, chapter 6 and Framework 2)* ***Degree of importance – 35 + 42 = 77*** ***77 – 15 = +62*** ***Requirements*** •*SCI* •*CFI* •*PM* •*RPA*	***Financial constraints*** •Poor cost visibility and hidden costs •High RL cost •Unnecessary expenses •Loss of money •Loss of profits and margin ***Operational constraints*** •FL failures •RL process failures •Loss of product •Contaminated inventory •Unpredictable quality and condition of returned products •Product quality risks	***External constraints*** •Lack of SCI •Lack of SC information sharing •SC risks •Opportunistic buying behaviour •Fraudulent return behaviour •High fraudulent and ineligible returns •High and unnecessary returns •Loss of consumer confidence and trust •Service failures •Unmet expectations •Consumer dissatisfaction and	***Economic benefits*** • Cost savings • Cost effectiveness and efficiency • Enable cost avoidance • Increase profitability • Maximum value recovery ***Operational benefits*** • Reduce unnecessary and fraudulent returns • Improve operational efficiency and effectiveness • Support RL processes • Inventory control • Improve logistics	• Enable RL implementation • Improve RL decision making • Improve information management ***Environmental benefits*** • Environmental sustainability and performance ***Social benefits*** • Improve brand image ***Market benefits*** • Increase competitiveness • Increase sales • Understand consumer behaviour • Meet consumer needs

	•Poor/no recovery ***Organisational constraints*** •Poor performance measurement •Poor accountability •Lack of internal coordination and integration •Silo mentality and internal autonomy •Poor internal information sharing	uncertainty •Loss of sales •Brand damage	• Control product return volume • ***Organisational benefits*** • Improve RL performance • Improve organisational performance • Facilitate return prevention • Improve internal coordination and communication • Improve RL innovation and capabilities • Successful RL function	• Increase consumer satisfaction, service, experience and loyalty ***SC benefits*** • Improve SC information sharing, integration and communication • Improve SC relationships • Enhance SC visibility, trust and performance
Product return visibility, segregation and inventory management for operational RLC *(sections 8.4.2.3.1 and 8.4.3, chapter 6 and Framework 2)* ***Degree of importance – 51 + 55 = 106*** ***106 – 28 = +78*** ***Requirements*** •*IT* •*SCI (integration)* •*CI* •*RL in/outsourcing* •*Separate F/L* •*RC* •*Strategic procedure* •*RL manager* •*RL staff*	***Financial constraints*** •Heavy financial investment •Lack of investment in resources •Lack of funding •High RL cost ***Operational constraints*** •Product return uncertainties •Poor product return visibility •Limited forecasting and planning •Unpredictable quality and condition of returned products •Demand and forecasting risks •Product quality risks •Inventory risk •Poor return decision making •Loss of product, product control and product value •Poor return segregation •Contaminated and disorganised inventory •Stockpiling of returns •Poor return process and RL process failures •Poor IT systems •Manual operations •Technology and data management risks	•Lack of infrastructure and development ***Organisational constraints*** •Lack of awareness about the importance of RLM •Lack of commitment •Management inattention •Resistance to change •Poor strategic planning and procedures •Poor facility and network design •Lack of resources •Loss of managerial control •Poor outsourcing decision making •Lack of resource commitment ***External constraints*** •Lack of SCI •Lack of SC information sharing •SC risks •Increase in fraudulent returns •Lack of consumer integration •Poor return communication •Poor return experience •Poor consumer information sharing •Unmet expectations and dissatisfaction •Consumer uncertainty •Loss of consumer confidence and trust •Service failures •Brand/brand image damage •Market liabilities	***Economic benefits*** • Cost savings and control • Improve profitability • Asset and value recovery • Cost efficiency and effectiveness ***Operational benefits*** • Improve RL processes • Improve forecasting, visibility and tracking • Reduce/avoid unnecessary returns • Reduce fraudulent returns • Improve product return control and handling • Improve inventory management and security • Improve RL process speed and efficiency • Reduce product return uncertainty • Improve operational performance • Facilitate IT implementation • ***Organisational benefits*** • Facilitate RL implementation • Improve RL function • Improve RL performance • Facilitate and improve RLM • Improve standardisation • Improve decision making • Improve information management • Facilitate return prevention • Clear roles/responsibilities	• Increase RL capabilities, expertise and innovation • Facilitate resource commitment ***Environmental benefits*** • Environmental protection ***Social benefits*** • Improve corporate image ***Market benefits*** • Satisfy market demand • Manage consumer expectations • Increase competitiveness • Improve consumer satisfaction and service • Improve consumer experience, convenience and responsiveness • Enhance consumer and relationships • Improve consumer information sharing • Facilitate CI ***SC benefits*** • Facilitate SCI • Increase SC visibility • Improve SC communication and information sharing • SC trust, integration and transparency • Improve SC efficiency and relationships
Control mechanisms, dedicated resources, standards, guidelines and maintenance for Managerial RLC *(sections 8.4.2.3.2 and 8.4.3, chapter 6 and Framework 2)* ***Degree of importance – 50 + 50 = 100*** ***100 – 26 = +74*** ***Requirements*** •*RL in/outsourcing* •*PM* •*Separate F/L* •*Centralised F/L* •*RC* •*Strategic procedure* •*RL manager* •*RL staff*	***Financial constraints*** •Heavy financial investment •Lack of investment in resources •Lack of funding •Raising additional capital •High RL costs •Loss of money and high RL cost risks •Loss of profits and margin ***Operational constraints*** •Product return uncertainties •Poor product return visibility •Limited forecasting and planning •Unpredictable quality and condition of returned	•Poor return segregation ***Organisational constraints*** •Lack of awareness about the importance of RLM •Management inattention •Resistance to change •Poor strategic planning and procedures •Poor return policy •Poor facility and network design •Lack of resources •Poor performance measurement •Lack of internal coordination •Silo mentality and internal autonomy •Poor internal information sharing •Loss of managerial control	***Economic benefits*** • Cost savings and reductions • Improve profitability • Maximum value recovery • Economies of scale • Cost efficiency and effectiveness • Reduce investment requirements • Increase budget and funding • Financial control and minimise losses ***Operational benefits*** • Support and improve RL processes • Improve forecasting and visibility • Reduce unnecessary returns • Improve product return and	• Improve RL function • Improve RL performance • Facilitate RLM • Improve managerial control • Improve standardisation and formalisation • Enhance performance measurement, monitoring and management • Enable RL function control • Improve decision making • Clear roles/responsibilities • Facilitate return prevention • Facilitate resource commitment • Support internal integration and information sharing ***Market benefits*** • Competitive advantage

	products •Demand and forecasting risks •Inventory risk •Product quality risks •Poor return decision making •Loss of product and product control •Contaminated and disorganised inventory •Poor return process and RL process failures •Lack of infrastructure and development	•Poor accountability and reporting ***External constraints*** •Lack of SC information sharing •High and unnecessary returns •High fraudulent returns •Brand image damage •Market liabilities •Poor return experience •Unmet expectations & dissatisfaction •Consumer uncertainty •Loss of sales	RL process control • Improve RL process speed and efficiency • Optimise facility capacity • Reduce product return uncertainty • Improve and monitor operational performance • ***Organisational benefits*** • Facilitate RL system development and implementation • Improve RL planning	• Consumer convenience, service and satisfaction • Improve consumer experience and responsiveness • Enhance consumer loyalty • Meet consumer needs
JUSTIFICATION OF SERVICE-SPECIFIC RLM PRACTICES				
Key RLM practices	**RLM constraints addressed**		**RLM benefits realised**	
Platforms, streamlining and personalisation for SOR communication *(sections 8.5.2.1.1 and 8.5.3, chapter 6 and Framework 2)* ***Degree of implementation 18 + 6 = 22*** ***Degree of importance – 58 + 54 = 112*** ***112 – 22 = +90*** ***Requirements*** •*IT* •*CI* •*RL in/outsourcing* •*RC* •*Strategic procedure* •*RL manager*	***Financial constraints*** •Heavy financial investment •Lack of investment in resources •Lack of funding •Raising additional capital •High RL cost •Loss of money and high RL cost risks •Loss of profits and margin ***Operational constraints*** •Poor product return and information visibility •Product return uncertainties •Limited forecasting and planning •Unpredictable quality and condition of returned products •Demand and forecasting risks •Product quality risks •Poor return decision making •Loss of product and product control •Poor systems and manual operations •Poor return process and RL process failures •Inadequate information systems and technology •Lack of infrastructure and development	***Organisational constraints*** •Lack of awareness about the importance of RLM •Management inattention •Poor strategic planning and procedures •Lack of resources •Lack of internal coordination •Silo mentality •Poor internal information sharing •Internal preservation •Loss of managerial control •Poor accountability •Poor outsourcing decision ***External constraints*** •Lack of support from SC parties •Lack of SC collaboration •Lack of SC information sharing and integration •Lack of integrated systems •Poor consumer integration •Poor communication •Brand image damage •Market liabilities •Reputational damage •Poor return experience •Unmet expectations & dissatisfaction •Consumer frustration, anger and uncertainty •Service failures •Loss of consumer confidence trust, sales, consumers and market share	***Economic benefits*** • Cost savings and control • Improve profitability • Cost efficiency and effectiveness ***Operational benefits*** • Support RL processes • Improve forecasting, visibility and tracking • Improve product return control • Improve RL process speed and efficiency • Facilitate FL/RL integration • Reduce product return uncertainty • Facilitate IT implementation ***Organisational benefits*** • Facilitate RL system development and implementation • Improve RL function • Improve RL performance • Facilitate and improve RLM • Improve standardisation • Improve decision making • Successful RL programme • Improve information management • Increase RL capabilities, expertise and innovation • Improve internal coordination and communication • Facilitate resource commitment	***Social benefits*** • Improve corporate image ***Market benefits*** • Attain a competitive advantage • Improve consumer satisfaction and service • Enable consumer retention • Improve consumer experience and responsiveness • Enhance consumer loyalty, trust and confidence • Meet consumer needs • Enhance consumer relationships • Improve consumer information sharing and visibility • Facilitate CI ***SC benefits*** • Facilitate SCI • Improve SC coordination, collaboration and relationships • Improve SC communication and information sharing • Improve SC visibility, transparency and trust
SOR processing *(sections 8.5.2.1.2 and 8.5.3, chapter 6 and Framework 2)* ***Degree of importance – 17 + 15 = 32*** ***32 – 8 = +24*** ***Requirements*** •*CI*	***Financial constraints*** •Loss of profits ***Operational constraints*** •Poor return process ***Organisational constraints*** •Internal preservation ***External constraints*** •Poor return experience •Unmet expectations & dissatisfaction	•Consumer frustration and anger •Service failures •Loss of consumer confidence and trust •Reputational damage and risk •Loss of sales, consumers and market share •Consumer uncertainty	***Economic benefits*** • Increase profitability ***Operational benefits*** • Improve RL process speed and efficiency • Improve standardisation ***Market benefits*** • Improve consumer satisfaction and service • Facilitate CI	• Increase sales and demand • Competitive advantage • Improve consumer responsiveness • Enhance consumer loyalty, retention and trust • Improve consumer relationship management
Preparation, metrics, tools and mystery shopper data for RSP	***Financial constraints*** •Unnecessary expenses ***Operational constraints*** •Poor product return and	•Silo mentality and internal autonomy •Poor strategic planning and procedures	***Economic benefits*** • Cost savings and reduction • Increase profitability ***Operational benefits***	• Enhance performance measurement, monitoring and management • Improve information

evaluation *(sections 8.5.2.2.1 and 8.5.3, chapter 6 and Framework 2)* ***Degree of importance – 45 + 46 = 91*** ***91 – 22 = +69*** ***Requirements*** •*IT* •*SCI (integration)* •*CI* •*CFI* •*PM* •*Strategic procedure* •*RL manager* •*RL staff*	information visibility •Limited forecasting and planning •Demand and forecasting risks •Poor return process and RL process failures •Inadequate information systems and technology •Technology and data management risks •Manual operations and poor systems ***Organisational constraints*** •Lack of awareness about the importance of RLM •Management inattention •Resistance to change •Lack of staff training and education •Labour risk of unskilled and untrained staff •Lack of internal integration and information sharing	•Poor performance measurement •Loss of managerial control •Poor accountability •Lack of resources ***External constraints*** •Lack of SC support •Lack of SC collaboration •Lack of SC information sharing and integrated systems •Lack of SCI •Lack of consumer integration •Poor return experience •Unmet expectations and dissatisfaction •Consumer uncertainty •Consumer frustration and anger •Loss of consumer confidence and trust •Service failures •Loss of consumers, market share and sales •Brand/brand image damage •Reputational damage	• Improve RL processes • Simplify and support RL processes • RL process and operational efficiency • Improve product return visibility, forecasting and tracking • Operational flexibility • Operational planning • Monitor operational performance ***Organisational benefits*** • Improve organisational performance • Support RL design, implementation and innovation • Successful RL programme and function • Improve RL performance, capabilities and decision making • Improve standardisation and formalisation	management • Enable RL function control • Facilitate RLM • Internal integration and information sharing • Enables goal attainment ***Market benefits*** • Competitive advantage • Meet consumer needs • Understand return behaviour • Improve consumer communication and CI • Improve consumer engagement ***SC benefits*** • Improve SC information sharing and collaboration • Improve SC visibility and transparency • Monitor and manage SC performance • Improve SCI • Improve SC performance
RSP improvement preparation and execution *(sections 8.5.2.2.2 and 8.5.3, chapter 6 and Framework 2)* ***Degree of importance – 58 + 72 = 130*** ***130 – 27 = + 103*** ***Requirements*** •*IT* •*CFI* •*RL in/outsourcing* •*Decentralised F/L* •*RC* •*Strategic plan* •*Strategic procedure* •*RL staff*	***Financial constraints*** •Heavy financial investment •Lack of investment in resources •Lack of funding •Raising additional capital •High RL cost •Loss of money and high RL cost risks •Loss of profits and margin ***Operational constraints*** •Product return uncertainties •Poor product return and information visibility •Limited forecasting and planning •Unpredictable quality and condition of returned products •Demand and forecasting risks •Product quality risks •Poor return decision making •Loss of product and product control •Poor systems •Poor return process and RL process failures •Inadequate information systems and technology •Lack of infrastructure and development ***Organisational constraints*** •Lack of awareness about the importance of RLM •Management inattention •Resistance to change	•Poor strategic planning and procedures •Poor facility and network design •Lack of resources •Lack of staff training and education •Labour risk of unskilled and untrained staff •Lack of internal integration and information sharing •Silo mentality and internal autonomy •Internal preservation •Loss of managerial control •Poor accountability ***External constraints*** •Lack of SC information sharing and integrated systems •Lack of SCI •Poor consumer integration •Poor return communication •Unnecessary returns •Poor return experience •Unmet expectations & dissatisfaction •Consumer frustration and anger •Consumer uncertainty •Service failures •Loss of consumer confidence and trust •Reputational damage •Loss of sales, consumers and market share	***Economic benefits*** • Cost savings and avoidance • Improve profitability and turnover • Maximum value recovery • Economies of scale • Improve financial performance • Cost effectiveness • Increase budget and funding • Minimise losses ***Operational benefits*** • Improve RL processes • Support RL processes • Improve forecasting, visibility and tracking • Reduce/avoid unnecessary returns • Reduce fraudulent returns • Improve product return and RL process control • Improve RL process speed and efficiency • Reduce product return uncertainty • Improve operational performance • Operational flexibility • Operational planning • Simplify RL transactions • Facilitate IT implementation ***Organisational benefits*** • Improve organisational performance • Facilitate RL system development and implementation • Improve RL function • Improve RL performance • Facilitate and improve RLM • Improve functional control • Improve RL planning and	• Facilitate return prevention • Increase RL capabilities, expertise and innovation • Improve internal coordination, integration and communication • Facilitate FM and control • Improve information management • Improve staff skills and competence • Clear roles/responsibilities • Facilitate resource commitment ***Environmental benefits*** • Improve environmental performance & responsibility ***Social benefits*** • Improve corporate image • Enhance social responsibility ***Market benefits*** • Competitive advantage • Improve consumer satisfaction and service • Enable consumer retention and loyalty • Improve consumer experience, convenience and responsiveness • Enhance consumer trust and confidence • Improve consumer information sharing and visibility • Improve consumer communication and CI • Meet consumer needs • Enhance consumer and relationships ***SC benefits*** • Facilitate SCI • Improve SC information

			decision making • Successful RL programme	sharing • Improve SC efficiency and relationships
Formalisation, service standards and agreements, and service failure reduction for RSP management *(sections 8.5.2.2.3 and 8.5.3, chapter 6 and Framework 2)* ***Degree of importance – 60 + 75 = 135*** ***135 – 30 = +105•**** ***Requirements*** •*IT* •*SCI* •*CI* •*RL in/outsourcing* •*PM* •*Centralised F/L* •*RC* •*Strategic plan* •*Strategic procedure* •*RL manager* •*RL staff*	***Financial constraints*** •Heavy financial investment •Lack of investment in resources •Lack of funding •Raising additional capital •High RL cost •Loss of money and high RL cost risks •Loss of profits and margin ***Operational constraints*** •Product return uncertainties •Poor product return and information visibility •Limited forecasting and planning •Unpredictable quality and condition of returned products •Demand and forecasting risks •Poor return decision making •Loss of product and product control •Poor systems •Poor return process and RL process failures •Inadequate information systems and technology •Lack of infrastructure and development ***Organisational constraints*** •Lack of awareness about the importance of RLM •Management inattention •Resistance to change •Poor performance measurement •Poor strategic planning and procedures •Poor return policies	•Poor facility and network design •Lack of resources •Lack of staff training and education •Labour risk of unskilled and untrained staff •Lack of internal integration and information sharing •Silo mentality and internal autonomy •Loss of managerial control •Poor accountability •***External constraints*** •Lack of support from SC partners •Lack of SC information sharing •Lack of integrated systems •Lack of SCI •SC risks •Poor consumer integration •Poor return communication •Poor return experience •Unmet expectations & dissatisfaction •Consumer frustration and anger •Consumer uncertainty •Service failures •Loss of consumer confidence and trust •Reputational damage •Loss of sales, consumers and market share •Market liabilities •Brand/brand image damage	***Economic benefits*** • Cost savings • Improve profitability • Economies of scale • Improve financial performance and control • Cost effectiveness • Reduce investment requirements ***Operational benefits*** • Improve RL processes • Support RL processes • Improve forecasting, visibility and tracking • Improve product return control • Improve RL process speed and efficiency • Reduce product return uncertainty • Improve operational performance • Operational efficiency flexibility • Facilitate IT implementation • Optimise facility capacity • ***Organisational benefits*** • Facilitate RL system development and implementation • Successful RL function • Improve RL performance • Facilitate and improve RLM • Improve decision making • Support standardisation • Successful RL programme • Facilitate return prevention • Develop RL capabilities and expertise • Improve internal coordination, integration and communication • Enhance performance measurement, monitoring and management	• Facilitate FM • Improve information management • Improve staff skills and competence • Clear roles/responsibilities • Facilitate resource commitment • Support facility/location strategies ***Environmental benefits*** • Support environmental responsibility • Improve environmental performance ***Social benefits*** • Improve corporate image ***Market benefits*** • Competitive advantage • Increase sales and demand • Improve consumer satisfaction and service • Enable consumer retention and loyalty • Improve consumer experience, convenience and responsiveness • Enhance consumer trust and confidence • Improve consumer information sharing and visibility • Improve consumer communication and CI • Meet consumer needs • Enhance consumer and relationships ***SC benefits*** • Improve SC communication and information sharing • Improve SC relationships • Enhance SC visibility, trust and performance • SC coordination, collaboration and integration
JUSTIFICATION OF COST-SPECIFIC RLM PRACTICES				
Key RLM practices	**RLM constraints addressed**		**RLM benefits realised**	
Cost determination and understanding RCE tools *(sections 8.6.2.1.1 and 8.6.3, chapter 6 and Framework 2)* ***Degree of importance – 44 + 57 = 101*** ***101 – 18 = +83•*** ***Requirements*** •*IT* •*CFI* •*RL in/outsourcing* •*Disposition* •*PM* •*FM* •*RPA* •*Strategic plan*	***Financial constraints*** •Heavy investment •Lack of funding •Financial instability, capacity and investment risks •Losing and attracting new investors •Raising additional capital •Inaccurate view of financial performance •Poor cost visibility and hidden costs •Poor accounting systems •Using a dual account for RL and FL processes	•Demand and forecasting risks •Poor return process and RL process failures •Poor/no recovery •Loss of product control ***Organisational constraints*** •Lack of awareness about the importance of RLM •Management inattention •Resistance to change •Poor strategic planning and procedures •Lack of resource commitment •Poor performance measurement and management •Loss of managerial control	***Economic benefits*** • Identify and understand true RL costs • Cost savings, reduction and effectiveness • Increase profits • Enhance cost visibility • Improve accounting • Improve cost control • Profitability • Facilitate RL cost allocation ***Operational benefits*** • Support RL processes • RL process efficiency, speed and flexibility	• Improve information management • Facilitate financial planning and management • Improve internal integration and information sharing • Facilitate performance measurement • Support resource commitment • Support facility/location strategies ***Environmental benefits*** • Support environmental responsibility • Improve environmental

• *RL manager*	• Failure to identify the impact of RL costs • Poor RL cost monitoring • Poor pricing • High RL cost • Indirect expenses • Unnecessary expenses • Loss of money and high RL cost risks • Loss of profits and margin • Dismissing RL costs ***Operational constraints*** • Poor product return visibility • Limited forecasting and planning • Inadequate information systems and technology • Lack of infrastructure	• Lack of internal integration and information sharing • Silo mentality and internal autonomy ***External constraints*** • Lack of SCI • Lack of SC collaboration • Lack of SC information sharing	• Enhance product return visibility, forecasting and tracking • Reduce human error and manual operations • Identify operational effectiveness • Facilitate product recovery • Improve product return control • ***Organisational benefits*** • Support RL implementation • Improve RL performance • Facilitate RLM • Sustainable and successful RL function • Improve RL capabilities, expertise and experience • Improve RL planning and decision making	performance • Environmental protection ***Market benefits*** • Competitive advantage • Market expansion and growth • Consumer service and responsiveness • Meet consumer needs • Increase consumer service • Facilitate consumer relationship management ***SC benefits*** • Facilitate SCI • Improve SC communication and information sharing • Improve SC collaboration • Improve SC visibility, transparency and efficiency
Cost identification and assessment for RCE execution *(sections 8.6.2.1.2 and 8.6.3, chapter 6 and Framework 2)* ***Degree of importance*** ***– 30 + 31 = 61*** ***61 – 14 = +47*** ***Requirements*** • *Disposition* • *PM* • *FM*	***Financial constraints*** • Heavy investment • Lack of funding • Financial instability, capacity and investment risks • Losing and attracting new investors • Raising additional capital • Inaccurate view of financial performance • Poor cost visibility and hidden costs • Failure to identify the impact of RL costs • Poor RL cost monitoring • Poor pricing • High RL cost • Indirect expenses • Unnecessary expenses • Loss of money	• Loss of profits and margins • Dismissing RL costs ***Operational constraints*** • Poor return process and RL process failures • Poor/no recovery • Poor return decision making ***Organisational constraints*** • Poor return policies • Poor return prevention • Poor performance measurement and management • Loss of managerial control ***External constraints*** • Opportunistic buying behaviour • Fraudulent return behaviour • Unnecessary returns • High fraudulent and ineligible returns	***Economic benefits*** • Identify and understand true RL costs • Cost savings, reduction and effectiveness • Increase profits • Higher recovery value • Enhance cost visibility • Improve cost management and control • Financial returns and profitability • Facilitate RL cost allocation ***Operational benefits*** • Support RL processes • RL process efficiency and speed • Identify operational effectiveness ***Organisational benefits*** • Support RL implementation • Improve RL performance	• Facilitate RLM • Sustainable and successful RL function • Improve RL planning and decision making • Improve FM • Facilitate performance measurement • Facilitate return prevention • Support resource commitment • Support facility/location strategies ***Environmental benefits*** • Support environmental responsibility • Improve environmental performance • Environmental protection
COR transportation for COR processes *(sections 8.6.2.2.1 and 8.6.3, chapter 6 and Framework 2)* ***Degree of importance*** ***– 26 + 33 = 59*** ***59 – 17 = +42*** ***Requirements*** • *IT* • *SCI (integration)* • *RL in/outsourcing* • *Disposition* • *Separate F/L* • *Centralised F/L* • *Decentralised F/L*	***Financial constraints*** • Heavy financial investment • Lack of investment in resources • Unnecessary expenses • High RL cost and risks • Loss of money and margins ***Operational constraints*** • Poor RL process and transportation • Poor product return visibility • Product return uncertainties • Product quality risks • Inventory risks	• RL process failures • Loss of product, product control and product value • Contaminated and disorganised inventory • Poor return segregation • Poor IT systems • Lack of infrastructure and development ***External constraints*** • Lack of SCI • Lack of SC collaboration • Lack of SC information sharing • SC risks	***Economic benefits*** • Cost savings and avoidance • Cost effectiveness • Economies of scale • Reduce investment requirements ***Operational benefits*** • Reduce product return uncertainty • Improve product return control and security • Support and improve the RL process • Improve RL process efficiency, effectiveness and speed • Improve product return visibility • Optimise facility capacity • Optimise network design ***Organisational benefits*** • Facilitate RL implementation	• Facilitate RC • Facilitate facility/location practices • Support decision making ***Environmental benefits*** • Improve environmental performance and sustainability ***Market benefits*** • Enhance consumer experience • Consumer convenience and satisfaction • Enhance consumer responsiveness • ***SC benefits*** • Improve SC relationships, communication and information sharing • SC coordination, collaboration and integration • Facilitate SCM
Return avoidance and cost absorption for RCM mitigation	***Financial constraints*** • Heavy investment • Lack of funding	• Loss of profits and margin • Dismissing RL costs ***Operational constraints***	***Economic benefits*** • Cost avoidance • Identify and understand true	• ***Organisational benefits*** • Improve RL planning and decision making

(sections 8.6.2.3.1 and 8.6.3, chapter 6 and Framework 2) ***Degree of importance – 32 + 28 = 60*** ***60 – 10 = +50*** ***Requirements*** •*SCI (integration)* •*FM* •*RPA*	•Financial instability, capacity and investment risks •Raising additional capital •Inaccurate view of financial performance •Poor cost visibility and hidden costs •Poor accounting •Failure to identify the impact of RL costs •Poor RL cost monitoring •Poor pricing •High RL cost •Indirect expenses •Unnecessary expenses •Loss of money	•RL process failures •Poor/no recovery •Obsolete stock •Poor return decision making •FL failures •Loss of product and product value ***Organisational constraints*** •Poor return prevention ***External constraints*** •Lack of SCI •Lack of SC collaboration •Lack of SC information sharing and SC risks •Unnecessary returns •High fraudulent and ineligible returns	RL costs • Cost savings, reduction and effectiveness • Increase profits • Higher recovery value • Enhance cost visibility • Improve cost management and control • Financial returns and profitability • Facilitate RL cost allocation ***Operational benefits*** • Support RL processes • Reduce and avoid unnecessary returns • Control product return volume	• Improve FM • Facilitate financial planning • Facilitate return prevention ***Environmental benefits*** • Environmental sustainability and performance ***SC benefits*** • Improve SC communication and information sharing • Facilitate SCI
Formalisation, accounting and cost monitoring for RCM execution *(sections 8.6.2.3.2 and 8.6.3, chapter 6 and Framework 2)* ***Degree of importance – 37 + 38 = 75*** ***75 – 19 = +56*** ***Requirements*** •*RL in/outsourcing* •*PM* •*FM* •*Strategic plan* •*Strategic procedure* •*RL manager* •*RL staff*	***Financial constraints*** •Heavy investment •Lack of investment in resources •Lack of funding •Raising additional capital •Financial instability, capacity and investment risks •Losing and attracting new investors •Inaccurate view of financial performance •Poor cost visibility and hidden costs •Poor accounting systems •Using a dual account for RL and FL processes •Failure to identify the impact of RL costs •Poor RL cost monitoring •Poor pricing •High RL cost •Unnecessary expenses •Dismissing RL costs	•Loss of money •Loss of profits and margin ***Operational constraints*** •Poor IT systems •Poor return process and RL process failures ***Organisational constraints*** •Lack of awareness about the importance of RLM •Management inattention •Resistance to change •Poor strategic planning and procedures •Lack of resource commitment •Poor performance measurement •Loss of managerial control •Lack of internal integration and information sharing •Silo mentality and internal autonomy ***External constraints*** •Lack of SCI •Lack of SC collaboration and information sharing	***Economic benefits*** • Identify and understand true RL costs • Cost savings, reduction and effectiveness • Increase profits • Enhance cost visibility • Improve accounting • Improve cost control • Financial returns and profitability • Attain economies of scale • Facilitate RL cost allocation ***Operational benefits*** • Support RL processes • Improve RL processes • RL process efficiency and effectiveness • Monitor operational performance • Facilitate FL/RL integration • ***Organisational benefits*** • Support RL implementation • Improve RL performance	• Facilitate RLM • Successful RL function • Improve RL capabilities, expertise and experience • Improve RL planning and decision making • Improve FM • Improve internal integration and information sharing • Facilitate performance measurement • Enable goal attainment • Support resource commitment ***Market benefits*** • Facilitate consumer relationship management ***SC benefits*** • Facilitate SCI • Improve SC collaboration • Improve SC communication and information sharing

Source: Compiled by the researcher

Table 9.9 shows a detailed overview of Framework 5C, which can help online retailers to justify the implementation of certain RLM practices through the RLM constraints addressed and RLM benefits realised. While the RLM practices were prioritised in Framework 4 (section 9.7) based on the interview findings, it is evident that most practices can be beneficial for prevention and control, service and cost for the effective RLM of consumer returns in online retailing. Subsequently, online retailers can implement the RLM practices based on their RLM constraints identified in Framework 2 (section 9.5), strategies or goals (e.g. consumer centric returns and consumer service improvement), capabilities and resources (e.g. availability of funding) or maximum value (most beneficial RLM practice).

Specifically, the framework can be used to identify the (1) specific RLM constraints and RLM benefits associated with the implementation of a specific RLM practice, (2) specific RLM constraints that can be addressed through the implementation of RLM practices, (3) specific RLM benefits that can be

realised through the implementation of RLM practices, (4) most beneficial RLM practice per practice category, (5) most valuable RLM practice in terms of addressing RLM constraints, (6) most beneficial RLM practice in terms of realising RLM benefits, (7) most significant RLM practice in terms of addressing RLM constraints and realising RLM benefits, (8) most beneficial RLM practice in terms of the degree of implementation (costs) against the degree of importance (benefits), (9) most beneficial RLM practice category, (10) least beneficial practice category, and (11) least beneficial RLM practice.

Due to the comprehensiveness of Framework 5C, only examples of the specific RLM practice, RLM constraint and RLM benefit (points 1 to 3) that online retailers can identify from the framework will be provided. Specifically, online retailers interested in implementing streamlined return logging (priority RLM practice) can use the framework to determine the RLM constraints addressed and RLM benefits realised as well as the degree of importance, costs versus the benefits and related requirement categories. Additionally, online retailers that identified management inattention as a RLM constraint can identify all the RLM practices that can be implemented to address management inattention. Similarly, online retailers that seek to improve RL performance can identify all the RLM practices that can be implemented to realise RL performance improvements.

Per RLM practice category, the framework illustrates (with pink dots) that the *most significant* (1) priority RLM practice includes an *optimised RL process*, (2) prevention and control specific RLM practice includes *product return visibility, segregation and inventory managemen*t for operational RL control, (3) service specific RLM practice includes *formalisation, service standards and agreements and service failure reduction* for return service performance (RSP) management, and (4) cost specific RLM practice includes *cost determination and understanding return tools* for return cost evaluation (RCE). Therefore, online retailers can consider implementing these practices first for the effective RLM of consumer returns. However, *formalisation, service standards and agreements, and service failure reduction* for RSP management is the most beneficial RLM practice in terms of (1) addressing RLM constraints, (2) realising RLM benefits and (3) the costs (30) versus the benefits (135), meaning that online retailers can prioritise the implementation of RSP management for the effective RLM of consumer returns. Other significant RLM practices in terms of the costs versus the benefits (except those mentioned as the most significant per practice category) include consumer feedback, complaints and product return data (+72), control mechanisms, dedicated resources, standards and guidelines and maintenance for managerial RL control (+74), platforms, streamlining and personalisation for service-oriented return (SOR) communication (+90) and RSP improvement preparation and execution (+103).

Consequently, *service specific RLM practices* can be the most beneficial for the effective RLM of consumer returns. Surprisingly, *cost specific RLM practices* can be the *least beneficial* in terms of the

overall costs versus the benefits. Evidently, online retailers that are cost-driven should reconsider their approach since a consumer-centric approach can be the best approach in terms of financial performance, operational performance, organisational performance and external performance. Nevertheless, the least beneficial RLM practice involve SOR processing, suggesting that online retailers can implement SOR processing as a last priority. Regardless, all RLM practices can be justified through the various RLM constraints that can be addressed and numerous RLM benefits that can be realised. Therefore, implementing any RLM practice will help online retailers to effectively manage consumer returns.

Essentially, Framework 5 demonstrates the significance of RLM, which entails the economic, competitive, social, legal and environmental significance of RLM (see Framework 5A), justification for the adoption of RLM success factors (Framework 5B) and the justification for the implementation of RLM practices (Framework 5C). Therefore, online retailers who refrain from adopting and implementing effective RLM due to the effort and complexity of RLM can be assured that the benefits of effective RLM far outweigh the costs. The next section provides the summary of main findings, recommendations and objectives realised.

9.9 SUMMARY OF MAIN FINDINGS, RECOMMENDATIONS AND OBJECTIVES REALISED

Since the framework for the effective RLM of consumer returns provided summaries of findings related to various chapters of the study, this section provides an overview of the main findings based on the framework for the effective RLM of consumer returns in online retailing (presented in sections 9.4, 9.5, 9.6, 9.7 and 9.8). Table 9.11 provides the summary of main findings, recommendations and objectives realised based on the structure of the framework for the effective RLM of consumer returns in online retailing.

Table 9.11 Summary of main findings, recommendations and objectives realised

MAIN FINDINGS, RECOMMENDATIONS AND OBJECTIVES: FRAMEWORK 1
FRAMEWORK 1 A - UNDERSTAND THE CONCEPT OF RL
Main findings
• RL can be defined in various ways, ranging from general to more specific. • This study identified a definition that online retailers can use to understand the concept or RL. Specifically, RL in online retailing was defined as: *The reverse logistics (RL) of online consumer returns is the process of managing (planning, implementing and controlling) the efficient and effective flows of returned products and information from the consumer (point of consumption) to an online retailer (point of recovery) or upstream supplier (point of origin) to recapture value, save costs, increase profits, satisfy, serve and retain online consumers, and improve*

economic and environmental sustainability through RL processes and practices

- The definition of RL in online retailing covered various elements that can be used to describe the traits, management activities, tasks, flows, points, parties and goals
- The traits in the definition of RL involve process, efficiency and effectiveness
- The management activities in the definition of RL involve planning, implementing and controlling
- The flows in the definition of RL involve flows of products and information
- The points in the definition of RL involve the point of consumption, point of recovery and point of origin
- The parties in the definition of RL involve consumers (point of consumption) who are responsible for returning the products, online retailers (point of recovery) who are responsible for accepting and receiving the product returns, and suppliers (point of origin) who are responsible for accepting warranty, defective or damage consumer returns from the online retailers
- The goals in the definition of RL involve recapture value, save costs, increase profits, satisfy, serve and retain online consumers, and improve economic and environmental sustainability that can be realised through the effective execution of RL processes and implementation of effective RL practices

Recommendations

- Online retailers can refer to Framework 1A to develop an understanding of the concept of RL. Additionally, online retailers can develop a greater understanding of the RL definition by focusing on (1) understanding consumer returns and RL processes (frameworks 1B, 1C and 1D), (2) adopting RLM success factors (framework 3), (3) implementing key RLM practices (framework 4) and (4) considering the related significance and justification of effective RLM (framework 5)
- It is recommended that online retailers understand consumer returns, pre-receipt and post-receipt RL processes (frameworks 1B, 1C and 1D) to understand the RL definition elements of process, flows, points, parties and goals
- It is recommended that online retailers consider the adoption and justification of the RLM design success factor of a well-designed RL process (frameworks 3 and 5B) to understand the RL definition elements of process, flows, points, parties and goals
- It is recommended that online retailers consider the implementation and justification of the priority RLM practices of an optimised RL process and effective disposition and recovery (frameworks 3 and 5B) to understand the RL definition elements of process, management activities, flows, parties and goals
- It is recommended that online retailers focus on understanding the economic, competitive, social, legal and environmental significance of RLM (framework 5A) to understand the RL definition element of goals

Objectives realised

- Defining RL can help online retailers to understand the concept of RL, which forms the foundation of understanding RLM. Therefore, defining RL for a basic understanding of RLM contributed to realising parts of SRO-1 (examine RLM) and the primary objective through Framework1A.

FRAMEWORK 1B - UNDERSTAND CONSUMER RETURNS

Main findings

- Online retailers can expect various consumer return types, including business-to-consumer (B2C), warranty, service, recalls and potentially end-of-use returns
- The most significant consumer return type in online retailing include B2C returns, which associate with various return reasons.
- Warranty returns can be another consumer return type that online retailers can focus on for effective RLM

Recommendations

- Online retailers can refer to Framework 1B to develop an understanding of the consumer return types and related product conditions, return reasons and disposition options
- For B2C and warranty returns online retailers can focus on identifying RLM constraints associated with B2C and warranty returns (framework 2), adopting RLM success factors that can be important for managing B2C and warranty returns

(framework 3), implementing key RLM practices for the effective execution of B2C and warranty returns (framework 4) and considering the related significance and justification of effective RLM (framework 5)

- For ***B2C returns***, it is recommended that online retailers (1) investigate product return and recovery, and consumer and market *RLM constraints* (framework 2), (2) consider the adoption and justification of the *RLM control success factor* of consumer centric return prevention (frameworks 3 and 5B), (3) consider the implementation and justification of the *RLM practices* of consumer feedback and product return data (priority practice), information sharing initiatives, logistics excellence (proactive prevention practices), product experts for targeted investigations, product interventions of product/package redesign and party interventions of supplier exit (reactive prevention practices) (see frameworks 4 and 5C), and (4) consider the economic, competitive, social and legal *significance of RLM* (see framework 5A). Furthermore, online retailers that experience high fraudulent returns can consider implementing and justifying the reactive return prevention RLM practices of abuse investigations and account suspensions of return abusers (see frameworks 4 and 5C).
- For ***warranty returns***, it is recommended that online retailers (1) investigate product return and recovery, and SC *RLM constraints* (framework 2), (2) consider the adoption and justification of the *RLM success factors* of consumer centric return prevention (control success factor) and well-established SC relationships (relational success factor) (frameworks 3 and 5B), (3) consider the implementation and justification of the *RLM practices* of consumer feedback and product return data, effective disposition and recovery (priority practices), information sharing initiatives, logistics excellence (key proactive prevention practices), product experts for targeted investigations, product interventions of product/package redesign and party interventions of supplier exit (key reactive prevention practices) (see frameworks 4 and 5C), and (4) consider the economic, social, legal and environmental *significance of RLM* (see framework 5A).

Objectives realised

- Describing and understanding consumer returns can be important for the effective RLM of consumer returns. Therefore, identifying, describing and understanding consumer returns contributed to realise parts of *SRO-2* (explore and analyse RL literature for consumer return types), *SRO-5* (determine consumer return types in online retailing based on inputs from industry experts) and the *primary objective* through Framework1B.

FRAMEWORK 1C – UNDERSTAND PRE-RECEIPT RL PROCESSES

Main findings

- The pre-receipt RL processes in online retailing included the consumer return request (CRR), gatekeeping (or authorisation), collection and transportation processes
- The pre-receipt RL processes can involve (1) characteristics related to a description, involvement and requirements, influential factors and links to other RL processes, (2) methods, options or types to execute the processes, (3) product flow and information flow activities, (4) consumers, online retailers and third-party providers as parties, and (5) consumer residences/workplaces and collection points as locations
- All pre-receipt RL processes can be important for the effective RLM of consumer returns

Recommendations

- Online retailers can refer to Framework 1C to develop an understanding of the pre-receipt RL processes and related characteristics, methods, activities, parties and locations. Additionally, online retailers can focus on identifying RLM constraints that can hamper pre-receipt RL processes (framework 2), adopting RLM success factors that can facilitate pre-receipt RL processes (framework 3), implementing key RLM practices for the effective execution of pre-receipt RL processes (framework 4) and considering the significance and justification of effective RLM (framework 5).
- For the ***CRR process***, it is recommended that online retailers (1) investigate financial and cash, operational support, policy and consumer and market *RLM constraints* (see framework 2), (2) consider the adoption and justification of the *RLM success factors* of a well-designed return policy, a well-designed RL process (design success factors), appropriate IT and well-established consumer relationships (see frameworks 3 and 5B), (3) consider the implementation and justification of the *RLM practices* of streamlined return logging, online authorisation (priority practices) and streamlined communication (service orientated return practice) (see frameworks 4 and 5C), and (4) consider the competitive *significance of RLM* (see framework

5A).

- For the ***gatekeeping process***, it is recommended that online retailers (1) investigate operational support, policy and consumer and market *RLM constraints* (see framework 2), (2) consider the adoption and justification of the *RLM success factors* of a well-designed return policy, a well-designed RL process (design factors), appropriate IT, trained/skilled staff (resource success factors) and consumer-centric return prevention (control success factor) (see frameworks 3 and 5B), (3) consider the implementation and justification of the *RLM practices* of online authorisation and preventative gatekeeping (priority practices) (see frameworks 4 and 5C), and (4) consider the competitive, social and legal *significance of RLM* (see framework 5A).
- For the ***collection process***, it is recommended that online retailers (1) investigate product return, operational support and SC *RLM constraints* (see framework 2), (2) consider the adoption and justification of the *RLM success factors* of a well-designed RL process (design success factor) and well-established SC relationships (relational success factor) (see frameworks 3 and 5B), (3) consider the implementation and justification of the *RLM practices* of efficient collection (priority practice), product return visibility (operational control practice) and return avoidance (cost management practice) (see frameworks 4 and 5C), and (4) consider the competitive *significance* of RLM (see framework 5A).
- For the ***transportation process***, it is recommended that online retailers (1) investigate financial and cash, product return, operational support and SC *RLM constraints* (see framework 2), (2) consider the adoption and justification of the *RLM success factors* of a well-designed RL process, a well-designed RL network (design success factors) and well-established SC relationships (relational success factor) (see frameworks 3 and 5B), (3) consider the implementation and justification of the *RLM practices* of product return visibility (operational control practice) and COR transportation (cost orientated return process practice) (see frameworks 4 and 5C), and (4) consider the economic and environmental *significance of RLM* (see framework 5A).

Objectives realised

- Understanding the pre-receipt RL processes can be important for the effective RLM of consumer returns. Therefore, identifying and understanding pre-receipt RL processes contributed to realising parts of *SRO-2* (explore and analyse RL literature for the pre-receipt RL processes of consumer returns), *SRO-5* (determine RL processes in online retailing based on inputs from industry experts) and the *primary research objective* through Framework1C.

FRAMEWORK 1D – UNDERSTAND POST-RECEIPT RL PROCESSES

Main findings

- The post-receipt RL processes in online retailing included the receiving, processing, inspection, sorting, disposition and redistribution processes
- The post-receipt RL processes can involve (1) characteristics related to a description, involvement and requirements, influential factors and links to other RL processes, (2) product flow, information flow and cash flow activities, (3) consumers, online retailers, staff, third parties and suppliers/manufacturers as parties, (4) collection points, retail locations, consumer locations, standard facilities, specialised facilities and markets as facilities/locations, and (5) aims (applicable to disposition and redistribution)
- All post-receipt RL processes can be important for the effective RLM of consumer returns

Recommendations

- Online retailers can refer to Framework 1D to develop an understanding of the post-receipt RL processes and related characteristics, activities, parties, locations and aims (if applicable). Additionally, online retailers can focus on identifying RLM constraints that can hamper post-receipt RL processes (framework 2), adopting RLM success factors that can facilitate post-receipt RL processes (framework 3), implementing key RLM practices for the effective execution of post-receipt RL processes (framework 4) and considering the significance and justification of effective RLM (framework 5).
- For the ***receiving process***, it is recommended that online retailers (1) investigate product return and operational support *RLM constraints* (see framework 2), (2) consider the adoption and justification of the *RLM design success factor* of a well-designed RL process (see frameworks 3 and 5B), (3) consider the implementation and justification of the *RLM practices* of an optimised RL process (priority practice) and return segregation (operational control) (see frameworks 4 and 5C), and (4) consider the economic *significance of RLM* (see framework 5A).

- For the ***processing process***, it is recommended that online retailers (1) investigate financial and cash, functional and consumer and market *RLM constraints* (see framework 2), (2) consider the adoption and justification of the *RLM success factors* of a well-designed return policy, a well-designed RL process (design success factors), well-controlled RL costs and risks (control success factor) and well-established functional relationships (relational success factor) (see frameworks 3 and 5B), (3) consider the implementation and justification of the *RLM practices* of return charges (priority practice), SOR processing (service oriented process practice), and accounting (return cost management practice) (see frameworks 4 and 5C), and (4) consider the economic, competitive and legal *significance of RLM* (see framework 5A).
- For the ***inspection process***, it is recommended that online retailers (1) investigate product return and recovery, operational support and functional *RLM constraints* (see framework 2), (2) consider the adoption and justification of the *RLM success factors* of a well-designed return policy, a well-designed RL process (design success factors) and skilled and trained staff (resource success factor) (see frameworks 3 and 5B), (3) consider the implementation and justification of the *priority RLM practices* of pre-return inspection, optimised RL process and preventative inspection (see frameworks 4 and 5C), and (4) consider the economic and competitive *significance of RLM* (see framework 5A).
- For the ***sorting process***, it is recommended that online retailers (1) investigate product return and recovery, and functional *RLM constraints* (see framework 2), (2) consider the adoption and justification of the *RLM success factors* of a well-designed RL process (design success factor) and skilled and trained staff (resource success factor) (see frameworks 3 and 5B), (3) consider the implementation and justification of the *RLM practices* of an optimised RL process (priority practice), return segregation and inventory management (operational control practices) (see frameworks 4 and 5C), and (4) consider the economic, legal and environmental *significance of RLM* (see framework 5A).
- For the ***disposition process***, it is recommended that online retailers (1) investigate investment, product return and recovery, operational support, functional and SC *RLM constraints* (see framework 2), (2) consider the adoption and justification of the *RLM success factors* of well-developed RL strategies and systems (strategic success factor), well-designed RL process (design success factor), appropriate and sufficient resources, skilled and trained staff (resource success factors) and well-established SC relationships (relational success factor) (see frameworks 3 and 5B), (3) consider the implementation and justification of the *priority RLM practice* of effective disposition and recovery (see frameworks 4 and 5C), and (4) consider the economic, social, legal and environmental *significance of RLM* (see framework 5A).
- For the ***redistribution process***, it is recommended that online retailers (1) investigate product return, operational support and SC *RLM constraints* (see framework 2), (2) consider the adoption and justification of the *RLM success factors* of a well-designed RL process, a well-designed RL network (design success factors) and well-established SC relationships (relational success factor) (see frameworks 3 and 5B), (3) consider the implementation and justification of the *RLM practice* of COR transportation (cost orientated return practice) (see frameworks 4 and 5C), and (4) consider the economic and environmental *significance of RLM* (see framework 5A).

Objectives realised

- Understanding the post-receipt RL processes can be important for the management of consumer returns. Therefore, identifying and understanding post-receipt RL processes contributed to realising *SRO-3* (explore and analyse RL literature for post-receipt RL process) and parts of *SRO-5* (determine RL processes in online retailing based on inputs from industry experts) and the primary objective through Framework1D.

MAIN FINDINGS, RECOMMENDATIONS AND OBJECTIVES: FRAMEWORK 2

FRAMEWORK 2 – IDENTIFY AND INVESTIGATE RLM CONSTRAINTS

Main findings

- The RLM constraints involves barriers, risks, pitfalls and problems that can hamper the effective RLM of consumer returns in online retailing
- The RLM constraints include the (1) financial constraints of investment and costing constraints and financial and cash constraints, (2) operational constraints of product return and recovery constraints and operational support constraints, (3) organisational constraints of management constraints, strategy, policy and control constraints and functional constraints, and (4) external constraints of SC constraints and consumer and market constraints
- All RLM constraints can be caused by other RLM constraints that involve specific risks, pitfalls and problems

- Addressing the RLM constraints can help lessen the degree of other RLM constraints
- All RLM constraint include solution focus areas relating to other RLM constraints that can be addressed as potential mitigating solutions
- The most problematic RLM constraint includes consumer and market constraints
- Financial and cash constraints include the highest number of causes
- All RLM constraints can hamper the effective RLM of consumer returns

Recommendations

- Online retailers can refer to Framework 2 to identify and investigate RLM constraints, constrain causes and solution focus areas. Additionally, online retailers can focus on understanding consumer returns and RL processes (if applicable) (framework 1), adopting RLM success factors that can help address the RLM constraints (framework 3), implementing key RLM practices for mitigating RLM constraints and causes (framework 4) and considering the significance and justification of effective RLM (framework 5).
- For the ***financial RLM constraints***, it is recommended that online retailers (1) consider the adoption and justification of the *RLM success factors* of strategic importance and significance of RLM, well-developed RL strategies and systems (strategic success factors), appropriate and sufficient resources (resource success factor) and a well-controlled RL costs and risks (control success factor) (see frameworks 3 and 5B), (2) consider the implementation and justification of the *RLM practices* of preventative inspection (priority practice), cost determination and understanding tools, cost identification and cost assessment (cost evaluation practices), return avoidance and cost absorption, and formalisation, accounting and monitoring (cost management practices) (see frameworks 4 and 5C), and (4) consider the economic *significance of RLM* (see framework 5A).
- For the ***operational RLM constraints***, it is recommended that online retailers (1) understand consumer return types (see framework 1B), (2) consider the adoption and justification of the *RLM success factors* of well-developed RL strategies and systems (strategic success factor), a well-designed RL process, a well-designed RL network (design success factors), appropriate and sufficient resources, and appropriate IT (resource success factors) (see frameworks 3 and 5B), (3) consider the implementation and justification of the *RLM practices* of an optimised RL process, effective disposition and recovery (priority practices) and product return visibility, segregation and inventory management (operational control practice) (see frameworks 4 and 5C), and (4) consider the economic, legal and environmental *significance of RLM* (see framework 5A).
- For the ***organisational RLM constraints***, it is recommended that online retailers (1) understand RL, consumer returns and RL processes (see framework 1), (2) consider the adoption and justification of the *RLM success factors* of strategic importance and significance of RLM, well-developed RL strategies and systems (strategic success factors), a well-designed RL policy, (design success factor), appropriate and sufficient resources, skilled and trained staff (resource success factors), well-developed performance management (control success factor) and well-established functional relationships (relational success factor) (see frameworks 3 and 5B), (3) consider the implementation and justification of the *RLM practices* of an optimised RL process, (priority practice), control mechanisms, dedicated resources, standards, guidelines and maintenance (managerial control practice), formalisation, service standards and agreements, and service failure reduction (return service management practice) (see frameworks 4 and 5C), and (4) consider the economic, competitive, social, legal and environmental *significance of RLM* (see framework 5A).
- For the ***external RLM constraints***, it is recommended that online retailers (1) understand consumer returns and RL processes (see framework 1), (2) consider the adoption and justification of the *RLM success factors* of strategically implemented RLM (strategic success factor), consumer centric prevention (control success factor), well-established SC relationships and well-established consumer relationships (relational success factors) (see frameworks 3 and 5B), (3) consider the implementation and justification of the *RLM practices* of streamlined return logging, online authorisation, preventative gatekeeping, effective disposition and recovery (priority practices), information sharing initiatives, logistics excellence (key proactive prevention practices), product experts, product interventions and party interventions (key reactive prevention practices), streamlined communication (service orientated return practice), preparation metrics, tools and mystery shopper data (return service performance evaluation practice), RSP improvement preparation and execution (service performance improvement practice), formalisation, service standards and agreements, and service failure reduction (return service management practice) (see frameworks 4 and 5C), and (4) consider the competitive, social and legal *significance of RLM* (see framework 5A).

Objectives realised

- RLM constraints, including barriers, risks, pitfalls and problems, can be important factors to address for the effective RLM of consumer returns in online retailing. Therefore, identifying and investigating the RLM constraints contributed to realising a part of *SRO-1* (determine the factors that influence the implementation of RLM), *SRO-7* (investigate and determine important factors for the effective RLM of consumer returns in online retailing) and the primary objective through Framework 2.

MAIN FINDINGS, RECOMMENDATIONS AND OBJECTIVES: FRAMEWORK 3

FRAMEWORK 3 - UNDERSTAND THE SUCCESS FACTORS OF EFFECTIVE RLM

Main findings

- The RLM success factors involves measures, initiatives, requirements and practices that can support the effective RLM of consumer returns in online retailing
- The RLM success factors include the (1) strategic success factors of strategic importance and commitment to RLM, strategically implemented RLM and well-designed RL strategies and systems, (2) design success factors of a well-designed return policy, a well-designed return process and a well-designed RL network design, (3) resource success factors of appropriate and sufficient resources, appropriate IT and skilled and trained staff, (4) control success factors of a well-developed performance management, consumer centric return prevention, and well-controlled RL costs and risks, and (5) relation success factors of well-established functional relationships, well-established SC relationships and well-established consumer relationships.
- The success factors of effective RLM can be used as a benchmark to explore ineffective and poor practices, procedures and processes
- All RLM success factors include requirements or practices that can be implemented or adopted (degree of adoption)
- All RLM success factors can facilitate the adoption of other RLM success factors (degree of impact)
- The most significant RLM success factor in term of the degree of adoption and degree of impact was the strategic success factor of strategic importance and commitment to RLM
- Other important RLM success factors in term of the degree of adoption and degree of impact were the relation success factors of well-established SC relationships and well-established consumer relationships
- All RLM success factors can be important for the effective RLM of consumer returns

Recommendations

- Online retailers can refer to Framework 3 to understand the RLM success factors. Additionally, online retailers can focus on understanding RL, consumer returns and RL processes (if applicable) (framework 1), identifying and investigating RLM constraints associated with the RLM success factors (framework 2), exploring RLM practices that can be supported by the RLM success factors (framework 4) and considering the significance and justification of effective RLM (framework 5A and B)
- For the ***strategic RLM success factors***, it is recommended that online retailers (1) understand RL, consumer returns and RL processes (see framework 1), (2) identify and investigate the *RLM constraints* of investment and costing (financial constraint) and management, strategy, policy and control (organisational constraints) (see framework 2), (3) explore the *RLM practices* of an optimised RL process (priority practice), preparation and execution for RSP improvement, formalisation, service standards and agreements, and service failure reduction for RSP management (service performance practices) and formalisation, accounting and monitoring for RCM execution (cost management practices) (see framework 4), (4) consider the economic, competitive, social, legal and environmental *significance of RLM* (see framework 5A), and (5) consider the *justification* of strategic importance and commitment to RLM, strategically implemented RLM and well-designed RL strategies and systems (see framework 5B)
- For the ***design RLM success factors***, it is recommended that online retailers (1) understand RL, consumer returns and RL processes (see framework 1), (2) identify and investigate the *RLM constraints* of operational support (operational constraint) and strategy, policy and control and functional (organisational constraints) (see framework 2), (3) explore the *prevention and control RLM practice* of control mechanisms, dedicated resources, standards, guidelines and maintenance for managerial RLC (see framework 4), (4) consider the economic, competitive, social, legal and environmental *significance of RLM* (see framework 5A), and (5) consider the *justification* of a well-designed return policy, a well-designed return process and a well-

designed RL network design (see framework 5B)

- For the ***resource RLM success factors***, it is recommended that online retailers (1) understand RL and RL processes (see framework 1), (2) identify and investigate the *RLM constraints* of investment and costing, operational support (operational constraint), management and functional (organisational constraints) (see framework 2), (3) explore the *RLM practices* of an optimised RL process (priority practice), preparation and execution for RSP improvement, and formalisation, service standards and agreements, and service failure reduction for RSP management (service performance practices) (see framework 4), (4) consider the economic and competitive *significance of RLM* (see framework 5A), and (5) consider the *justification* of appropriate and sufficient resources, appropriate IT and skilled and trained staff (see framework 5B)
- For the ***control RLM success factors***, it is recommended that online retailers (1) understand consumer returns and RL processes (see framework 1), (2) identify and investigate the *RLM constraints* of investment and costing, financial and cash (financial constraints), product return and recovery (operational constraints), strategy, policy and control (organisational constraints), and consumer and markets (external constraints) (see framework 2), (3) explore the *RLM practices* of online authorisation, return charges and penalties, preventative gatekeeping (priority practices), metrics, product experts and abuse investigations for RRP examination, product interventions, supplier exit and account suspensions for RRP interventions (reactive prevention practices), control mechanisms, dedicated resources, standards, guidelines and maintenance for managerial RLC (control practice), cost determination and understanding RCE tools, cost identification and assessment for RCE (cost evaluation practices) and formalisation, accounting and monitoring for RCM (cost management practice) (see framework 4), (4) consider the economic, competitive, social, legal and environmental *significance of RLM*, and (5) consider the *justification* of well-developed performance management, consumer centric return prevention, and well-controlled RL costs and risks (see framework 5B)
- For the ***relational RLM success factors***, it is recommended that online retailers (1) understand RL, consumer returns and RL processes (see framework 1), (2) identify and investigate the *RLM constraints* of functional (organisational constraint), SC and consumer and markets (external constraints) (see framework 2), (3) explore the *service performance RLM practice* of preparation, metrics, tools and mystery shopper data for RSP evaluation (see framework 4), (4) consider the competitive and social *significance of RLM*, and (5) consider the *justification* of well-established functional relationships, well-established SC relationships and well-established consumer relationships (see framework 5B)

Objectives realised

- RLM success factors, including strategic, design, resource, control and relational, can be important factors for the effective RLM of consumer returns in online retailing. Therefore, understanding RLM success factors contributed to realising a part of *SRO-1* (determine the factors that influence the success of RLM), *SRO-7* (investigate and determine important factors for the effective RLM of consumer returns in online retailing) and the primary objective through Framework 3.

MAIN FINDINGS, RECOMMENDATIONS AND OBJECTIVES: FRAMEWORK 4

FRAMEWORK 4 – IDENTIFY AND IMPLEMENT RLM PRACTICES

Main findings

- The RLM practices involves key practices, propositions, requirements and considerations that can be important for the effective RLM of consumer returns in online retailing
- The RLM practices can be categorised as priority RLM practices, prevention and control specific RLM practices, service specific RLM practices and cost specific RLM practices
- The priority RLM practices include pre-return inspection, an optimised RL process, streamlined return logging, online authorisation, efficient return collection, effective product disposition and recovery, clearly communicated return policies, return charges and penalties, preventative gatekeeping, preventative inspection and consumer feedback and complaints data, which can be important for effective return prevention and control, service performance and cost effectiveness.
- The prevention and control RLM practices include (1) logistics excellence and information sharing initiative for pre-sales PRP (proactive prevention), (2) metrics, product experts and abuse investigations for RRP examination, (3) product interventions, supplier exit and account suspensions for RRP interventions (reactive return prevention), (4) product return visibility, segregation and inventory management for operational RLC (RL control), and (5) control mechanisms, dedicated resources, standards, guidelines and maintenance for managerial RLC.

- The service specific RLM practices include (1) platforms, streamlining and personalisation for SOR communication (service orientated return), (2) SOR processing, (3) preparation, metrics, tools and mystery shopper data for RSP (return service performance) evaluation, (4) RSP improvement preparation and execution, and (5) formalisation, service standards and agreements, and service failure reduction for RSP management.
- The cost specific RLM practices include (1) cost determination and understanding RCE (return cost evaluation) tools, (2) cost identification and assessment for RCE execution, (3) COR (cost orientated return) transportation, (4) return avoidance and cost absorption for RCM (return cost management) mitigation and (5) formalisation, accounting and cost monitoring for RCM execution.
- The priority practice of pre-return inspection can be important for return prevention, service effectiveness and cost effectiveness in the RL process
- Most priority practices can be important for product return and cost prevention and control
- All RLM practices include key elements, requirements and considerations as well as associated RLM success factors that can be implemented for effective execution (degree of implementation)
- The most complex RLM practice in term of the degree of implementation is effective product return disposition and recovery (priority practice), which involve multiple descriptions, requirements, considerations and RLM success factors
- The RLM success factors can play the biggest role in the implementation of an optimised RL process (priority practice), RSP improvement preparation and execution, and formalisation, service standards and agreements, and service failure reduction for RSP management (service practices).
- The most important success factors for the implementation of RLM practices included a well-designed RL process (design success factor), appropriate and sufficient resources (resource success factor), well-controlled RL costs and risks (control success factor) and well-established SC relationships (relational success factor).
- All RLM practices can be implemented for the effective RLM of consumer returns

Recommendations

- Online retailers can refer to Framework 4 to identify RLM practices with related key elements, requirements, considerations and RLM success factors necessary for the implementation of RLM practices. Additionally, online retailers can focus on understanding RL, consumer returns and RL processes (framework 1), identifying and investigating RLM constraints associated with the RLM practices (framework 2), exploring the most significant RLM success factors for each RLM practice category (frameworks 3 and 4) and considering the significance and justification of effective RLM (framework 5A and C).
- For the ***priority RLM practices***, it is recommended that online retailers (1) understand RL, consumer returns and RL processes (see framework 1), (2) identify and investigate the *RLM constraints* of investment and costing, financial and cash (financial constraints), product return and recovery, operational support (operational constraints), strategy, policy and control (organisational constraints), SC and consumer and market (external constraints) (see framework 2), (3) explore the *RLM success factors* of well-developed RL strategies and systems (strategic success factor) and a well-designed RL process (design success factor) (see frameworks 3 and 4), (4) consider the economic, legal and environmental *significance of RLM* (see framework 5A), and (5) consider the *justification* of pre-return inspection, an optimised RL process, streamlined return logging, online authorisation, efficient return collection, effective product disposition and recovery, clearly communicated return policies, return charges and penalties, preventative gatekeeping, preventative inspection and consumer feedback and complaints data (see framework 5C).
- For the ***prevention and control specific RLM practices***, it is recommended that online retailers (1) understand consumer returns (see framework 1), (2) identify and investigate the *RLM constraints* of financial and cash (financial constraints), product return and recovery, operational support (operational constraint), strategy, policy and control (organisational constraints), SC and consumer and market (external constraints) (see framework 2), (3) explore the *RLM success factors* of appropriate and sufficient resources (resource success factor), well-developed performance management and consumer centric return prevention (control success factors) (see frameworks 3 and 4), (4) consider the economic, competitive and legal *significance of RLM* (see framework 5A), and (5) consider the *justification* of logistics excellence and information sharing initiative for pre-sales PRP, metrics, product experts and abuse investigations for RRP examination, product interventions, supplier exit and account suspensions for RRP interventions, product return visibility, segregation and inventory management for operational RLC, and control mechanisms, dedicated resources, standards, guidelines and maintenance for managerial RLC (see framework 5C).

- For the ***service specific RLM practices***, it is recommended that online retailers (1) understand RL, consumer returns and RL processes (see framework 1), (2) identify and investigate the *RLM constraints* of operational support (operational constraints), strategy, policy and control (organisational constraints), consumer and market (external constraints) (see framework 2), (3) explore the *RLM success factors* of a well-designed RL process (design success factor), appropriate and sufficient resources, appropriate IT, skilled and trained staff (resource success factors), well-established SC relationships and well-established consumer relationships (relational success factors) (see frameworks 3 and 4), (4) consider the competitive and social *significance of RLM* (see framework 5A), and (5) consider the *justification* of platforms, streamlining and personalisation for SOR communication, SOR processing, preparation, metrics, tools and mystery shopper data for RSP evaluation, RSP improvement preparation and execution, and formalisation, service standards and agreements, and service failure reduction for RSP management (see framework 5C).
- For the ***cost specific RLM practices***, it is recommended that online retailers (1) understand RL processes (see framework 1), (2) identify and investigate the *RLM constraints* of investment and costing and financial and cash (financial constraints), operational support (operational constraint), management, and strategy, policy and control (organisational constraints) (see framework 2), (3) explore the *RLM success factors* of well-designed RL strategies and systems (strategic success factor), well-developed performance management and well-controlled RL costs and risks (control success factors) (see frameworks 3 and 4), (4) consider the economic *significance of RLM* (see framework 5A), and (5) consider the *justification* of cost determination and understanding RCE tools, cost identification and assessment for RCE execution, COR transportation, return avoidance and cost absorption for RCM mitigation, and formalisation, accounting and cost monitoring for RCM execution (see framework 5C).

Objectives realised

- The RLM practices, including priority, prevention and control, service and cost practices, can be important factors for the effective RLM of consumer returns in online retailing. Therefore, identifying and implementing RLM practices contributed to realising *SRO-4* (identify and explore RL literature for RL practices to manage consumer returns), *SRO-6* (identify and explore important RL practices for managing consumer returns in online retailing, based on inputs from industry experts), *SRO-7* (investigate and determine important factors for the effective RLM of consumer returns in online retailing) and the primary objective through Framework 4.

MAIN FINDINGS, RECOMMENDATIONS AND OBJECTIVES: FRAMEWORK 5

FRAMEWORK 5A - UNDERSTAND THE SIGNIFICANCE OF RLM

Main findings

- The significance of RLM involves drivers and reasons that motivate online retailers to adopt RLM, which can support the effective RLM of consumer returns in online retailing
- The significance of RLM includes economic, competitive, social, legal and environmental significance
- Economic significance relates to financial benefits and drivers, including capturing economic value, financial gains, an increase in profits, cost savings, an increase in economic power and improvement to the overall bottom line, which can motivate online retailers to adopt RLM for the effective RLM of consumer returns.
- Competitive significance relates to market benefits and drivers, including competitiveness, consumer satisfaction, an increase in consumer service, trust and loyalty, discouragement of future entrants to the market, an increase in market share, competitive pressures, consumer retention and confidence, competitive advantage and prevention of competitor access to the market and technology, which can motivate online retailers to adopt RLM for the effective RLM of consumer returns.
- Social significance relates to social drivers, including consumer pressures, corporate social responsibility and corporate citizenship, which can motivate online retailers to adopt RLM for the effective RLM of consumer returns.
- Legal significance relates to legal drivers, including regulations to implement RL, governmental and juridical regulations for product take-back, recovery and recycling, environmental laws and consumer protection laws, which can motivate online retailers to adopt RLM for the effective RLM of consumer returns.
- Environmental significance relates to environmental drivers, including concerns with the environment, reducing impact on the environment and the adoption of environmentally sustainable practices, which can motivate online retailers to adopt RLM for the effective RLM of consumer returns.
- All significance factors can contribute to other significance factors in terms of benefits.

- The economic significance of RLM can involve benefits related to the competitive and environmental significance of RLM, namely competitive advantage, reuse of resources and waste reduction.
- The competitive significance of RLM can involve benefits related to the economic, social, legal and environmental significance of RLM, namely increase in profits, improving consumer relationships, avoiding non-compliance of laws and reducing environmental damage.
- The social significance of RLM can involve benefits related to the competitive, legal and environmental significance of RLM, namely satisfying consumer demands, complying with laws and reducing waste
- The legal significance of RLM can involve benefits related to the economic, competitive, social and environmental significance of RLM, namely avoidance of legal fees, enhancing competitiveness, improving brand image and protecting the environment.
- The environmental significance of RLM can involve benefits related to the economic, competitive, social and legal significance of RLM, namely reducing disposal costs, bringing a competitive advantage, enhancing corporate social responsibility and complying with environmental legislation.
- All significance factors of RLM can influence the effective RLM of consumer returns

Recommendations

- Online retailers can refer to Framework 5A to understand the significance of RLM. Additionally, online retailers can focus on understanding RL, consumer returns and RL processes (framework 1), identifying and investigating RLM constraints (framework 2), RLM success factors (framework 3) and RLM practices (framework 4) associated with the significance of RLM, and considering the justification of effective RLM (framework 5A and C).
- To understand the ***economic significance of RLM***, it is recommended that online retailers (1) understand RL, consumer returns and RL processes (see framework 1), (2) identify and investigate the *RLM constraints* of investment and costing, financial and cash (financial constraints) and product return and recovery (operational constraint) (see framework 2), (3) identify and consider the justification of the *RLM success factors* of strategic importance and significance of RLM, well-developed RL strategies and systems (strategic success factor) and a well-designed RL process (design success factor) (see frameworks 3 and 5B), and (4) identify and consider the of *RLM practices* of effective product disposition and recovery (priority practice) (see frameworks 4 and 5C).
- To understand the ***competitive significance of RLM***, it is recommended that online retailers (1) understand RL, consumer returns and RL processes (see framework 1), (2) identify and investigate the *RLM constraints* of consumer and market (external constraints) (see framework 2), (3) identify and consider the justification of the *RLM success factors* of strategic importance and significance of RLM (strategic success factor), a well-designed return policy, a well-designed RL process (design success factors), and well-established consumer relationships (relational success factor) (see frameworks 3 and 5B), and (4) identify and consider the of *RLM practices* of an optimised RL process, streamlined return logging (priority practices), SOR communication, RSP improvement preparation and execution, formalisation, service standards and agreements, and service failure reduction for RSP management (service practices) (see frameworks 4 and 5C).
- To understand the ***social significance of RLM***, it is recommended that online retailers (1) understand consumer returns and RL processes (see framework 1), (2) identify and investigate the *RLM constraints* of SC and consumer and market (external constraints) (see framework 2), (3) identify and consider the justification of the *RLM success factors* of strategic importance and significance of RLM (strategic success factor), a well-designed return policy, a well-designed RL process (design success factors), and well-established consumer relationships (relational success factor) (see frameworks 3 and 5B), and (4) identify and consider the of *RLM practices* of an optimised RL process, streamlined return logging, effective product disposition and recovery, consumer feedback and complaints data (priority practices) and RSP improvement preparation and execution (service practices) (see frameworks 4 and 5C).
- To understand the ***legal significance of RLM***, it is recommended that online retailers (1) understand RL, consumer returns and RL processes (see framework 1), (2) identify and investigate the *RLM constraints* of product return and recovery (operational constraint) and strategy, policy and control (organisational constraint) (see framework 2), (3) identify and consider the justification of the *RLM success factors* of strategic importance and significance of RLM (strategic success factor), a well-designed return policy (design success factor), and well-controlled RL costs and risks (control success factor) (see frameworks 3 and 5B), and (4) identify and consider the of *RLM practices* of an pre-return inspection, preventative gatekeeping, preventative inspection (priority practices), metrics, product experts and abuse investigations for RRP examination, product interventions, supplier exit and account suspensions for RRP interventions (reactive return prevention practices), and return

avoidance for RCM mitigation (return cost management) (see frameworks 4 and 5C).

- To understand the ***environmental significance of RLM***, it is recommended that online retailers (1) understand RL, consumer returns and RL processes (see framework 1), (2) identify and investigate the *RLM constraints* of product return and recovery (operational constraint) and strategy, policy and control (organisational constraint) (see framework 2), (3) identify and consider the justification of the *RLM success factors* of strategic importance and significance of RLM, well-developed RL strategies and systems (strategic success factor), a well-designed RL process and a well-designed RL network (design success factor) (see frameworks 3 and 5B), and (4) identify and consider the of *RLM practices* of an pre-return inspection, an optimised RL process, streamlined return logging, online authorisation, efficient return collection, effective product disposition and recovery, return charges and penalties, preventative gatekeeping and preventative inspection (priority practices) (see frameworks 4 and 5C).

Objectives realised

- The significance of RLM, including economic, competitive, social, legal and environmental significance, can be important factors for the adoption of RLM to effectively manage consumer returns in online retailing. Therefore, understanding the significance of contributed to realising a part of *SRO-1* (determine the factors that influence the success of RLM) and the primary objective through Framework 5A.

FRAMEWORK 5B – JUSTIFY THE ADOPTION OF RLM SUCCESS FACTORS

Main findings

- As mentioned in the findings of Framework 3, the RLM success factors can be important for the effective RLM of consumer return in online retailing
- The justification for adopting RLM success factors relates to the number of RLM constraints that can be addressed and the number of RLM benefits realised
- The RLM benefits include various economic, operational, organisational, environmental, social, market and SC benefits
- All RLM success factors addressed various RLM constraints and realised numerous RLM benefits
- Appropriate IT as a resource RLM success factor was the most important success factor in terms of the number of RLM constraints addressed and benefits realised
- The RLM control success factor of well-controlled RL costs and risks was the most significant success factor in terms of addressing RLM constraints
- The most beneficial RLM success factor in terms of realising RLM benefits was appropriate IT
- The least significant RLM success factor in terms of addressing RLM constraints and realising RLM benefits was a well-designed return policy (design success factor)

Recommendations

- To justify the adoption of RLM success factors online retailers can refer to Framework 5B. Additionally, online retailers can prioritise the adoption of success factors based on the findings presented in Frameworks 1B, 1C and 1D (understand consumer returns and RL processes), Framework 2 (RLM constraints), Framework 3 (RLM success factors) and Framework 5B (justify the adoption of RLM success factors).
- It is recommended that online retailers prioritise the adoption of ***strategic RLM success factors*** if they aim to (1) manage B2C returns effectively (framework 1 B), (2) improve or effectively manage collection, transportation, inspection, sorting, disposition and redistribution processes (frameworks 1C and 1D), (3) address investment and costing (financial RLM), operational support (operational RLM), management, strategy, policy, control and functional (organisational RLM) constraints (frameworks 2 and 5B), and (4) improve organisational, environmental, social and market (competitive) performance (frameworks 3 and 5B).
- It is recommended that online retailers prioritise the adoption of ***design RLM success factors*** if they aim to (1) manage consumer returns effectively (framework 1 B), (2) improve or effectively manage CRR, gatekeeping, collection, transportation, receiving, processing, inspection, sorting, disposition and redistribution processes (frameworks 1C and 1D), (3) address

financial and cash (financial RLM), product return and recovery, operational support (operational RLM), strategy, policy, control (organisational RLM), consumer and market (external RLM) constraints (frameworks 2 and 5B), and (4) improve operational, environmental, market and SC performance (frameworks 3 and 5B).

- It is recommended that online retailers prioritise the adoption of ***resource RLM success factors*** if they aim to (1) manage B2C returns effectively (framework 1 B), (2) improve or effectively manage CRR, gatekeeping, receiving, inspection, sorting and disposition processes (frameworks 1C and 1D), (3) address investment and costing (financial RLM), operational support (operational RLM), functional (organisational RLM), SC, consumer and market (external RLM) constraints (frameworks 2 and 5B), and (4) improve operational, environmental, social, market and SC performance (frameworks 3 and 5B).
- It is recommended that online retailers prioritise the adoption of ***control RLM success factors*** if they aim to (1) manage B2C returns effectively (framework 1 B), (2) improve or effectively manage gatekeeping and disposition processes (frameworks 1C and 1D), (3) address investment and costing, financial and cash (financial RLM), product return and recovery risk (operational RLM), strategy, policy, control (organisational RLM), functional (organisational RLM), consumer and market (external RLM) constraints (frameworks 2 and 5B), and (4) improve economic, operational, environmental, social and market performance (frameworks 3 and 5B)
- It is recommended that online retailers prioritise the adoption of ***relational RLM success factors*** if they aim to (1) manage B2C returns effectively (framework 1 B), (2) improve or effectively manage CRR, gatekeeping, collection, transportation, receiving, processing, inspection, sorting, disposition and redistribution processes (frameworks 1C and 1D), (3) address product return and recovery (operational RLM) functional (organisational RLM), SC and consumer and market (external RLM) constraints (frameworks 2 and 5B), and (4) improve environmental, environmental, social, SC and market performance (frameworks 3 and 5B)

Objectives realised

- RLM success factors can be important to improve RL processes, address RLM constraints and realise RLM benefits for the effective RLM of consumer returns in online retailing. Therefore, justifying the adoption of the RLM success factors contributed to realising a part of *SRO-1* (determine the factors that influence the success of RLM), *SRO-7* (investigate and determine important factors for the effective RLM of consumer returns in online retailing) and the primary objective through Framework 5B.

FRAMEWORK 5C – JUSTIFY THE IMPLEMENTATION OF RLM PRACTICES

Main findings

- As mentioned in the findings of Framework 4, the RLM practices can be important for the effective RLM of consumer return in online retailing
- The justification for the implementation of RLM practices relates to the number of RLM constraints that can be addressed and the number of RLM benefits realised
- The service specific RLM practice of formalisation, service standards and agreement, and service failure reduction for RSP management is the most beneficial RLM practice in terms of addressing RLM constraints, realising RLM benefits, and costs (degree of implementation) versus benefits (RLM constraints addressed and RLM benefits realised)
- Service specific RLM practice of can be the most beneficial for the effective RLM of consumer returns in online retailing
- Cost specific RLM practices can be the least beneficial in terms of the overall costs versus the benefits
- All RLM practices addressed various RLM constraints and realised numerous RLM benefits

Recommendations

- To justify the implementation of RLM practices online retailers can refer to Framework 5C. Additionally, online retailers can prioritise the implementation of RLM practices based on the findings presented in Frameworks 1B, 1C and 1D (understand consumer returns and RL processes), Framework 2 (RLM constraints), Framework 4 (RLM practices) and Framework 5C (justify the implementation of RLM practices).
- It is recommended that online retailers prioritise the implementation of ***priority RLM practices*** if they aim to (1) manage

consumer returns effectively (framework 1 B), (2) improve or effectively manage CRR, gatekeeping, collection, inspection and disposition processes (frameworks 1C and 1D), (3) address financial and cash (financial RLM), product return and recovery (operational RLM), and consumer and market (external RLM) constraints (frameworks 2 and 5C), and (4) improve economic, operational, environmental, social, market and SC performance (frameworks 4 and 5C).

- It is recommended that online retailers prioritise the implementation of ***prevention and control specific RLM practices*** if they aim to (1) manage and reduce consumer returns (framework 1 B), (2) improve or effectively manage receiving, sorting and disposition processes (frameworks 1C and 1D), (3) address financial and cash (financial RLM), product return and recovery, operational support (operational RLM), management, strategy, policy and control, functional (organisational RLM), SC and consumer and market (external RLM) constraints (frameworks 2 and 5C), and (4) improve economic, operational, organisational, environmental, market and SC performance (frameworks 4 and 5C).
- It is recommended that online retailers prioritise the implementation of ***service specific RLM practices*** if they aim to (1) manage consumer returns efficiently (framework 1 B), (2) improve or effectively manage CRR, gatekeeping, collection, processing and inspection processes (frameworks 1C and 1D), (3) address product return and recovery, operational support (operational RLM), management, strategy, policy and control, functional (organisational RLM) and consumer and market (external RLM) constraints (frameworks 2 and 5C), and (4) improve economic, operational, organisational, environmental, social, market and SC performance (frameworks 4 and 5C).
- It is recommended that online retailers prioritise the implementation of ***cost specific RLM practices*** if they aim to (1) manage and avoid consumer returns (framework 1 B), (2) improve or effectively manage gatekeeping, transportation, processing and disposition processes (frameworks 1C and 1D), (3) address investment and costing, financial and cash (financial RLM), management, strategy, policy and control, and functional (organisational RLM) constraints (frameworks 2 and 5C), and (4) improve economic and environmental performance (frameworks 4 and 5C).

Objectives realised

- The RLM practices can be important factors to improve RL processes, address RLM constraints and realise RLM benefits for the effective RLM of consumer returns in online retailing. Therefore, justifying the implementation of RLM practices contributed to realising *SRO-4* (identify and explore RL literature for RL practices to manage consumer returns), *SRO-6* (identify and explore important RL practices for managing consumer returns in online retailing, based on inputs from industry experts), *SRO-7* (investigate and determine important factors for the effective RLM of consumer returns in online retailing) and the primary objective through Framework 5C.

Source: Compiled by the researcher

In the next section, the contribution, limitations and future research opportunities will be provided.

9.10 CONTRIBUTION, LIMITATIONS AND FUTURE RESEARCH RECOMMENDATIONS

This section provides the contribution, highlights the limitations of this study, and recommends future research opportunities.

9.10.1 Contribution of the study

This study extensively investigated the effective RLM of consumer returns in online retailing. This study identified that effective RLM requires understanding, exploring, identifying or investigating the concept of RL, consumer returns, pre-receipt and post-receipt RL processes, RLM constraints, RLM success factors, practices for effective RLM and significance of effective RLM. Furthermore, this study developed a framework for the effective RLM of consumer returns in online retailing consisting of

several sub-frameworks for implementation and consideration. Specifically, the study developed a framework (1) that provides online retailers with limited experience in RL with an understanding of the concept of RL (Framework 1A), consumer returns (Framework 1B), pre-receipt RL processes (Framework 1C) and post-receipt RL processes (Framework1D). Following the understanding of the concept of RLM, the study identified that online retailers could identify economic, operational, organisational and external constraints that hamper the adoption and effective implementation of RLM (Framework 2). Without knowledge about the barriers, risks, pitfalls and problems in RLM, online retailers might struggle to implement appropriate RLM practices.

Online retailers that lack knowledge about success factors in RLM can identify the strategic, design, resource, control and relational RLM success factors (Framework 3), which can be used as a benchmark for successful RLM. When effectively managed, these factors can significantly improve the efficiency and effectiveness of RLM. This study identified that various practices can be implemented for effective RLM, including priority, return prevention and control, service and cost RLM practices (Framework 4). All RLM practices in Framework 4 include key elements, requirements and considerations, and associated RLM success factors that can be implemented for the effective execution of RLM.

Additionally, the study identified that understanding the significance of RLM (Framework 5A), justifying the adoption of RLM success factors (Framework 5B) and justifying the implementation of RLM practices (Framework 5C) can be important drivers for adopting and implementing effective RLM. This study determined that online retailers should understand the economic, competitive, social, legal and environmental significance of RLM (Framework 5A) for more awareness of the importance of RLM. Furthermore, the study identified that adopting RLM success factors (Framework 5B) and implementing RLM practices (Framework 5C) can be justified through the number of constraints addressed and the number of benefits realised. Consequently, identifying the beneficial outcomes of RLM can motivate online retailers to adopt RLM success factors and implement RLM practices for the effective RLM of consumer returns.

While the study identified that consumer and market constraints could be most problematic in RLM, strategic, resource and relational factors can be the most significant RLM success factors, and priority and service practices can be the most beneficial for the effective RLM of consumer returns in online retailing, the developed framework is not a one-size-fits-all solution. Instead, it can be uniquely applied to the online retailer's situation, adapting to their specific needs and challenges. For instance, if the online retailer identified economic constraints (Framework 2) as the most significant constraints to the adoption and implementation of effective RLM, they could focus on benchmarking control RLM

success factors (Framework 3), implementing cost RLM practices (Framework 4), understanding the economic significance of RLM (Framework 5A), justifying the adoption of control RLM success factors (Framework 5B) and justifying the implementation of cost RLM practices (Framework 5C).

This study provided several theoretical, methodological, practical and policy contributions, which will be emphasised in the subsequent sections.

9.10.1.1 Theoretical and empirical contributions

In the problem statement of the study, presented in section 1.3, several gaps in research were identified that this study addressed. Additionally, from the unique contributions presented in section 1.8, additional areas were identified that support the theoretical and empirical contributions of the study. Accordingly, this study made the following theoretical and empirical contributions:

- **Development of RL literature**: This study significantly advances the literature on RL by synthesising a wide selection of scientific journal articles and integrating insights from industry experts, specifically in the South African online retail industry. This study provides new perspectives and a deeper understanding of RL processes, practices and the management of consumer returns in online retailing.
- **Focus on online consumer returns**: While most existing research focuses on brick-and-mortar settings, this study addresses the gap by exploring the types and significance of consumer returns in online retailing. Therefore, this study contributes to the theoretical discourse by highlighting the unique challenges and opportunities in the online context.
- **Exploration of RL processes and practices**: The study examines RL processes and practices from theoretical (literature review) and practical (interviews) perspectives. This dual approach enriches the theoretical understanding of effective RLM.
- **Alternative RLM practices**: By identifying various RLM practices beyond return policies, this study offers theoretical insights into alternative strategies for managing consumer returns effectively, expanding the theoretical framework of RLM in online retailing.
- **Geographic focus**: The study contributes empirical knowledge to the relatively unexplored area of RL and RLM of consumer returns in the South African online retail industry, providing a foundation for further research in this geographic context.
- **Research in developing countries**: By focusing on South Africa, the study contributes to the empirical literature on RL in developing countries, addressing the noted gap in research in these regions.

- **Input from industry experts**: Including inputs from industry experts provides empirical validation of the theoretical concepts and offers practical insights into the current state challenges of RLM in online retailing.

9.10.1.2 Methodological contributions

The problem statement (section 1.3) and unique contribution (section 1.8) identified methodological gaps in the research. However, additional contributions were made regarding the methodology chapters (3 and 7) of this study. This study made the following methodological contributions:

- **Qualitative research methodology**: This study addresses the dominance of quantitative methodologies in RL research by employing a multimethod qualitative approach, thus enriching the methodological diversity in the field.
- **Representation in organisational research**: Through a multimethod qualitative design, the study contributes to the underrepresented area of qualitative research in organisational and management studies.
- **Qualitative content analysis**: The study provides a detailed methodological overview of applying QCA to literature and demonstrates the practical use of software like ATLAS.ti, addressing the scarcity of practical guidance in this area.
- **Thematic analysis (TA)**: This study provides a detailed and practical approach to conducting reflexive TA, facilitating other researchers' use and understanding of this methodology.

9.10.1.3 Practical contributions

In the background (section 1.2), problem statement (section 1.3) and unique contribution (section 1.8), it was established that RL and RLM can be more complicated in online retailing and can significantly impact online retailers' performance in terms of cost, market share, corporate image and consumer service. Unfortunately, many online retailers still fail to recognise the importance of RLM, viewing RLM as an unwanted burden. Furthermore, ineffective RLM can be detrimental to the long-term sustainability of online retailers. Various studies, including this study, identified that practise lacks an RLM framework guiding online retailers to manage consumer returns effectively. This study provided the following practical contributions:

- **RLM practices beyond return policies**: The study identifies and emphasises RLM practices such as return prevention and control, service performance, and cost management, which are important for effective RLM rather than focusing solely on return policies.

- **Framework development**: The study develops a comprehensive framework for effective RLM of consumer returns, which online retailers can implement to improve their RLM practices.
- **Guidance for online retailers**: The framework assists online retailers in understanding RL concepts, gaining insights into consumer returns and RL processes, identifying RLM constraints, success factors and practices, and justifying the adoption and implementation of effective RLM.
- **Practical insights and recommendations**: The study provides actionable insights and recommendations that online retailers can apply when using the developed framework, ultimately enhancing their RLM practices and overall performance.

9.10.1.4 Policy contributions

In addition to the theoretical, empirical, methodological and practical contributions, this study contributes to policy in the following ways:

- **Guidelines for policymakers**: The study offers key insights and recommendations that can inform policymakers in developing guidelines and regulations to support effective RLM practices.
- **Policy tool**: The framework can serve as a policy tool to standardise RLM procedures, enhance consumer satisfaction, and improve the sustainability of online retail operations.
- **Supporting sustainable practices**: Policymakers can use the findings of the study to promote sustainable RL practices, which would benefit the broader online retail industry.

In the next section, the limitations of the study will be identified.

9.10.2 Limitations of the study

Despite the valuable contributions, this study was subjected to several limitations in terms of time, scope, lack of research in the field, impact of multimethod qualitative research, field of study, access to participants, sampling, research subjects and geographical region. The limitations of this study are as follows:

- **Time:** The most significant limitation in this study was time. Due to the nature of this multimethod qualitative study, this study was conducted over a period of six years. Additionally, the analysis of almost 300 articles and 13 lengthy interviews added to the time constraints. The researcher personally transcribed, coded and analysed all qualitative data.

- **Scope of the study:** The scope of the study was limited to consumer returns, RL processes, RL practices and RLM in online retailing, with a strong focus on economic, competitive and market performance. Therefore, this study excluded any practices and recovery activities associated with manufacturers and waste management. Particularly, this study excluded green logistics practices, environmental management practices, disposition options of reconditioning, remanufacturing, recycling and waste management. Additionally, this study was limited to consumer returns, which excluded distribution returns and manufacturer returns.
- **Lack of available research:** At the start of the study, almost no publications were found that focused on RL and consumer returns in online retailing. Resultingly, the initial literature review and QCA of RL literature mostly included publications focusing on manufacturing, bricks-and-mortar retailing, automotive industry, construction industry and waste management sectors. Only after the completion of the QCA of RL literature did research in RL and online retailing increase, especially due to the COVID-19 pandemic. However, more recent research was added to the literature study, which supported the empirical findings of the study.
- **Impact of multimethod qualitative research:** As the researcher was familiar with quantitative survey methodologies, substantial effort and time was needed to understand, apply and use qualitative research methods. The researcher underestimated the requirements of a thorough qualitative study, which added to the time constraints of the study. Using three different qualitative research methods created challenges in the writing of various chapters, including two methodology chapters and five findings' chapters. Consequently, the length of this thesis reflects the implication and scope of selecting multiple qualitative research methods.
- **Field of study and access to participants:** In the recruitment stage of this study, it was noted that limited individuals in South Africa can be regarded as experts in RL, consumer returns and RLM. Additionally, industry professionals, CEOs, owners and senior managers are hard-to-access individuals, which complicated the recruitment process. Despite this inaccessibility of industry experts, thirteen were recruited for the empirical research of the study.
- **Sampling, research subjects and geographical region:** Since the interviews with industry experts included a small sample size, the study findings cannot be generalised to a larger population. Furthermore, this study excluded views from operational staff, who might provide different insights into RL processes and activities. While this study focused on consumer returns, consumers were excluded as participants from the study, which can be a shortcoming in terms of identifying consumer-centric RLM practices. Additionally, this research was conducted within the borders of South Africa, which might impact the application of the framework to other regions.

9.10.3 Future research recommendations

Based on the limitations and findings of the study, the following recommendations for future research can be made:

- To extend the scope of this study, future research could focus on the green logistics management of consumer returns in online retailing
- To extend the framework developed in this study, future research can be conducted on the RLM of business-to-business returns
- Future research can be conducted using quantitative research methods to examine consumer returns and RL in the online retailing industry of South Africa
- Future research can focus on risk management and the impact of supply chain disruptions on the management of consumer returns in online retailing
- Future research can focus on the financial management, accounting and costing practices in RL
- More research is needed into the application of modern technologies in managing RL and product returns in South Africa
- More research is needed on the impact of the 4th industrial revolution and circular economy principles in the RLM of product returns in South Africa
- Future research can focus on the economic, legislative, competitive, corporate citizenship and environmental drivers in the adoption of RLM in South Africa
- More research can be conducted on strategic management and top management support as practices for the effective management of consumer returns
- Future research can focus on cross-functional collaboration and internal relationship management as RLM practices to address RL problems
- To extend the sampling scope of this study, future research can include operational staff to understand RL processes and alternative RLM practices
- Future research can include consumers as research subjects, using focus groups that can help online retailers to identify additional problems and success factors
- More research is needed in South Africa to explore the impact of wardrobing, opportunistic buying and fraudulent return behaviours on the economic sustainability and competitiveness of online retailers.

In the next section, the conclusion of the study is provided.

9.11 CONCLUSION OF THE STUDY

In this chapter, a final framework for the effective RLM of consumer returns in online retailing and was presented and a conclusion of this study was provided, including an overview of the study, summary of main findings, recommendations and objectives, contribution, limitations and future research opportunities.

Consequently, the first aim of this chapter was to achieve the primary research objective of the study, which was to ***develop a framework for the effective RLM of consumer returns in online retailing.*** The framework was developed based on the findings of the three research phases of the study, including the literature study (phase 1 presented in chapter 2), QCA of RL literature (phase 2 presented in chapters 4, 5 and 6) and the interviews with industry experts (phase 3 presented in chapter 8). Due to the comprehensiveness of the findings of this study, the final framework was divided into five separate but interrelated frameworks, which in combination represents the framework for the effective RLM of consumer returns in online retailing. Specifically, the framework for the effective RLM of consumer returns in online retailing included (1) Framework 1 – Understand RL, consumer returns and RL processes, (2) Framework 2 – Identify and investigate RLM constraints, (3) Framework 3 – Understand the success factors of effective RLM, (4) Framework 4 – Identify and implement RLM practices, and (5) Framework 5 – Understand and justify the significance of effective RLM. Additionally, the framework was used to structure the summary of main findings, recommendations and objectives realised.

Framework 1 (section 9.4) focused on providing online retailers with a limited understanding of RLM, with a description of the concept of RL, consumer returns and RL processes that can take place in online retailing. Framework 1 consisted of four parts, including Framework 1A – Understand the concept of RL, which focused on defining and describing RL (from section 2.2), Framework 1B – Understand consumer returns, which focused on describing consumer return types (from sections 4.3 and 8.3.1), Framework 1C – Understand pre-receipt RL processes, which focused on describing the pre-receipt RL processes (from sections 4.4 and 8.3.2), and Framework 1D – Understand post-receipt RL processes, which focused on describing the post-receipt RL processes (from chapter 5 and section 8.3.3).

Framework 2 (section 9.5) focused on helping online retailers to identify and investigate RLM constraints that hampers the effective RLM of consumer returns. Specifically, Framework 2 involved the identification and investigation of RLM constraints and RLM constraint causes that represented RLM barriers, risks, pitfalls and problems (from sections 2.3, 8.4.1, 8.5.1 and 8.6.1) and potential

solutions for RLM constraints (derived from identified constraint causes). The main RLM constraints were classified as financial, operational, organisational and external constraints. As a part of the investigation of RLM constraints, Framework 2 indicated the degree of constraints, degree of causes and degree of solutions, which can help online retailers investigate the most significant RLM constraints, constraint causes and solution focus areas. The framework showed that consumer and market constraints can be the most problematic for online retailers, which means that online retailers must focus on avoiding and addressing consumer and market constraints for the effective RLM of consumer returns.

Framework 3 (section 9.6) focused on educating online retailers that lack knowledge about the success factors of effective RLM. Particularly, Framework 3 involved an understanding of the RLM success factors, classified as strategic, design, resource, control and relational RLM success factors, which represented descriptions of the RLM success factors (from section 2.5) and RL practices (from chapter 6). Framework 3 can be used as a benchmark for online retailers to compare their current RL practices, processes and procedures against key RLM success factors, which can help them to consider adopting key RLM success factors for the effective RLM of consumer returns. Furthermore, Framework 3 provided online retailers with the degree of adoption and impact of RLM success factors, which can help them understand the requirements and importance of each key RLM success factor. The framework illustrated that the most important RLM success factor included strategic importance and commitment to RLM, suggesting that online retailer can prioritise the adoption of this RLM success factor for the effective RLM of consumer returns.

Framework 4 (section 9.7) focused on helping online retailers to identify and implement suitable RLM practices for the effective RLM of consumer returns. The main RLM practices were classified as priority RLM practices (most significant key practices in terms of occurring in more than one theme from the interview findings presented in chapter 8), prevention and control specific RLM practices (from section 8.4.2), service specific RLM practices (from section 8.5.2) and cost specific RLM practices (from section 8.6.2). Specifically, Framework 4 involved the identification and implementation of (1) key RLM practices (from sections 8.4.2, 8.5.2 and 8.6.2), (2) RLM practice requirements (from chapter 6), (3) RLM practice considerations (from sections 8.4.2.4, 8.5.2.3 and 8.6.2.4), and (4) RLM success factors to adopt (identified from Framework 3). Additionally, Framework 4 provides the degree of implementation of each key RLM practice, which can help online retailers identify the most complex RLM practices. The framework identified that effective product disposition and recovery (key priority RLM practice) can be the most complex RLM practice, meaning

that online retailers must identify various initiatives, requirements and considerations and adopt several RLM success factors before product disposition and recovery can be implemented successfully.

Finally, Framework 5 (section 9.8) focused on helping online retailers to understand the significance of RLM and identify the beneficial outcomes of adopting RLM success factors and implementing RLM practices. Framework 5 consisted of three parts, including (1) Framework 5A – Understand the significance of RLM, which focused on describing economic, competitive, social, environmental and legal significance of RLM (from section 2.4), (2) Framework 5B – Justify the adoption of RLM success factors, which focused on identifying the RLM constraints addressed (from section 2.3 and Framework 2) and RLM benefits realised (from section 2.5 and chapter 6) through the adoption of RLM success factors, and (3) Framework 5C – Justify the implementation of RLM practices, which focused on identifying the RLM constraints addressed (from sections 8.4.2, 8.5.2 and 8.6.2 and Framework 2) and RLM benefits realised (sections 8.4.3, 8.5.3 and 8.6.3 and chapter 6) through the implementation of RLM practices. Framework 5 showed that RLM can be economically, competitively, socially, legally an environmentally significant, adopting RLM success factors can be highly beneficial and implementing RLM practices can be highly significant. Therefore, online retailers can confidently adopt RLM success factors and implement RLM practices for the effective RLM of consumer returns since the benefits of effective RLM far exceeds the costs.

Based on the justification of the adoption of RLM success factors, Framework 5B demonstrated that the most significant RLM success factor in terms of addressing RLM constraints and realising RLM benefits included appropriate IT. Therefore, online retailers must prioritise the adoption of appropriate IT as a RLM success factor for the effective RLM of consumer returns. Furthermore, based on the justification of the implementation of RLM practices, Framework 5C showed that the most significant key RLM practice included formalisation, service standards and agreements, and service failure reduction for RSP (return service performance) management, which means online retailers must prioritise the implementation of RSP management for the effective RLM of consumer returns in online retailing. Finally, Framework 5C showed that the most significant RLM practice category included service RLM practices, indicating that the effective RLM of consumer returns in online retailing requires a consumer-centric or service-oriented RLM approach.

Following the presentation of the frameworks and summary of findings, this chapter concluded with (1) an overview of the theoretical, methodological, practical and policy contributions of the study, (2) the limitations of this study, including time, scope, lack of research in the field, impact of multimethod qualitative research, field of study, access to participants, sampling, research subjects and geographical

region, (3) future research opportunities based on the limitations and findings in this study, and (4) the conclusion of this study.

BIBLIOGRAPHY [25]

Abdalla, M.M., Oliveira, L.G.L., Azevedo, C.E.F. & Gonzalez, R.K. 2018. Quality in Qualitative Organizational Research: types of triangulation as a methodological alternative. *Administração: Ensino e Pesquisa*. 19(1):66–98. DOI: 10.13058/raep.2018.v19n1.578.

Abdullah, N.A.H.N. & Yaakub, S. 2014. Reverse logistics: pressure for adoption and the impact on the firm's performance. *International Journal of Business and Society*. 15(1):151–170.

Abdulrahman, M.D., Gunasekaran, A. & Subramanian, N. 2014. Critical barriers in implementing reverse logistics in the Chinese manufacturing sectors. *International Journal of Production Economics*. 147(PART B):460–471. DOI: 10.1016/j.ijpe.2012.08.003.

Adams, WC. 2015. Conducting Semi-Structured Interviews. In: *Handbook of Practical Program Evaluation.* 4th ed. K.E. Newcomer, H.P. Hatry, & J.S. Wholey, Eds. Jossey-Bass. 492–505. doi.org/10.1002/9781119171386.ch19.

Agrawal, S., Singh, R.K. & Murtaza, Q. 2015. A literature review and perspectives in reverse logistics. *Resources, Conservation and Recycling*. 97:76–92. DOI: 10.1016/j.resconrec.2015.02.009.

Ahlén, A. & Johansson, E. 2023. Overcoming barriers for functional reverse logistics in e-commerce: A systematic literature review. Bachelor's thesis in International Logistics. Chalmers University of Technology. Available from: www.chalmers.se. [Accessed on 30 October 2023].

Ahmed, A. & Sil, R. 2012. When multi-method research subverts methodological pluralism- or, why we still need single-method research. *Perspectives on Politics*. 10(4):935–953. DOI: 10.1017/S1537592712002836.

Ahsan, K. & Rahman, S. 2022. A systematic review of e-tail product returns and an agenda for future research. *Industrial Management & Data Systems*. 122(1):137–166. DOI: 10.1108/IMDS-05-2021-0312.

Akinyode, BF & Khan, TH. 2018. Step by step approach for qualitative data analysis. International Journal of Built Environment and Sustainability. 5(3):163–174. doi.org/10.11113/ijbes.v5.n3.267.

[25] This bibliography excludes the publications that were used for the QCA of RL literature. These references are provided in Appendix A1.

Anderson, A. 2022. Here's everything you need to know about reverse logistics. Available: https://www.linkedin.com/pulse/heres-everything-you-need-know-reverse-logistics-audrey-anderson-/ [Accessed on 1 November 2023].

Anderson, K. 2021a. Microsoft Teams Review, Pricing & Features. Available: https://www.softwarepundit.com/video-conferencing/microsoft-teams-review-pricing-features [Accessed on 21 December 2022].

Anderson, K. 2021b. Skype Review, Pricing & Features. Available from: https://www.softwarepundit.com/skype-review-pricing-features [Accessed on 21 December 2022].

Andresen, C.N. & Istad, J. 2019. Reverse logistics in e-commerce: A multiple-case study of four e-commerce companies. Master's degree thesis, Molde University College, Norway.

Ang, A. & Tan, A. 2018. Designing Reverse Logistics Network in an Omni-channel Environment in Asia. *Logforum*. 14(4):519–533. DOI: 10.17270/J.LOG.2018.307.

Archibald, M.M., Ambagtsheer, R.C., Casey, M.G. & Lawless, M. 2019. Using Zoom Videoconferencing for Qualitative Data Collection: Perceptions and Experiences of Researchers and Participants. *International Journal of Qualitative Methods*. 18:1–8. DOI: 10.1177/1609406919874596.

ATLAS.ti., 2017. Rigor in qualitative and quantitative. Available from: http://atlasti.com/rigor-social-science-research/ [Accessed on 12 April 2017].

Aytekin, M., Çopuroğlu, F. & Sariçiçek, R. 2016. A study on the applicability of reverse logistics in food enterprises. In *International Logistics and Supply Chain Congress*. Izmir. 500–506.

Azungah, T. 2018. Qualitative research: deductive and inductive approaches to data analysis. *Qualitative Research Journal*. 18(4):383–400. DOI: 10.1108/QRJ-D-18-00035.

Badenhorst, A. 2017. Management practices to mitigate barriers in reverse logistics. *Journal of Contemporary Management*. 14:595–623. DOI: 10.10520/EJC-947ba3111.

Badenhorst, A. 2018. What practice can learn from theory: The potential impact of disposition decision factors on organisational performance. *Journal of Transport and Supply Chain Management*. 10(0):338. DOI: https://doi.org/10.4102/ jtscm.v12i0.338.

Badenhorst, A. 2022. Reverse logistics. In *Strategic logistics management: A supply chain management approach*. 3rd ed. W. Niemann & G. de Villiers, Eds. Pretoria: Van Schaiks.

Bajor, I. & Babić, D. 2014. Reverse Logistics Retail Level Return. *International Journal for Traffic and Transport Engineering*. 4(2):161–170. DOI: 10.7708/ijtte.2014.4(2).03.

Bensalem, A. & Kin, V. 2019. A bibliometric analysis of reverse logistics from 1992 to 2017. *Supply Chain Forum: An International Journal*. 20(1):15–28. DOI: 10.1080/16258312.2019.1574430.

Bernon, M., Upperton, J., Bastl, M. & Cullen, J. 2013. An exploration of supply chain integration in the retail product returns process. *International Journal of Physical Distribution & Logistics Management*. 43(7):586–608. DOI: 10.1108/IJPDLM-03-2012-0060.

Bieniek, M. 2023. Returns handling in e-commerce: How to avoid demand negativity in supply chain contracts with returns? *Electronic Commerce Research*. (March, 20). DOI: 10.1007/s10660-023-09689-2.

Billups, F.D. 2022. *Qualitative data collection tools: Design, development, and applications*. SAGE Publications, Inc. DOI: 10.4135/9781071878699.

Biswas, C. & Abdul-Kader, W. 2018. Reverse logistics challenges in e-commerce. *Proceedings of the International Conference on Industrial Engineering and Operations Management*. 2018(SEP):1016–1023.

Blackstone, A. 2014. *Principles of Sociological Inquiry: Qualitative and Quantitative Methods*. E-book ed. Washington, D.C: Saylor Foundation. DOI: 10.5840/zfs19387312.

Boddy, C.R. 2016. Sample size for qualitative research. *Qualitative Market Research: An International Journal*. 19(4):426–432. DOI: 10.1108/QMR-06-2016-0053.

Bolderston, A. 2012. Conducting a research interview. *Journal of Medical Imaging and Radiation Sciences*. 43(1):66–76. doi.org/10.1016/j.jmir.2011.12.002.

Boodhoo, R. & Purmessur, R.D. 2009. Justifications for qualitative research in organisations: A step forward. *Journal of Online Education.* (January):1–7. Available from: https://scholar-google-co-za.ezproxy.uct.ac.za/scholar?hl=en&q=Justifications+for+Qualitative+Research+in+Organisations%3A+A+Step+Forward+by+BOODHOO&btnG=&as_sdt=1%2C5&as_sdtp= [Accessed on 12 March 2015].

Borders, T. 2023. Advancing along the returns journey. *Supply Chain Brain*. Available from: https://www.supplychainbrain.com/articles/35709-advancing-along-the-returns-journey?oly_enc_id=9130E1776801E1T [Accessed on 3 April 2023]

Bouzon, M., Govindan, K. & Rodriguez, C.M.T. 2018. Evaluating barriers for reverse logistics implementation under a multiple stakeholders' perspective analysis using grey decision making approach. *Resources, Conservation and Recycling*. 128:315–335. DOI: 10.1016/j.resconrec.2016.11.022.

Bouzon, M., Spricigo, R., Rodriguez, C.M.T., de Queiroz, A.A. & Cauchick, P.A.M. 2015. Reverse logistics drivers: empirical evidence from a case study in an emerging economy. *Production Planning & Control*. 26(16):1368–1385. DOI: 10.1080/09537287.2015.1049239.

Bowen, G. 2009. Document Analysis as a Qualitative Research Method. *Qualitative Research Journal*, *9*(2), 27–40. https://doi.org/10.3316/QRJ0902027.

Bozzi, C., Neves, M. & Mont'Alvão, C. 2022. Fashion E-Tail and the Impact of Returns: Mapping Processes and the Consumer Journey towards More Sustainable Practices. *Sustainability*. 14(9):5328. DOI: 10.3390/su14095328.

Brannen, J & O'Connell, R. 2015. Data Analysis I: Overview of Data Analysis Strategies. In *The Oxford Handbook of Multimethod and Mixed Methods Research Inquiry*. S.N. Hesse-Biber & R.B. Johnson, Eds. Oxford: Oxford University Press. 257–274.

Braun, V & Clarke, V. 2006. Using thematic analysis in psychology. *Qualitative Research in Psychology*. 3(2):77–101. doi.org/10.1191/1478088706qp063oa.

Braun, V. & Clarke, V. 2012. Thematic analysis. In *APA handbook of research methods in psychology, Vol. 2: Research designs: Quantitative, qualitative, neuropsychological, and biological*. H. Cooper, P. M. Camic, D. L. Long, A. T. Panter, D. Rindskopf, & K. J. Sher, Eds. Washington, DC: American Psychological Association. 57-71.

Braun, V. & Clarke, V. 2021. One size fits all? What counts as quality practice in (reflexive) thematic analysis? *Qualitative Research in Psychology*. 18(3):328–352. DOI: 10.1080/14780887.2020.1769238.

Caiado, N., Guarnieri, P., Xavier, L.H. & de Lorena Diniz Chaves, G. 2017. A characterization of the Brazilian market of reverse logistic credits (RLC) and an analogy with the existing carbon credit market. *Resources, Conservation and Recycling*. 118:47–59. DOI: 10.1016/j.resconrec.2016.11.021.

Cardano, M. 2019. *Defending Qualitative Research*. London: Routledge, https://0-doi-org.oasis.unisa.ac.za/10.4324/9780429464232.

Cardano, M. 2020. *Defending Qualitative Research. Design, Analysis, and Textualization*. New York: Routledge. doi.org/10.4000/qds.3771.

Cassel, C. 2015. *Conducting Research Interviews for Business and Management Students*. Sage: London.

Castillo, C. 2023. Must-Know Ecommerce Return Statistics. Available from: https://blog.gitnux.com/ecommerce-returnstatistics/#:~:text=regarding%20ecommerce%20returns.,30%25%20of%20all%20products%20ordered%20online%20are%20returned%2C%20as%20compared,that%20online%20shopping%20offers%20customers. [Accessed on 3 April 2023]

Castillo-Montoya, M. 2016. The Qualitative Report Preparing for Interview Research: The Interview Protocol Refinement Framework. *The Qualitative Report*. 21(5):811–831. Available from: http://nsuworks.nova.edu/tqr [Accessed 11 April 2018].

Chan, F.T.S., Chan, H.K. & Jain, V. 2012. A framework of reverse logistics for the automobile industry. *International Journal of Production Research*. 50(5):1318–1331. DOI: 10.1080/00207543.2011.571929.

Chen, H., Anselmi, K., Falasca, M. & Tian, Y. 2017. Measuring returns management orientation. *International Journal of Physical Distribution & Logistics Management*. 28(2):251–262. DOI: 10.1108/IJLM-06-2015-0095.

Chen, L., Li, W. & Zhai, H. 2016. The Analysis of Reverse Logistics Model in the E-commerce Models. *International Journal of Grid and Distributed Computing*. 9(9):173–184. DOI: 10.14257/ijgdc.2016.9.9.15.

Chileshe, N., Rameezdeen, R., Hosseini, M.R., Martek, I., Li, H.X. & Panjehbashi-Aghdam, P. 2018. Factors driving the implementation of reverse logistics: A quantified model for the construction industry. *Waste Management*. 79:48–57. DOI: 10.1016/j.wasman.2018.07.013.

Ciesielska, M. & Jemielniak, D. 2017. *Qualitative Methodologies in Organization Studies*. V. 1. Springer International Publishing. DOI: 10.1007/978-3-319-65217-7.

Collis, J. & Hussey, R. 2021. *Business research: A practical guide for Students*. 5th ed. London: Bloomsbury Publishing.

Consumer Protection Act, No. 68 of 2008. 2009. Government gazette. 562(32186). 28 April. Government notice no. 465. Cape Town: Government Printer.

Da Slva, P.C.F., de Novais, P.G.M., de Araújo, F.A., Kyrillos, S.L. & Sacomano, J.B. 2016. The Challenge of the Reverse Logistics of the High Tech After-Sales Equipment: A Comprehensive Study. In *International Conference Information Systems Logistics and Supply Chain*. Bordeaux, France. 1–7.

Daniel, J. 2012. *Sampling essentials – Practical guidelines for making sampling choices*. Sage: Thousand Oaks, California.

Daniel, L. 2021. SA's online retail has more than doubled in two years – but the best is probably over. *Business Insider SA*. Available from: https://www.businessinsider.co.za/sas-online-retail-has-more-than-doubled-in-two-years-but-the-best-is-probably-over-2021-5 [Accessed on 2 January 2022].

Dapiran, G.P. & Kam, B.H. 2017. Value creation and appropriation in product returns management. *The International Journal of Logistics Management*. 28(3):821–840. DOI: 10.1108/IJLM-11-2015-0199.

Davidavičienė, V. & Al Majzoub, M. 2021. Performance of reverse logistics in electronic commerce: A case study from Lebanon and Syria. *Transport*. DOI: https://doi.org/10.3846/transport.2021.14956.

De Araújo, A.C., Matsuoka, E.M., Ung, J.E., Massote, A. & Sampaio, M. 2018. An exploratory study on the returns management process in an online retailer. *International Journal of Logistics Research and Applications*. 21(3):345–362. DOI: 10.1080/13675567.2017.1370080.

De Borba, J.L.G., de Magalhães, M.R., Filgueiras, R.S. & Bouzon, M. 2020. Barriers in omnichannel retailing returns: a conceptual framework. *International Journal of Retail & Distribution Management*. 49(1):121–143. DOI: 10.1108/IJRDM-04-2020-0140.

De Villiers, C., Farooq, M.B. & Molinari, M. 2021. Qualitative research interviews using online video technology – challenges and opportunities. *Meditari Accountancy Research*. DOI: 10.1108/MEDAR-03-2021-1252.

DeJonckheere, M. & Vaughn, LM. 2019. Semistructured interviewing in primary care research: A balance of relationship and rigour. *Family Medicine and Community Health*. 7(2):1–8. doi.org/10.1136/fmch-2018-000057.

Dobroselskyi, M., Madleňák, R. & Laitkep, D. 2021. Analysis of return logistics in e-commerce companies on the example of the Slovak Republic. *Transportation Research Procedia*. 55(2019):318–325. DOI: 10.1016/j.trpro.2021.06.037.

Dopson, E. 2023. Ecommerce Returns: Expert Guide to Best Practices. Available from: https://www.shopify.com/za/enterprise/ecommerce-returns [Accessed on 1 November 2023].

Eakin, J.M. & Gladstone, B. 2020. "Value-adding" analysis: Doing more with qualitative data. *International Journal of Qualitative Methods*. 19:1–13. DOI: 10.1177/1609406920949333.

Eliav, R. 2022. Reverse logistics. Available from: https://www.bringg.com/blog/logistics/reverse-logistics/ [Accessed on 1 November 2023].

Elo, S. & Kyngäs, H. 2008. The qualitative content analysis process. *Journal of Advanced Nursing*. 62(1):107–115. DOI: 10.1111/j.1365-2648.2007.04569.x.

Elo, S., Kääriäinen, M., Kanste, O., Pölkki, T., Utriainen, K. & Kyngäs, H. 2014. Qualitative content analysis: A focus on Trustworthiness. *SAGE Open*. 4(1):215824401452263. DOI: 10.1177/2158244014522633.

Eriksson, P. & Kovalainen, A. 2008. *Qualitative methods in business research*. London: Sage Publication.

Eriksson, S. & Käck, J. 2023. Sustainable reverse logistics in fast fashion e-commerce: A literature review. Bachelor thesis. Chalmers University of Technology.

Espinosa, J.A., Stock, J., Ortinau, D.J. & Monahan, L. 2021. Exploring an adaptability approach: how creative return processors impact firm performance. *The International Journal of Logistics Management*. 32(3):790–820. DOI: 10.1108/IJLM-10-2019-0293.

Etikan, I, Musa, S. & Alkassim, R. 2016. Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics*. 5(1):1–4. doi.org/10.11648/j.ajtas.20160501.11.

Euchi, J., Bouzidi, D. & Bouzid, Z. 2019. Structural analysis of acute success factors of performance of reverse logistics relative to customer satisfaction. *International Journal of Combinatorial Optimization Problems and Informatics*. 10(2):39–56.

Fin24. 2022. Shoprite, Checkers recall canned tuna. *Fin24*. Available from: https://www.news24.com/fin24/companies/shoprite-checkers-recall-canned-tuna-20220527 [Accessed on 28 July 2023].

Flick, U. 2014. *An introduction to qualitative research*. 5th ed. London: Sage Publication.

Foo, Y.J. & A-Jalil, E.E. 2021. Strategic planning of reverse logistics system among omnichannel companies: A qualitative study. *Journal of Technology and Operations Management*. 16(2):45–61. DOI: 10.32890/jtom2021.16.2.5.

Forman, J. & Damschroder, L. 2008. Qualitative Content Analysis. In *Empirical Methods for Bioethics: A Primer Advances in Bioethics*. L. Jacoby & L. Siminoff, Eds. Bingley: Emerald Group Publishing Limited. 11:39-62. DOI: 10.1016/S1479-3709(07)11003-7.

Fox, R. 2023. The ultimate guide to reverse logistics for ecommerce. Available from: https://returngo.ai/ultimate-guide-to-reverse-logistics/#:~:text=Reverse%20logistics%20is%20the%20process,validation%2C%20and%20restocking%20or%20disposal [Accessed on 16 October 2023].

Franklin, S. 2022. The ultimate reverse logistics guide - How it works and how you should deal with it. *Bloom Group S.A.* Available from: https://www.letsbloom.com/blog/ebooks/managing-reverse-logistics/ [Accessed on 1 November 2023].

Frei, R., Jack, L. & Brown, S. 2020. Product returns: a growing problem for business, society and environment. *International Journal of Operations and Production Management*. 40(10):1613–1621. DOI: 10.1108/IJOPM-02-2020-0083.

Friese, S. 2012. ATLAS.ti 7 Quick Tour. Available from: http://atlasti.com/wp-content/uploads/2014/05/QuickTour_a7_en_07.pdf. [Accessed on 13 March 2016].

Friese, S. 2014. Qualitative Data Analysis with ATLAS.Ti. 2nd ed. London: Sage.

Garg, D., Luthra, S. & Haleem, A. 2016. An evaluation of barriers to implement reverse logistics: A cast study of Indian Fastener Industry. *International Journal of Mechanical, Aerospace, Industrial, Mechatronic and Manufacturing Engineering*. 10(8):1375–1380.

Gattorna, J. & Ellis, D. 2009. The supply-side view and 'reverse' logistics. In *Dynamic Supply Chain Alignment*. J. Gattorna, Ed. Farnham: Gower Publishing. 145–158.

Gentles, S.J., Charles, C., Ploeg, J. & Ann McKibbon, K. 2015. Sampling in qualitative research: Insights from an overview of the methods literature. *Qualitative Report*. 20(11):1772–1789.

Glinka, B. & Hensel, P. 2018. What Should Be Avoided During Qualitative Research? In *Qualitative Methodologies in Organization Studies: Volume II: Methods and Possibilities*. M. Ciesielska & D. Jemielniak, Eds. Cham: Springer International Publishing. 245–257. DOI: 10.1007/978-3-319-65442-3_11.

Goedhart, J., Haijema, R. & Akkerman, R. 2023. Modelling the influence of returns for an omni-channel retailer. *European Journal of Operational Research*. 306(3):1248–1263. DOI: 10.1016/j.ejor.2022.08.021.

Goga, S., Paelo, A. & Nyamwena, J. 2019. Online Retailing in South Africa: An Overview. *SSRN Electronic Journal*. DOI: 10.2139/ssrn.3386008.

Govindan, K. & Bouzon, M. 2018. From a literature review to a multi-perspective framework for reverse logistics barriers and drivers. *Journal of Cleaner Production*. 187:318–337. DOI: 10.1016/j.jclepro.2018.03.040.

Graneheim, U.H., Lindgren, B.M. & Lundman, B. 2017. Methodological challenges in qualitative content analysis: A discussion paper. *Nurse Education Today*. 56:29–34. DOI: 10.1016/j.nedt.2017.06.002.

Gu, W., Wei, L., Zhang, W. & Yan, X. 2019. Evolutionary game analysis of cooperation between natural resource- and energy-intensive companies in reverse logistics operations. *International Journal of Production Economics*. 218:159–169. DOI: 10.1016/j.ijpe.2019.05.001.

Gudkova, S. 2018. Interviewing in qualitative research. In *Qualitative Methodologies in Organization Studies: Volume II: Methods and Possibilities.* M. Ciesielska & D. Jemielniak, Eds. Cham: Springer International Publishing. 75–96. DOI: 10.1007/978-3-319-65442-3_4.

Guercini, S. 2014. New qualitative research methodologies in management. *Management Decision*. 52(4):662–674. DOI: 10.1108/MD-11-2013-0592.

Guest, G., Namey, E.E. & Mitchell, M.L. 2013. *Collecting qualitative data: a field manual for applied research*. Thousand Oaks: Sage Publication.

Gupta, R.K. & Awasthy, R. 2021. *Qualitative research in management: Methods and experiences*. New Delhi: SAGE Publications.

Gustafsson, E., Jonsson, P. & Holmström, J. 2021. Reducing retail supply chain costs of product returns using digital product fitting. *International Journal of Physical Distribution & Logistics Management*. 51(8):877–896. DOI: 10.1108/IJPDLM-10-2020-0334.

Harris, C. & Martin, K.B. 2014. The reverse logistics of online retailing, its evolution and future directions. *Journal of System and Management Science*. 4(2):1–14.

Harvey, L. 2019. Researching the Real World. Available from: https://www.qualityresearchinternational.com/methodology/aboutRRW.php [Accessed on 12 October 2019].

Hesse-Biber, S.N., Rodriguez, D. & Frost, N.A. 2015. A qualitatively driven approach to multimethod and mixed methods research. *The Oxford handbook of multimethod and mixed methods research inquiry*. (June):3–20. Available from: http://oxfordhandbooks.com/view/10.1093/oxfordhb/9780199933624.001.0001/oxfordhb-9780199933624-e-3.[Accessed on 15 July 2022].

Hewson, C. 2017. Research Design and Tools for Online Research. In *The SAGE Handbook of Online Research Methods*. N.G. Fielding, R.M. Lee, & G. Blank, Eds. 55 City Road: SAGE Publications. 57–75. doi.org/10.4135/9781473957992.n4.

Heyns, G.J. & Kilbourn, P.J. 2022. Online shopping behaviour and service quality perceptions of young people in South Africa: A COVID-19 perspective. *Journal of Transport and Supply Chain Management*. 16. DOI: 10.4102/jtscm.v16i0.777.

Hine, CM. 2015. Mixed methods and multimodal research and internet technologies. In *The Oxford handbook of multimethod and mixed methods research inquiry*. S.N. Hesse-Biber & R.B. Johnson, Eds. Oxford: Oxford University Press. 503–521.

Hjort, K., Hellström, D., Karlsson, S. & Oghazi, P. 2019. Typology of practices for managing consumer returns in internet retailing. *International Journal of Physical Distribution and Logistics Management*. 49(7):767–790. DOI: 10.1108/IJPDLM-12-2017-0368.

Hornberger, B & Rangu, S. 2020. Designing inclusion and exclusion criteria. *ScholarlyCommons*. (1). Available from: https://repository.upenn.edu/crp/1/[Accessed on 15 July 2022].

Huang, Y.C., Wu, Y.C.J. & Rahman, S. 2012. The task environment, resource commitment and reverse logistics performance: evidence from the Taiwanese high-tech sector. *Production Planning & Control*. 23(June 2014):851–863. DOI: 10.1080/09537287.2011.642189.

Hunter, A & Brewer, JD. 2015. Designing Multimethod Research. In *The Oxford handbook of multimethod and mixed methods research inquiry*. S.N. Hesse-Biber & R.B. Johnson, Eds. Oxford: Oxford University Press. 185–205.

IPA. 2020. Learnings from Remote Qualitative Interviews: Impact Evaluation of Select Justice Reform Programs. Available: https://www.poverty-action.org/sites/default/files/publications/IPA-Philippines-Learnings-from-Remote-Qualitative-Interviews.pdf [Accessed on 5 January 2022].

Irani, E. 2019. The use of videoconferencing for qualitative interviewing: Opportunities, challenges, and considerations. *Clinical Nursing Research*. 28(1):3–8. DOI: 10.1177/1054773818803170.

Irine, W. 2023. *The State of E-Commerce in South Africa in 2023*. Available from: https://truehost.co.za/ecommerce-in-south-africa/#7_COVID_19_impact_on_the_South_Africa_e-commerce_industry [Accessed on 1 November 2023].

Jalil, E.E.A. 2019. Customer satisfaction and reverse logistics in ecommerce: The case of Klang Valley. In *9th International Conference on Operations and Supply Chain Management*. Vietnam. 1–9.

Jenkins, A. 2021. *A guide to reverse logistics: How it works, types and strategies*. Available from: https://www.netsuite.com/portal/resource/articles/inventory-management/reverse-logistics.shtml [Accessed on 1 November 2023]..

Johnson, R.B. & Christensen, L. 2013. *Educational research: quantitative, qualitative, and mixed approaches*. Thousand Oaks: Sage Publication.

Johnson, R.B. & Walsh, I. 2019. Mixed Grounded Theory: Merging Grounded Theory with Mixed Methods and Multimethod Research. In *The SAGE Handbook of Current Developments in Grounded*

Theory. K. Bryant, A & Charmaz, Eds. 55 City Road: SAGE Publications. 517–531. doi.org/10.4135/9781526485656.n27.

Jović, M., Schlierf, J.F., Heinen, V. & Tijan, E. 2020. Information management in Reverse logistics. *Journal of Maritime & Transportation Science*. 58(1):155–167. DOI: 10.18048/2020.58.10.

Karlsson, S., Oghazi, P., Hellstrom, D., Patel, P.C., Papadopoulou, C. & Hjort, K. 2023. Retail returns management strategy: An alignment perspective. *Journal of Innovation & Knowledge*. 8(4):100420. DOI: 10.1016/j.jik.2023.100420.

Kaynak, R., Koçoğlu, İ. & Akgün, A.E. 2014. The role of reverse logistics in the concept of logistics centers. *Procedia - Social and Behavioral Sciences*. 109:438–442. DOI: 10.1016/j.sbspro.2013.12.487.

Kelly, L.M. & Cordeiro, M. 2020. Three principles of pragmatism for research on organizational processes. *Methodological Innovations*. 13(2). DOI: 10.1177/2059799120937242.

Kiger, M.E. & Varpio, L. 2020. Thematic analysis of qualitative data: AMEE Guide No. 131. *Medical Teacher*. 42(8):846–854. DOI: 10.1080/0142159X.2020.1755030.

King, N & Brooks, J. 2019. Thematic Analysis in Organisational Research. In *The SAGE Handbook of Qualitative Business and Management Research Methods: Methods and Challenges*. 55 City Road: SAGE Publications. 219–236. doi.org/10.4135/9781526430236.n14.

King, N, Brooks, J & Tabari, S. 2017. Template analysis in business and management research. *Qualitative Methodologies in Organization Studies*. 2:179–206. doi.org/10.1007/978-3-319-65442-3_8.

King, N. 2004a.Using interviews in qualitative research. In *Essential Guide to Qualitative Methods in Organizational Research.* C. Cassell & G. Symon, Eds. chapter 2. London: Sage.

King, N. 2004b.Using templates in the thematic analysis of test. In *Essential Guide to Qualitative Methods in Organizational Research.* C. Cassell & G. Symon, Eds. chapter 21. London: Sage.

Kiro, R. 2015. Reverse logistics in e-com: a trust factor. Cargoconnect. Available from: http://reverselogistics.in/images/nimg/may-15/Cargo_Connect.pdf [Accessed on 25 September 2015].

Klenke, K. 2016a. Content Analysis in Leadership Research. In *Qualitative Research in the Study of Leadership*. Emeral Group Publishing Limited. 93–122. doi.org/https://0-doi-org.oasis.unisa.ac.za/10.1108/978-1-78560-651-920152006.

Klenke, K. 2016b. Philosophical Foundations: Qualitative Research as Paradigm. In *Qualitative Research in the Study of Leadership*. Emeral Group Publishing Limited. 3–29. doi.org/https://0-doi-org.oasis.unisa.ac.za/10.1108/978-1-78560-651-920152002.

Klenke, K. 2016c. Qualitative Interviewing in Leadership Research. In *Qualitative Research in the Study of Leadership*. Emeral Group Publishing Limited. 123–150. doi.org/https://0-doi-org.oasis.unisa.ac.za/10.1108/978-1-78560-651-920152007.

Kowal, S. & O'Connell, D.C. 2014. Transcription as a Crucial Step of Data Analysis. In *The SAGE Handbook of Qualitative Data Analysis*. U. Flick, Ed. Sage. 64–78. DOI: 10.4135/9781446282243.n5.

Krippendorff, K. 2022. *Content analysis: An introduction to its methodology*. 4th ed. Thousand Oaks: SAGE Publications, Inc. DOI: 10.4135/9781071878781.

Kuckartz, U. 2019. Qualitative content analysis: From Kracauer's beginnings to today's challenges. *Forum: Qualitative Social Research*. 20(3). Available: http://www.qualitative-research.net/.

Kunz, N. 2019. An automated quantitative content analysis process for humanitarian logistics research. *Journal of Humanitarian Logistics and Supply Chain Management*. DOI: 10.1108/JHLSCM-06-2018-0051.

Kushwaha, P. 2020. Conceptual reverse logistics model used by online retailers post COVID-19 Lockdown. *SAMVAD*. 20(0):28. DOI: 10.53739/samvad/2020/v20/153418.

Kussing, U. & Pienaar, W.J. 2012. Product returns and reverse logistics management. In *Business Logistics Management*. W.J. Pienaar & J.J. Vogt, Eds. Cape Town: Oxford University Press. 421-437.

Lai, N.Y.G., Kuah, A.T.H., Kim, C.H. & Wong, K.H. 2022. Toward sustainable express deliveries for online shopping: Reusing packaging materials through reverse logistics. *Thunderbird International Business Review*. 64(4):351–362. DOI: 10.1002/tie.22259.

Lamba, D., Yadav, D.K., Barve, A. & Panda, G. 2020. Prioritizing barriers in reverse logistics of E-commerce supply chain using fuzzy-analytic hierarchy process. *Electronic Commerce Research*. 20(2):381–403. DOI: 10.1007/s10660-019-09333-y.

Lanka, E., Lanka, S., Rostron, A. & Singh, P. 2021. Why we need qualitative research in management studies. *Revista de Administração Contemporânea*. 25(2):1–8. DOI: 10.1590/1982-7849rac2021200297.en.

Le, S.T. 2023. Investigating the drivers of the reverse logistics implementation in reducing waste in Vietnam. *Environmental Health Insights*. 17. DOI: 10.1177/11786302231211058.

Leedy, P.D. & Ormrod, J. 2021. *Practical research - Planning and design*. 12th ed. Harlow: Pearson Education Limited.

Li, X., Ma, B. & Chu, H. 2021. The impact of online reviews on product returns. *Asia Pacific Journal of Marketing and Logistics*. 33(8):1814–1828. DOI: 10.1108/APJML-02-2020-0074.

Liamputtong, P. 2020. *Qualitative research methods*. 5th ed. V. 5. Melbourne: Oxford University Press.

Lin, W.S. & Hsu, S.L. 2017. A framework for investigating reverse logistics capability of e-tailers. *World Academy of Science, Engineering and Technology International Journal of Economics and Management Engineering*. 11(1):217–222.

Lobe, B., Morgan, D. & Hoffman, K.A. 2020. Qualitative data collection in an era of social distancing. *International Journal of Qualitative Methods*. 19:1–8. DOI: 10.1177/1609406920937875.

Lu, Q., Goh, M. & De Souza, R. 2016. A Research Framework on Reverse Logistics Governance. *Izmir Review of Social Sciences*. 3(2):1–15.

Luo, Y. 2016. Research on integrated optimization of the reverse logistics network. *International Journal of u- and e- Service, Science and Technology*. 9(7):247–256. DOI: 10.14257/ijunesst.2016.9.7.25.

Ma, S., Seidl, D. & McNulty, T. 2021. Challenges and practices of interviewing business elites. *Strategic Organization*. 19(1):81–96. DOI: 10.1177/1476127020980969.

Maguire, M. & Delahunt, B. 2017. Doing a thematic analysis: a practical, step-by-step guide for learning and teaching scholars. *All Ireland Journal of Teach and Learning in Higher Education*. 8(3). DOI: 10.1109/TIA.2014.2306979.

Mahadevan, K. 2019. Collaboration in reverse: a conceptual framework for reverse logistics operations. *International Journal of Productivity and Performance Management*. 68(2):482–504. DOI: 10.1108/IJPPM-10-2017-0247.

Mahamba, C. 2022. Knorr Cup-a-Soup Beef, Vegetable Lite boxes recalled. *The Star*. Available from: https://www.iol.co.za/the-star/news/knorr-cup-a-soup-beef-vegetable-lite-boxes-recalled-c92cbf7e-836c-45db-9ebc-bb35c6175a82 [Accessed on 22 October 2022].

Mahindroo, A., Samalia, H.V. & Verma, P. 2018. Moderated influence of return frequency and resource commitment on information systems and reverse logistics strategic performance. *International Journal of Productivity and Performance Management*. 67(3):550–570. DOI: 10.1108/IJPPM-05-2016-0101.

Mai, E.S, Chen, H. & Anselmi, K. 2012. The role of returns management orientation, internal collaboration, and information support in reverse logistics. *Journal of Transportation Management*. 23(1):45–59. DOI: 10.22237/jotm/1333238640.

Makaleng, M.S.M. & Hove-Sibanda, P. 2022. Reverse logistics strategies and their effect on the competitiveness of fast-moving consumer goods firms in South Africa. *Logistics*. 6(3):56. DOI: 10.3390/logistics6030056.

Mathu, K. 2021. The influence of reverse logistics on the leading fast moving consumer goods retailers in South Africa. *Advances in Image and Video Processing*. 9(5). DOI: 10.14738/aivp.95.11006.

Mawadi, C.P., Sitanggang, N.V., Olfebri, O. & Saidah, D. 2023. The role of trust as a mediating the influence of reverse logistics on customer satisfaction at Shopee Indonesia. *Jurnal Manajemen Bisnis Transportasi dan Logistik*. 9(1). Available: https://journal.itltrisakti.ac.id/index.php/jmtbtl.

Mayring, P. 2014. *Qualitative content analysis – theoretical foundation, basic procedures and software solutions*. Klagenfurt. Available from: http://nbn-resolving.de/urn:nbn:de:0168-ssoar-395173 [Accessed on 28 August 2015].

Mayring, P. 2019. Qualitative content analysis: Demarcation, varieties, developments. *Forum: Qualitative Social Research*. 20(3). Available: http://www.qualitative-research.net/.

McGrath, C., Palmgren, P.J. & Liljedahl, M. 2019. Twelve tips for conducting qualitative research interviews. *Medical Teacher*. 41(9):1002–1006. DOI: 10.1080/0142159X.2018.1497149.

Merriam, S.B. & Grenier, R. 2019. *Qualitative Research in Practice: Examples for Discussion and Analysis*. 2nd ed. Jossey-Bass.

Meyer, A., Niemann, W., Mackenzie, J. & Lombaard, J. 2017. Drivers and barriers of reverse logistics practices: A study of large grocery retailers in South Africa. *Journal of Transport and Supply Chain Management*. 11. DOI: 10.4102/jtscm.v11i0.323.

Mishra, R. & Napier, R. 2014. Reverse logistics: Antecedents of successful implementation and firm performance effects. *Journal of Supply Chain and Operations Management*. 12(2):33–49. Available from: http://www.csupom.org/PUBLICATIONS/2014-2/JSCOM_2014_2_3.pdf. [Accessed on 14 April 2015].

Misni, F. & Lee, L.S. 2017. A review on strategic, tactical and operational decision planning in reverse logistics of green supply chain network design. *Journal of Computer and Communications*. 05(08):83–104. DOI: 10.4236/jcc.2017.58007.

Morgan, D.L. & Nica, A. 2020. Iterative thematic inquiry: A new method for analyzing qualitative data. *International Journal of Qualitative Methods*. 19:1–11. DOI: 10.1177/1609406920955118.

Morgan, D.L. 2017. *Integrating Qualitative and Quantitative Methods: A Pragmatic Approach*. SAGE Publications, Inc. DOI: 10.4135/9781544304533.

Morse, J.M. & Maddox, L.J. 2014. Analytic Integration in Qualitatively Driven (QUAL) Mixed and Multiple Methods Designs. In *The SAGE Handbook of Qualitative Data Analysis*. U. Flick, Ed. London: SAGE Publications Ltd. 524-539.

Mostert, W., Niemann, W. & Kotzé, T. 2017. Supply chain integration in the product return process : A study of consumer electronics retailers. *Acta Commercii*. 17(1):a487. DOI: https://doi.org/10.4102/ac.v17i1.487.

Muniz Jr, J., Cunha, J.C., Almeida, R. & Marins, F.A.S. 2017. The knowledge management in business strategies and reverse logistics. *Brazilian Journal of Operations & Production Management*. 14(1):28–36. DOI: 10.14488/BJOPM.2017.v14.n1.a4.

Mwaura, A., Letting, N., Ithinji, G. & Orwa, B. 2015. Reverse logistics practices and their effect on competitiveness of food manufacturing firms in Kenya. *International Journal of Economics, Finance and Management Sciences*. 3(6):678–684. DOI: 10.11648/j.ijefm.20150306.14.

Myers, M.D. 2013. *Qualitative research in business & management* [online]. 2nd ed. London: Sage Publication. Available from: books.google.com [Accessed on 20 July 2015].

Myers, MD & Newman, M. 2007. The qualitative interview in IS research: Examining the craft. *Information and Organization*. 17(1):2–26. doi.org/10.1016/j.infoandorg.2006.11.001.

Nandyala, M. 2022. *Reverse logistics: How mastering this process can help you retain business value and reduce costs*. Available from: https://www.forbes.com/sites/forbestechcouncil/2022/11/28/reverse-logistics-how-mastering-this-process-can-help-you-retain-business-value-and-reduce-costs/?sh=78860dc41feb [Accessed on 1 November 2023].

Nardon, L., Hari, A. & Aarma, K. 2021. Reflective Interviewing—Increasing Social Impact through Research. *International Journal of Qualitative Methods*. 20. DOI: 10.1177/16094069211065233.

Nascimento, L. & Steinbruch, FK. 2019. "The interviews were transcribed", but how? Reflections on management research. *RAUSP Management Journal*. ahead-of-p(ahead-of-print). doi.org/10.1108/rausp-05-2019-0092.

Nehls, K., Smith, B.D. & Schneider, H.A. 2015. Video-conferencing interviews in qualitative research. In *Enhancing Qualitative and Mixed Methods Research with Technology*. Hershey: IGI-Global Publishing. 140–157. DOI: 10.4018/978-1-4666-6493-7.ch006.

Nel, J.D. & Badenhorst, A. 2020. A conceptual framework for reverse logistics challenges in e-commerce. *International Journal of Business Performance Management*. 21(1–2):114–131. DOI: 10.1504/IJBPM.2020.106119.

Nowell, LS, Norris, JM, White, DE & Moules, NJ. 2017. Thematic analysis: Striving to meet the trustworthiness criteria. *International Journal of Qualitative Methods*. 16(1):1–13. doi.org/10.1177/1609406917733847.

O'Gorman, K & MacIntosh, R. 2015. Mapping research methods. In *Research methods for business & management*. 2nd ed. K. O'Gorman & R. MacIntosh, Eds. Oxford: Goodfellow Publishers. 1–13.

O'Neill, L. 2021. What is Microsoft Teams? Everything you need to know. Available from: https://www.techtarget.com/searchunifiedcommunications/definition/Microsoft-Teams [Accessed on 04 January 2024].

Oghazi, P., Karlsson, S., Hellström, D. & Hjort, K. 2018. Online purchase return policy leniency and purchase decision: Mediating role of consumer trust. *Journal of Retailing and Consumer Services*. 41:190–200. DOI: 10.1016/j.jretconser.2017.12.007.

Oliffe, J.L., Kelly, M.T., Montaner, G.G. & Yu Ko, W.F. 2021. Zoom interviews: Benefits and concessions. *International Journal of Qualitative Methods*. 20:1–8. DOI: 10.1177/16094069211053522.

Pal, R. 2017. Value creation through reverse logistics in used clothing networks. *The International Journal of Logistics Management*. 28(3):864–906. DOI: 10.1108/IJLM-11-2016-0272.

Pandian, G.R.S. & Abdul-Kader, W. 2017. Performance evaluation of reverse logistics enterprise – an agent-based simulation approach. *International Journal of Sustainable Engineering*. 10(6):384–398. DOI: 10.1080/19397038.2017.1370032.

Panjehfouladgaran, H. & Lim, S.F.W.T. 2020. Reverse logistics risk management: identification, clustering and risk mitigation strategies. *Management Decision*. 58(7):1449–1474. DOI: 10.1108/MD-01-2018-0010.

Pargo. 2018. The Rise of Click-and-Collect. Available from: https://pargo.co.za/blog/the-rise-of-click-collect-in-south-africa/ [Accessed on 20 June 2018].

Pathak, A.K., Joshi, N. & Kumar, R. 2020. Reverse logistics of Indian e-commerce industry- consumer perspective and ways to improve. *International Journal of Management and Humanities*. 4(12):41–49. DOI: 10.35940/ijmh.L1093.0841220.

Patino, CM & Ferreira, JC. 2018. Inclusion and exclusion criteria in research studies: Definitions and why they matter. *Jornal Brasileiro de Pneumologia*. 44(2):84. doi.org/10.1590/s1806-37562018000000088.

Perry, J. 2019. What exactly is Microsoft Teams and what are its key features? Available from: https://www.contentformula.com/blog/what-exactly-is-microsoft-teams-and-what-are-its-key-features/ [Accessed on 4 January 2022].

Phuong, N.H. 2019. A short communication on reverse logistics role in the supply chain. *Information Management and Computer Science*. 2(1):10–14. DOI: 10.26480/imcs.01.2019.10.14.

Pinkman, K. 2019. *Top reasons for returns and how to minimize them in your online store*. Available from: https://www.ecwid.com/blog/top-reasons-for-returns-and-how-to-minimize-them-inyour-online-store.html [Accessed on 21 February 2021].

Prajapati, H., Kant, R. & Shankar, R. 2019. Bequeath life to death: State-of-art review on reverse logistics. *Journal of Cleaner Production*. 211:503–520. DOI: 10.1016/j.jclepro.2018.11.187.

Prajapati, H., Kant, R. & Shankar, R. 2023. Selection of strategy for reverse logistics implementation. *Journal of Global Operations and Strategic Sourcing*. 16(1):1–23. DOI: 10.1108/JGOSS-04-2021-0034.

Prakash, C. & Barua, M.K. 2016. A multi-criteria decision-making approach for prioritizing reverse logistics adoption barriers under fuzzy environment: Case of Indian electronics Industry. *Global Business Review*. 17(5):1–18. DOI: 10.1177/0972150916656667.

Pramono, S.N.W., Ulkhaq, M.M. & Aulia, Z. 2021. Analysing the barriers of reverse logistics implementation: A case study. *IOP Conference Series: Materials Science and Engineering*. 1072(1):012063. DOI: 10.1088/1757-899x/1072/1/012063.

Preiser, R., García, M.M., Hill, L. & Klein, L. 2022. Qualitative content analysis. In *The Routledge Handbook of Research Methods for Social-Ecological Systems*. R. Biggs, A. de Vos, R., Preiser, H. Clements, K. Maciejewski, & M. Schlüter, Eds. New York: Taylor and Francis. 270–281. DOI: 10.4324/9781003021339-23.

Qureshi, A. 2020. Microsoft Teams vs. Zoom: A side-by-side comparison. Available from: https://www.intradyn.com/microsoft-teams-vs-zoom/ [Accessed on 5 January 2022].

Ratchford, B., Soysal, G., Zentner, A. & Gauri, D.K. 2022. Online and offline retailing: What we know and directions for future research. *Journal of Retailing*. 98(1):152–177. DOI: 10.1016/j.jretai.2022.02.007.

Ravi, V. & Shankar, R. 2017. An ISM-based approach analyzing interactions among variables of reverse logistics in automobile industries. *Journal of Modelling in Management*. 12(1):36–52. DOI: 10.1108/JM2-08-2014-0066.

Read, H. 2023. *Reverse logistics: What is it and how do you manage it?* Available from: https://dclcorp.com/blog/fulfillment/common-reverse-logistics-costs/ [Accessed on 1 November 2023].

Reay, T, Zafar, A, Monteiro, P & Glaser, V. 2019. Presenting findings from qualitative research: One size does not fit all! In *The Production of Managerial Knowledge and Organizational Theory: New Approaches to Writing, Producing and Consuming Theory - Research in the Sociology of*

Organizations. V. 59. T. Zilber, J. Amis, & J. Mair, Eds. Emerald Publishing Limited. 201-216. doi.org/10.1108/S0733-558X20190000059011.

Reis, JCG dos, Amorim, MPC & Melão, NFR. 2017. Breaking barriers with qualitative multi-method research for engineering studies: pros, cons and issues! *Proelium*. VII(12):275–292.

Rekord. 2021. Ten SA car brands recalled over dangerous airbags. *Rekord*. 25 January. Available from: https://rekord.co.za/364714/ten-sa-car-brands-recalled-over-dangerous-airbags/ [Accessed on 21 May 2022].

Roberts, J.K., Pavlakis, A.E. & Richards, M.P. 2021. It's more complicated than it seems: Virtual qualitative research in the COVID-19 era. *International Journal of Qualitative Methods*. 20. DOI: 10.1177/16094069211002959.

Roberts, R.E. 2020. Qualitative interview questions: Guidance for novice researchers. *Qualitative Report*. 25(9):3185–3203. DOI: 10.46743/2160-3715/2020.4640.

Robertson, T.S., Hamilton, R. & Jap, S.D. 2020. Many (un)happy returns? The changing nature of retail product returns and future research directions. *Journal of Retailing*. 96(2):172–177. DOI: 10.1016/j.jretai.2020.04.001.

Robinson, A. 2014. E-commerce reverse logistics framework strategy for the automotive aftermarket industry. Available from: http://www.aftermarketsuppliers.org/Doc-Vault/AASA/E-Commerce-Reverse-Logistics.pdf [Accessed on 25 September 2015].

Rogers, D.S. & Tibben-Lembke, R.S. 1998. *Going backwards: reverse logistics trends and practices*. Reverse Logistics Executive Council. Available from: www.rlec.com [Accessed on 27 July 2007].

Roller, M. 2016. Qualitative Research Design: Selected Articles from Research Design Review Published in 2015. Research design review. (January):1–31. doi.org/10.4324/9781315213033-51.

Roulston, K. 2014. Analysing Interviews. In *The SAGE Handbook of Qualitative Data Analysis.* U. Flick, Ed. London: SAGE Publications Ltd. 297-312.

Saarijärvi, M. & Bratt, E.L. 2021. When face-to-face interviews are not possible: Tips and tricks for video, telephone, online chat, and email interviews in qualitative research. *European Journal of Cardiovascular Nursing*. 20(4):392–396. DOI: 10.1093/eurjcn/zvab038.

Sackos, J. 2022. How retailers are taking on a tsunami of returns. *Supply Chain Brain*. (April, 2). Available from: https://www.supplychainbrain.com/blogs/1-think-tank/post/34776-preparing-for-a-reverse-logistics-tsunami [Accessed on 23 October 2022].

Sajjanit, C. & Rompho, N. 2019. Measuring customer-oriented product returns service performance. *The International Journal of Logistics Management*. 30(3):772–796. DOI: 10.1108/IJLM-06-2018-0157.

Salkind, N.J. 2010. *Encyclopedia of research design*. SAGE Publications: Thousand Oaks. doi:10.4135/9781412961288.

Salkind, N.J. 2021. *Exploring Research*. Global ed. Harlow: Pearson Education. DOI: 10.3389/fpsyg.2017.00571/full.

Salmons, JE. 2015. Conducting Multimethod and Mixed Methods Research Online. In *The Oxford Handbook of Multimethod and Mixed Methods Research Inquiry*. S.N. Hesse-Biber & R.B. Johnson, Eds. Oxford: Oxford University Press. 521–547.

Saravanan, S., Jainullabdeen, A. & Sirajudeen J. 2023. Questionnaire designing for a survey on reason for product return and reverse logistics performance on customer satisfaction in online shopping. *International Journal of Advances in Engineering and Management (IJAEM)*. 5:1537. DOI: 10.35629/5252-050315371541.

Saunders, M.N.K., Lewis, P. & Thornhill, A. 2019. *Research methods for business students*. 8th ed. Harlow: Person Education Limited.

Schamne, A.N. & Nagalli, A. 2016. Reverse logistics in the construction sector: A literature review. *Electronic Journal of Geotechnical Engineering*. 21(2):691–702.

Schooling, N. 2023. How reverse logistics can make or break e-commerce businesses. *BusinessDay*. Available from: https://www.businesslive.co.za/bd/opinion/2023-07-25-nathalie-schooling-how-reverse-logistics-can-make-or-break-e-commerce-businesses/ [Accessed on 30 October 2023].

Schreier, M. 2012. *Qualitative content analysis in practice*. London: Sage Publication. Available from: books.google.com [Accessed on 10 August 2015].

Schreier, M. 2014. Qualitative content analysis. In *The SAGE handbook of qualitative data analysis.* U. Flick, Ed. London: Sage Publication. 170-184.

Schutt, R.K. & Chambliss, D.F. 2014. Qualitative Data Analysis. In *Making Sense of the Social World: Methods of Investigation*. 5th ed. R.K. Schutt & D.F. Chambliss, Eds. Thousand Oaks, California: Sage. 320–357. DOI: 10.1136/ebnurs.2011.100352.

Schwandt, TA & Lichty, L. 2015. What problem are we trying to solve?: Practical and innovative uses of multimethod and mixed methods research. In *The Oxford handbook of multimethod and mixed methods research inquiry*. S.N. Hesse-Biber & R.B. Johnson, Eds. Oxford: Oxford University Press. 587–593.

Selvi, A.F. 2019. Qualitative content analysis. In *The Routledge Handbook of Research Methods in Applied Linguistics*. 1st ed. J. McKinley & H. Rose, Eds. Taylor and Francis. 1–530. DOI: 10.4324/9780367824471.

Senthil, S., Murugananthan, K. & Ramesh, A. 2018. Analysis and prioritisation of risks in a reverse logistics network using hybrid multi-criteria decision making methods. *Journal of Cleaner Production*. 179:716–730. DOI: 10.1016/j.jclepro.2017.12.095.

Shaheen, M., Pradhan, S. & Ranajee. 2019. Sampling in Qualitative Research. In *Qualitative Techniques for Workplace Data Analysis*. K. Gupta, M. Shaheen & K.P. Reddy, Ed. IGI Global. 25–51. DOI: 10.4018/978-1-5225-5366-3.ch002.

Shang, G., Ghosh, B.P. & Galbreth, M.R. 2017. Optimal retail return policies with wardrobing. *Production and Operations Management*. 26(7):1315–1332. DOI: 10.1111/poms.12690.

Sharma, S.K., Panda, B.N., Mahapatra, S.S. & Sahu, S. 2011. Analysis of barriers for reverse logistics: An Indian perspective. *International Journal of Modeling and Optimization*. 1(2):101–106. DOI: 10.7763/IJMO.2011.V1.18.

Shih, D.-H., Huang, F.-C., Chieh, C.-Y., Shih, M.-H. & Wu, T.-W. 2021. Preventing return fraud in reverse logistics - A case study of ESPRES Solution by Ethereum. *Journal of Theoretical and Applied Electronic Commerce Research*. 16(6):2170–2191. DOI: 10.3390/jtaer16060121.

Silver, C & Lewins, A. 2014. *Using Software in Qualitative Research: A Step-by-Step Guide*. 2nd ed. London: Sage Publications. doi.org/10.4135/9780857025012.

Silverman, R.M. & Patterson, K.L. 2021. *Qualitative research methods for community development*. 2nd ed. New York: Routledge. DOI: 10.4324/9781003172925-5.

Sirisawat, P. & Kiatcharoenpol, T. 2018. Fuzzy AHP-TOPSIS approaches to prioritizing solutions for reverse logistics barriers. *Computers & Industrial Engineering*. 117:303–318. DOI: 10.1016/j.cie.2018.01.015.

Skjott Linneberg, M & Korsgaard, S. 2019. Coding qualitative data: a synthesis guiding the novice. Qualitative Research Journal. 19(3):259–270. doi.org/10.1108/QRJ-12-2018-0012.

Smit, B. & Scherman, V. 2021. Computer-Assisted Qualitative Data Analysis Software for scoping reviews: A case of ATLAS.ti. *International Journal of Qualitative Methods*. 20. DOI: 10.1177/16094069211019140.

Snyder, H. 2019. Literature review as a research methodology: An overview and guidelines. *Journal of Business Research*. 104(July):333–339. DOI: 10.1016/j.jbusres.2019.07.039.

Solati, S., Shojaei, P., Alimohammadlou, M. & Hesamabadi, Z.H. 2023. Reverse logistics implementations solutions: Interval type 2 FAHP-FTOPSIS approach. *Discrete Dynamics in Nature and Society*. 2023:1–17. DOI: 10.1155/2023/6805773.

Soltany, Z., Rostamzadeh, R. & Skrickij, V. 2018. A model to evaluate supply chain technology implementation influence on organizational performance. *Transport*. 33(3):779–792. DOI: 10.3846/transport.2018.5468.

Srivastava, S.K. 2013. Issues and challenges in reverse logistics. In *Reverse supply chains – issues and analysis*. S.M. Gupta, Ed. Boca Raton: CRC-Press. 61-68.

Stahl N.A. & King J.R. 2020. Expanding approaches for research: Understanding and using trustworthiness in qualitative research. *Journal of Developmental Education*. 44(1):26–28. Available from: https://files.eric.ed.gov/fulltext/EJ1320570.pdf [Accessed on 03 January 2023].

Starostka-Patyk, M. 2021. The use of information systems to support the management of reverse logistics processes. In *Procedia Computer Science*. V. 192. Elsevier B.V. 2586–2595. DOI: 10.1016/j.procs.2021.09.028.

Starostka-Patryk, M., Zawada, M., Pabian, A. & Abed, M. 2013. Barriers to reverse logistics implementation in enterprises: proceedings of 2013 International Conference on Advanced Logistics and Transport (ICALT), Sousse, May 29-31, 2013. IEEE.

Stasik, A & Gendźwiłł, A. 2018. Designing a qualitative research project. In *Qualitative Methodologies in Organization Studies: Volume II: Methods and Possibilities*. M. Ciesielska & D. Jemielniak, Eds. Cham: Springer International Publishing. 223–244. doi.org/10.1007/978-3-319-65442-3_10.

Şükrü, M. Akdoğan, M.Ş. & Coşkun, A., 2012. Drivers of reverse logistics activities: An empirical investigation. *Procedia-Social and Behavioral Sciences*. 58:1640-1649.

Suri, H. 2011. Purposeful sampling in qualitative research synthesis. *Qualitative Research Journal*. 11(2):63–75. DOI: 10.3316/QRJ1102063.

Suter, W. N. 2012. Qualitative data, analysis, and design. In *Introduction to educational research: A critical thinking approach*. SAGE Publications Inc. 342-386. https://www.doi.org/10.4135/9781483384443

Tarab, S. 2019. Becoming familiar with qualitative research. In *Qualitative Techniques for Workplace Data Analysis*. K. Gupta, M. Shaheen & K.P. Reddy, Ed. IGI Global. 1–24. DOI: 10.4018/978-1-5225-5366-3.ch001.

Terry, G. & Hayfield, N. 2020. Reflexive thematic analysis. In *Handbook of Qualitative Research in Education*. M. Ward & S. Delamont, Eds. Cheltenham, Gloucestershire: Edward Elgar Publishing. 430–441. DOI: 10.4337/9781788977159.00049.

Thiyagarajan, G. & Ali, S. 2016. Analysis of reverse logistics implementation barriers in online retail industry. *Indian Journal of Science and Technology*. 9(19). DOI: 10.17485/ijst/2016/v9i19/94193.

Tombido, L.L., Louw, L. & Van Eeden, J. 2018. A systematic review of 3PLs' entry into reverse logistics. *South African Journal of Industrial Engineering*. 29(3). DOI: 10.7166/29-3-2062.

Triani, A., Anastaqiya, B., Setiawan, E.B. & Octora, Y. 2019. The role of reverse logistics capabilities in improving trust and purchase decision in Indonesian e-commerce. *Advances in Transportation and Logistics Research*. 2(2019).

Trotter, R.T. 2012. Qualitative research sample design and sample size: Resolving and unresolved issues and inferential imperatives. *Preventive Medicine*. 55(5):398–400. DOI: 10.1016/j.ypmed.2012.07.003.

Tummons, J. 2014. Using software for qualitative data analysis: Research outside paradigmatic boundaries. In *Big Data? Qualitative Approaches to Digital Research Studies in Qualitative*

Methodology. V. 13. Emeral Group Publishing Limited. 155–177. doi.org/10.1108/S1042-319220140000013010.

University of South Africa (Unisa). 2016. *Policy on research ethics*. Pretoria: Unpublished internal company document.

Van Zeeland, I., van den Broeck, W., Boonen, M. & Tintel, S. 2021. Effects of digital mediation and familiarity in online video interviews between peers. *Methodological Innovations*. 14(3):1–15. DOI: 10.1177/20597991211060743.

Walsh, G. & Möhring, M. 2017. Effectiveness of product return-prevention instruments: Empirical evidence. *Electronic Markets*. 27(4):341–350. DOI: 10.1007/s12525-017-0259-0.

Wang, C.N., Dang, T.T. & Nguyen, N.A.T. 2021. Outsourcing Reverse Logistics for E-Commerce Retailers: A Two-Stage Fuzzy Optimization Approach. *Axioms*. 10(34):1–22. DOI: https://doi.org/10.3390/ axioms10010034 Academic.

Wang, J.J., Chen, H., Rogers, D.S., Ellram, L.M. & Grawe, S.J. 2017. A bibliometric analysis of reverse logistics research (1992-2015) and opportunities for future research. *International Journal of Physical Distribution & Logistics Management*. 47(8):666–687. DOI: 10.1108/IJPDLM-10-2016-0299.

Wang, M., Wang, B. & Chan, R. 2021. Reverse logistics uncertainty in a courier industry: a triadic model. *Modern Supply Chain Research and Applications*. 3(1):56–73. DOI: 10.1108/mscra-10-2020-0026.

Wang, W., Liu, Y. & Wei, Y. 2013. Research on management strategies of reverse logistics in e-commerce environments. *Journal of System and Management Sciences*. 3(2):45-50.

Waqas, M., Dong, Q., Ahmad, N., Zhu, Y. & Nadeem, M. 2018. Critical barriers to implementation of reverse logistics in the manufacturing industry: A case study of a developing country. *Sustainability*. 10(11):4202. DOI: 10.3390/su10114202.

Wei, L., Ma, Z. & Liu, N. 2021. Design of reverse logistics system for B2C e-commerce based on management logic of internet of things. *International Journal of Shipping and Transport Logistics*. 13(5):484–497. Available from: http://creativecommons.org/licenses/by/4.0/ [Accessed on 12 September 2023].

Wisner, J., Tan, K.C. & Leong, G.K. 2023. *Principles of Supply Chain Management*. 6th ed. Boston: Cengage.

Xu, D. 2019. Research on strategic mode and development of reverse logistics in retail industry. *Malaysian E Commerce Journal*. 3(1):30–33. DOI: 10.26480/mecj.01.2019.30.33.

Yan, Q., Yong, H., Qinli, D. & Stokes, P. 2012. Reverse logistics network design model based on e-commerce. *International Journal of Organizational Analysis*. 20(2):251–261. DOI: 10.1108/19348831211227864.

Yang, H. 2014. Returns reverse logistics management strategy in e-commerce B2C market. *Proceedings of the International Conference on Logistics, Engineering, Management and Computer Science*. (Lemcs). DOI: 10.2991/lemcs-14.2014.37.

Zailani, S., Govindan, K., Shaharudin, M. & Kuan, E. 2017. Barriers to product return management in automotive manufacturing firms in Malaysia. *Resources, Conservation & Recycling*. 141:22–40. DOI: 10.1016/j.jclepro.2016.08.160.

Zhang, D., Frei, R., Senyo, P.K., Bayer, S., Gerding, E., Wills, G. & Beck, A. 2023. Understanding fraudulent returns and mitigation strategies in multichannel retailing. *Journal of Retailing and Consumer Services*. 70:103145. DOI: 10.1016/j.jretconser.2022.103145.

Zhang, T., Chang, S., Dong, Y., Yue, J. & Teo, K.L. 2022. Competitive strategies in the presence of consumers' expected service and product returns. *Journal of Industrial and Management Optimization*. 18(5):3187. DOI: 10.3934/jimo.2021108.

Appendix A – QCA RL literature

A.1 ARTICLES DETAILS OF QCA ANALYSIS

Note these articles are not included in the reference list as it was used as the unit of analysis.

#	QCA RL LITERATURE - ARTICLES
1.	Abdulrahman, M.D., Gunasekaran, A. & Subramanian, N. 2014. Critical barriers in implementing RL in the Chinese manufacturing sectors. International Journal of Production Economics. 147(PART B):460–471. DOI: 10.1016/j.ijpe.2012.08.003
2.	Abraham, N. 2011. The apparel aftermarket in India – a case study focusing on RL. Journal of Fashion Marketing and Management. 15(2):211–227. DOI: 10.1108/13612021111132645
3.	Achillas, C., Vlachokostas, C., Aidonis, D., Moussiopoulos, N., Iakovou, E. & Banias, G. 2010. Optimising RL network to support policy-making in the case of Electrical and Electronic Equipment. Waste Management. 30(12):2592–2600. DOI: 10.1016/j.wasman.2010.06.022
4.	Agarwal, V., Govindan, K., Darbari, J.D. & Jha, P.C. 2016. An optimization model for sustainable solutions towards implementation of RL under collaborative framework. International Journal of System Assurance Engineering and Management. 1–8. DOI: 10.1007/s13198-016-0486-3.
5.	Agrawal, A. & Choudhary, V. 2014. RL: Performance Measures and their effect in product lifecycle. International Journal Of Core Engineering & Management. 1(2):14–22.
6.	Agrawal, S., Singh, R.K. & Murtaza, Q. 2015. A literature review and perspectives in RL. Resources, Conservation and Recycling. 97:76–92. DOI: 10.1016/j.resconrec.2015.02.009.
7.	Agrawal, S., Singh, R.K. & Murtaza, Q. 2016a. Disposition decisions in RL by using AHP-fuzzy TOPSIS approach. Journal of Modelling in Management. 11(4): 932- 948. DOI: 10.1108/JM2-12-2014-0091.
8.	Agrawal, S., Singh, R.K. & Murtaza, Q. 2016b. Disposition decisions in RL: Graph theory and matrix approach. Journal of Cleaner Production. 137:93–104. DOI: 10.1016/j.jclepro.2016.07.045.
9.	Agrawal, S., Singh, R.K. & Murtaza, Q. 2016c. Outsourcing decisions in RL: Sustainable balanced scorecard and graph theoretic approach. Resources, Conservation and Recycling. 108:41–53. DOI: 10.1016/j.resconrec.2016.01.004.
10.	Agrawal, S., Singh, R.K. & Murtaza, Q. 2016d. Prioritizing critical success factors for RL implementation using fuzzy-TOPSIS methodology. Journal of Industrial Engineering International. 12(1):15–27. DOI: 10.1007/s40092-015-0124-8.
11.	Ahsan, K. & Rahman, S. 2016. An investigation into critical service determinants of customer to business (C2B) type product returns in retail firms. International Journal of Physical Distribution & Logistics Management. 46(6/7):606–633. DOI: 10.1108/IJPDLM-08-2014-0215.
12.	Aitken, J. & Harrison, A. 2013. Supply governance structures for RL systems. International Journal of Operations & Production Management. 33(6):745–764. DOI: 10.1108/IJOPM-10-2011-0362.
13.	Alamri, A.A. 2011. Theory and methodology on the global optimal solution to a General RL Inventory Model for deteriorating items and time-varying rates. Computers and Industrial Engineering. 60(2):236–247. DOI: 10.1016/j.cie.2010.11.005.
14.	Alinovi, A., Bottani, E. & Montanari, R. 2012. RL: a stochastic EOQ-based inventory control model for mixed manufacturing/remanufacturing systems with return policies. International Journal of Production Research. 50(5):1243–1264. DOI: 10.1080/00207543.2011.571921.
15.	Alptekinoğlu, A. & Grasas, A. 2014. When to Carry Eccentric Products? Optimal Retail Assortment under Consumer Returns. Production and Operations Management. 23(5):877–892. DOI: 10.1111/poms.12081.
16.	Alshamrani, A., Mathur, K. & Ballou, R.H. 2007. RL: simultaneous design of delivery routes and returns strategies. Computers and Operations Research. 34(2):595–619. DOI: 10.1016/j.cor.2005.03.015.
17.	Alshamsi, A. & Diabat, A. 2015. A RL network design. Journal of Manufacturing Systems. 37:589–598. DOI: 10.1016/j.jmsy.2015.02.006.
18.	Alumur, S.A., Nickel, S., Saldanha-Da-Gama, F. & Verter, V. 2012. Multi-period RL network design. European Journal of Operational Research. 220(1):67–78. DOI: 10.1016/j.ejor.2011.12.045.
19.	Aras, N., Aksen, D. & Tanuğur, A. 2008. Locating collection centers for incentive-dependent returns under a pick-up policy with capacitated vehicles. European Journal of Operational Research. 191(3):1223–1240. DOI: 10.1016/j.ejor.2007.08.002.
20.	Asdecker, B. 2015. Returning mail-order goods: analyzing the relationship between the rate of returns and the associated costs. Logistics Research. 8(1):3–12. DOI: 10.1007/s12159-015-0124-5.
21.	Assavapokee, T. & Wongthatsanekorn, W. 2012. Reverse production system infrastructure design for electronic products in the state of Texas. Computers and Industrial Engineering. 62(1):129–140. DOI: 10.1016/j.cie.2011.09.001.
22.	Atasu, A. & Cetinkaya, S. 2006. Lot sizing for optimal collection and use of remanufacturable returns over a finite life-cycle. Production and Operations Management. 15(4):473–487. DOI: 10.1111/j.1937-5956.2006.tb00157.x.

#	QCA RL LITERATURE - ARTICLES
23.	Ayvaz, B. & Bolat, B. 2014. Proposal of a stochastic programming model for RL network design under uncertainties. International Journal of Supply Chain Management. 3(3):33–42.
24.	Ayvaz, B., Bolat, B. & Aydın, N. 2015. Stochastic RL network design for waste of electrical and electronic equipment. Resources, Conservation and Recycling. 104:391–404. DOI: 10.1016/j.resconrec.2015.07.006.
25.	Ayvaz, B., Boltürk, E. & Kaçtioglu, S. 2014. A grey system for the forecasting of return product quantity in recycling network. International Journal of Supply Chain Management. 3(3):105–112.
26.	Badenhorst, A. & Nel, J.D. 2012. Identifying potential solutions for specific RL problems. Journal of Transport and Supply Chain Management. 6(1):73–90.
27.	Badenhorst, A. & van Zyl, C. 2015. Finding theoretical evidence to justify the outsourcing of RL. Journal of Contemporary Management. 12:144–163.
28.	Badenhorst, A. 2013. A framework for prioritising practices to overcome cost-related problems in RL. Journal of Transport and Supply Chain Management. 7(1):1–10. DOI: 10.4102/jtscm.v7i1.113.
29.	Badenhorst, A. 2016. Prioritising the implementation of practices to overcome operational barriers in RL. Journal of Transport and Supply Chain Management. 10(1):1–12.
30.	Baenas, J.M.H., De Castro, R., Battistelle, R.A.C. & Junior, J.A. 2011. A study of RL flow management in vehicle battery industries in the midwest of the state of São Paulo (Brazil). Journal of Cleaner Production. 19(2–3):168–172. DOI: 10.1016/j.jclepro.2010.08.018.
31.	Bahn, K.D. & Boyd, E. 2014. Information and its impact on consumers' reactions to restrictive return policies. Journal of Retailing and Consumer Services. 21(4):415–423. DOI: 10.1016/j.jretconser.2014.03.002.
32.	Bai, C. & Sarkis, J. 2013. Flexibility in RL: A framework and evaluation approach. Journal of Cleaner Production. 47:306–318. DOI: 10.1016/j.jclepro.2013.01.005.
33.	Banomyong, R., Veerakachen, V. & Supatn, N. 2008. Implementing leagility in RL channels. International Journal of Logistics Research and Applications. 11(1):31–47. DOI: 10.1080/13675560701403651.
34.	Barker, T. & Zabinsky, Z. 2011. A multicriteria decision making model for RL using analytical hierarchy process. Omega. 39(5):558–573. DOI: 10.1016/j.omega.2010.12.002.
35.	Barker, T.J. & Zabinsky, Z.B. 2008. RL network design: a conceptual framework for decision making. International Journal of Sustainable Engineering. 1(4):250–260. DOI: 10.1080/19397030802591196.
36.	Bazan, E., Jaber, M.Y. & El Saadany, A.M.A. 2015. Carbon Emissions and Energy Effects on Manufacturing-Remanufacturing Inventory Models. Computers & Industrial Engineering. 88:307–316. DOI: 10.1016/j.cie.2015.07.002.
37.	Beh, L.S., Ghobadian, A., He, Q., Gallear, D. & O'Regan, N. 2016. Second-life retailing: a reverse supply chain perspective. Supply Chain Management: An International Journal. 21(2):1-32. DOI: 10.1108/SCM-07-2015-0296.
38.	Bernon, M. & Cullen, J. 2007. An integrated approach to managing RL - International Journal of Logistics Research and Applications. International Journal of Logistics Research and Applications. 10(January 2015):41–56. DOI: 10.1080/13675560600717763.
39.	Bernon, M., Cullen, J. & Gorst, J. 2016. Online retail returns management: Integration within an omni-channel distribution context. International Journal of Physical Distribution & Logistics Management. 46(6/7):584–605. DOI: 10.1108/IJPDLM-08-2014-0215.
40.	Bernon, M., Rossi, S. & Cullen, J. 2011. Retail RL: a call and grounding framework for research. International Journal of Physical Distribution & Logistics Management. 41(5):484–510. DOI: 10.1108/09600031111138835.
41.	Biehl, M., Prater, E. & Realff, M.J. 2007. Assessing performance and uncertainty in developing carpet RL systems. Computers and Operations Research. 34(2):443–463. DOI: 10.1016/j.cor.2005.03.008.
42.	Bing, X., Bloemhof-Ruwaard, J.M. & van der Vorst, J.G.A.J. 2014. Sustainable RL network design for household plastic waste. Flexible Services and Manufacturing Journal. 26:119–142. DOI: 10.1007/s10696-012-9149-0.
43.	Bogataj, M. & Grubbström, R. 2013. Transportation delays in RL. International Journal of Production Economics. 143:395–402. DOI: 10.1016/j.ijpe.2011.12.007.
44.	Bokade, S. & Raut, D.N. 2013. Cost effectiveness and flexibility of RL for consumables and raw material: An empirical investigation. International Journal of Supply Chain Management. 2(3):41–46.
45.	Bouzon, M., Govindan, K., Rodriguez, C.M.T. & Campos, L.M.S. 2016. Identification and analysis of RL barriers using fuzzy Delphi method and AHP. Resources, Conservation and Recycling. 108:182–197. DOI: 10.1016/j.resconrec.2015.05.021.
46.	Bower, A.B. & Maxham, J.G. 2012. Return Shipping Policies of Online Retailers: Normative Assumptions and the Long-Term Consequences of Fee and Free Returns. Journal of Marketing. 76(5):110–124. DOI: 10.1509/jm.10.0419.
47.	Breen, L. 2006. Give me back my empties or else! A preliminary analysis of customer compliance in RL practices (UK). Management Research News. 29(9):532–551. DOI: 10.1108/01409170610708989.
48.	Brix-Asala, C., Hahn, R. & Seuring, S. 2016. RL and informal valorisation at the Base of the Pyramid: A case study on sustainability synergies and trade-offs. European Management Journal. DOI: 10.1016/j.emj.2016.01.004.
49.	Cannella, S., Bruccoleri, M. & Framinan, J.M. 2016. Closed-loop supply chains: What RL factors influence performance? International Journal of Production Economics. 175:35–49. DOI: 10.1016/j.ijpe.2016.01.012.
50.	Cardoso, S.R., Barbosa-Povoa, A.P.F.D. & Relvas, S. 2013. Design and planning of supply chains with integration of RL activities under demand uncertainty. European Journal of Operational Research. 226(3):436–451. DOI: 10.1016/j.ejor.2012.11.035.

#	QCA RL LITERATURE - ARTICLES
51.	Chan, F.T.S., Chan, H.K. & Jain, V. 2012. A framework of RL for the automobile industry. International Journal of Production Research. 50(5):1318–1331. DOI: 10.1080/00207543.2011.571929.
52.	Chan, H.K., Yin, S. & Chan, F.T.S. 2010. Implementing just-in-time philosophy to RL systems: a review. International Journal of Production Research. 48(21):6293–6313. DOI: 10.1080/00207540903225213.
53.	Chari, N., Venkatadri, U. & Diallo, C. 2016. Design of a RL network for recyclable collection in Nova Scotia using compaction trailers. INFOR: Information Systems and Operational Research. 54(1):1–18. DOI: 10.1080/03155986.2016.1149315.
54.	Chatfield, D.C. & Pritchard, A.M. 2013. Returns and the bullwhip effect. Transportation Research Part E: Logistics and Transportation Review. 49(1):159–175. DOI: 10.1016/j.tre.2012.08.004.
55.	Chen, J. & Chen, B. 2015. Competing with Customer Returns Policies. International Journal of Production Research. 7543(April):1–15. DOI: 10.1080/00207543.2015.1106019.
56.	Chen, J. 2011. The impact of sharing customer returns information in a supply chain with and without a buyback policy. European Journal of Operational Research. 213(3):478–488. DOI: 10.1016/j.ejor.2011.03.027.
57.	Cheng, Y.H. & Lee, F. 2010. Outsourcing RL of high-tech manufacturing firms by using a systematic decision-making approach: TFT-LCD sector in Taiwan. Industrial Marketing Management. 39(7):1111–1119. DOI: 10.1016/j.indmarman.2009.10.004.
58.	Chern, C.C., Chen, P.Y. & Huang, K.L. 2014. A production base-stock policy for recycling supply chain management in the presence of uncertainty. Computers and Industrial Engineering. 76(1):193–203. DOI: 10.1016/j.cie.2014.08.002.
59.	Chileshe, N., Rameezdeen, R., Hosseini, M.R. & Lehmann, S. 2015. Barriers to implementing RL in South Australian construction organisations. Supply Chain Management-an International Journal. 20(2):179–204. DOI: 10.1108/SCM-10-2014-0325.
60.	Choi, D.W., Hwang, H. & Koh, S.G. 2007. A generalized ordering and recovery policy for reusable items. European Journal of Operational Research. 182(2):764–774. DOI: 10.1016/j.ejor.2006.08.048.
61.	Choudhary, A., Sarkar, S., Settur, S. & Tiwari, M.K. 2015. A carbon market sensitive optimization model for integrated forward-RL. International Journal of Production Economics. 164:433–444. DOI: 10.1016/j.ijpe.2014.08.015
62.	Cline, A., LeMay, S. & Helms, M.M. 2015. A framework for RL: the case of post-consumer carpet in the US. International Journal of Commerce and Management. 25(4):466–489. DOI: 10.1108/17465681011017255.
63.	Clottey, T., Benton, W. & Srivastava, R. 2012. Forecasting Product Returns for Remanufacturing Operations. Decision Sciences,43(4):589–614.
64.	Cruz-Rivera, R. & Ertel, J. 2009. RL network design for the collection of End-of-Life Vehicles in Mexico. European Journal of Operational Research. 196(3):930–939. DOI: 10.1016/j.ejor.2008.04.041.
65.	Daaboul, J., Le Duigou, J., Penciuc, D. & Eynard, B. 2014. RL network design: a holistic life cycle approach. Journal of Remanufacturing. 4(1):7. DOI: 10.1186/s13243-014-0007-y.
66.	Das, D. & Dutta, P. 2012. A Simulation Study of Bullwhip Effect in a Closed-Loop Supply Chain with Fuzzy Demand and Fuzzy Collection Rate under Possibility Constraints. International Journal of Mathematical, Computational, Physical, Electrical and Computer Engineering. 6(4):466–473.
67.	Das, D. & Dutta, P. 2013. A system dynamics framework for integrated reverse supply chain with three way recovery and product exchange policy. Computers and Industrial Engineering. 66(4):720–733. DOI: 10.1016/j.cie.2013.09.016.
68.	Das, K. & Chowdhury, A.H. 2012. Designing a RL network for optimal collection, recovery and quality-based product-mix planning. International Journal of Production Economics. 135(1):209–221. DOI: 10.1016/j.ijpe.2011.07.010.
69.	Das, K. 2012. Integrating RL into the strategic planning of a supply chain. International Journal of Production Research. 50(5):1438–1456. DOI: 10.1080/00207543.2011.571944.
70.	De Leeuw, S., Minguela-Rata, B., Sabet, E., Boter, J. & Sigurðardóttir, R. 2016. Trade-offs in managing commercial consumer returns for online apparel retail. International Journal of Operations & Production Management. 36(6):710–731. DOI: 10.1108/02656710210415703.
71.	de Oliveira, C.R., Bernardes, A.M. & Gerbase, A.E. 2012. Collection and recycling of electronic scrap: A worldwide overview and comparison with the Brazilian situation. Waste Management. 32(8):1592–1610. DOI: 10.1016/j.wasman.2012.04.003.
72.	Demirel, N.Ö. & Gökçen, H. 2008. A mixed integer programming model for remanufacturing in RL environment. The International Journal of Advanced Manufacturing Technology. 39(11–12):1197–1206. DOI: 10.1007/s00170-007-1290-7.
73.	Dhib, S., Addouche, S.A., Loukil, T. & Elmhamedi, A. 2016. A Performance Model for Designing Network in Reverse Logistic. International Journal of Mechanical, Aerospace, Industrial, Mechatronic and Manufacturing Engineering. 10(2):372–381.
74.	Dixit, S. & Badgaiyan, A.J. 2016. Towards improved understanding of RL - Examining mediating role of return intention. Resources, Conservation and Recycling. 107:115–128. DOI: 10.1016/j.resconrec.2015.11.021.
75.	Dowlatshahi, S. 2010a. A cost-benefit analysis for the design and implementation of RL systems: case studies approach. International Journal of Production Research. 48(5):1361–1380. DOI: 10.1080/00207540802552642.
76.	Dowlatshahi, S. 2010b. The role of transportation in the design and implementation of RL systems. International Journal of Production Research. 48(14):4199–4215. DOI: 10.1080/00207540902998356.
77.	Dowlatshahi, S. 2012. A framework for the role of warehousing in RL. International Journal of Production Research. 50(5):1265–1277. DOI: 10.1080/00207543.2011.571922.

#	QCA RL LITERATURE - ARTICLES
78.	Du, F. & Evans, G.W. 2008. A bi-objective RL network analysis for post-sale service. Computers and Operations Research. 35(8):2617–2634. DOI: 10.1016/j.cor.2006.12.020.
79.	Efendigil, T., Önüt, S. & Kongar, E. 2008. A holistic approach for selecting a third-party RL provider in the presence of vagueness. Computers and Industrial Engineering. 54(2):269–287. DOI: 10.1016/j.cie.2007.07.009.
80.	El Korchi, A. & Millet, D. 2011. Designing a sustainable RL channel: The 18 generic structures framework. Journal of Cleaner Production. 19(6–7):588–597. DOI: 10.1016/j.jclepro.2010.11.013.
81.	El-Sayed, M., Afia, N. & El-Kharbotly, A. 2010. A stochastic model for forward-RL network design under risk. Computers and Industrial Engineering. 58(3):423–431. DOI: 10.1016/j.cie.2008.09.040.
82.	Ene, S. & Öztürk, N. 2015. Network modeling for reverse flows of end-of-life vehicles. Waste Management. 38(1):284–296. DOI: 10.1016/j.wasman.2015.01.007.
83.	Entezaminia, A., Heidari, M. & Rahmani, D. 2016. Robust aggregate production planning in a green supply chain under uncertainty considering RL: a case study. The International Journal of Advanced Manufacturing Technology. 1–22. DOI: 10.1007/s00170-016-9459-6.
84.	Eskandarpour, M., Masehian, E., Soltani, R. & Khosrojerdi, A. 2014. A RL network for recovery systems and a robust metaheuristic solution approach. International Journal of Advanced Manufacturing Technology. 74(9–12):1393–1406. DOI: 10.1007/s00170-014-6045-7.
85.	Fattahi, M. & Govindan, K. 2016. Integrated forward/RL network design under uncertainty with pricing for collection of used products. Annals of Operations Research. DOI: 10.1007/s10479-016-2347-5.
86.	Fehr, M. & Santos, F.C. 2013. Source separation-driven RL in MSW management. Environment Systems and Decisions. 33(2):286–294. DOI: 10.1007/s10669-013-9441-x.
87.	Ferguson, M. & Toktay, L.B. 2006. The Effect of Competition on Recovery Strategies. Production and Operations Management. 15(3):351–368. DOI: 10.1111/j.1937-5956.2006.tb00250.x.
88.	Ferguson, M.E., Fleischmann, M. & Souza, G.C. 2011. A Profit-Maximizing Approach to Disposition Decisions for Product Returns. Decision Sciences. 42(3):773–798. DOI: 10.1111/j.1540-5915.2011.00330.x.
89.	Flygansvær, B.M., Gadde, L.E. & Haugland, S.A. 2008. Coordinated action in reverse distribution systems. International Journal of Physical Distribution & Logistics Management. 38(1):5–20. DOI: 10.1108/09600030810857184.
90.	García-Rodríguez, F.J., Castilla-Gutiérrez, C. & Bustos-Flores, C. 2013. Implementation of RL as a sustainable tool for raw material purchasing in developing countries: The case of Venezuela. International Journal of Production Economics. 141(2):582–592. DOI: 10.1016/j.ijpe.2012.09.015.
91.	Genchev, S.E. 2009. RL program design: A company study. Business Horizons. 52(2):139–148. DOI: 10.1016/j.bushor.2008.09.005.
92.	Genchev, S.E., Richey, R.G. & Gabler, C.B. 2011. Evaluating RL programs: a suggested process formalization. International Journal of Logistics Management. 22(2):242. DOI: 10.1108/09574091111156569.
93.	Ghezavati, V. & Nia, N.S. 2015. Development of an optimization model for product returns using genetic algorithms and simulated annealing. Soft Computing. 19(11):3055–3069. DOI: 10.1007/s00500-014-1465-8.
94.	Ghezavati, V.R. & Beigi, M. 2016. Solving a bi-objective mathematical model for location-routing problem with time windows in multi-echelon RL using metaheuristic procedure. Journal of Industrial Engineering International. 1–15. DOI: 10.1007/s40092-016-0154-x.
95.	Giannetti, B.F., Bonilla, S.H. & Almeida, C.M.V.B. 2013. An energy-based evaluation of a RL network for steel recycling. Journal of Cleaner Production. 46:48–57. DOI: 10.1016/j.jclepro.2012.05.024.
96.	Gobbi, C. 2011. Designing the reverse supply chain: The impact of the product residual value. International Journal of Physical Distribution and Logistics Management. 41(8):768–796. DOI: 10.1108/09600031111166429.
97.	Gonçalves, M. & Silva, Â. 2016. RL: Systematic literature review vs companies' perspective. International Journal of Engineering and Industrial Management. 6:67–86. DOI: 10.1007/978-3-540-24803-3.
98.	González-Torre, P., Álvarez, M., Sarkis, J. & Adenso-Díaz, B. 2010. Barriers to the implementation of environmentally oriented RL: evidence from the automotive industry sector. British Journal of Management. 21(4):889–904. DOI: 10.1111/j.1467-8551.2009.00655.x.
99.	Govindan, K. & Murugesan, P. 2011. Selection of third-party RL provider using fuzzy extent analysis. Benchmarking: An International Journal. 18(1):149–167. DOI: 10.1108/14635771111109869.
100.	Govindan, K., Paam, P. & Abtahi, A. 2016. A fuzzy multi-objective optimization model for sustainable RL network design. Ecological Indicators. 67:753–768. DOI: 10.1016/j.ecolind.2016.03.017.
101.	Govindan, K., Palaniappan, M., Zhu, Q. & Kannan, D. 2012. Analysis of third party RL provider using interpretive structural modeling. International Journal of Production Economics. 140(1):204–211. DOI: 10.1016/j.ijpe.2012.01.043.
102.	Govindan, K., Soleimani, H. & Kannan, D. 2015. RL and closed-loop supply chain: A comprehensive review to explore the future. European Journal of Operational Research. 240(3):603–626. DOI: 10.1016/j.ejor.2014.07.012.
103.	Griffis, S.E., Rao, S., Goldsby, T.J. & Niranjan, T.T. 2012. The customer consequences of returns in online retailing: An empirical analysis. Journal of Operations Management. 30(4):282–294. DOI: 10.1016/j.jom.2012.02.002.
104.	Gu, Q. & Tagaras, G. 2014. Optimal collection and remanufacturing decisions in reverse supply chains with collector's imperfect sorting. International Journal of Production Research. 52(17):5155–5170. DOI: 10.1080/00207543.2014.899720.

#	QCA RL LITERATURE - ARTICLES
105.	Guarnieri, P., Silva, L.C. & Levino, N.A. 2016. Analysis of electronic waste RL decisions using Strategic Options Development Analysis methodology: A Brazilian case. Journal of Cleaner Production. 133:1105–1117. DOI: 10.1016/j.jclepro.2016.06.025.
106.	Guarnieri, P., Sobreiro, V.A., Nagano, M.S. & Marques Serrano, A.L. 2015. The challenge of selecting and evaluating third-party RL providers in a multicriteria perspective: A Brazilian case. Journal of Cleaner Production. 96:209–219. DOI: 10.1016/j.jclepro.2014.05.040.
107.	Hahler, S. & Fleischmann, M. 2013. The Value of Acquisition Price Differentiation in RL. Journal of Business Economics. 83(1):1–28. DOI: 10.1007/s11573-012-0641-5.
108.	Hall, D.J., Huscroft, J.R., Hazen, B.T. & Hanna, J.B. 2013. RL goals, metrics, and challenges: perspectives from industry. International Journal of Physical Distribution & Logistics Management. 43(9):768–785. DOI: 10.1108/IJPDLM-02-2012-0052.
109.	Han, J., Ju, H. & Chun, J. 2010. RFID-ready master data management for RL. International Journal of Computer, Electrical, Automation, Control and Information Engineering. 4(6):813–816.
110.	Hanafi, J., Kara, S. & Kaebernick, H. 2008. RL strategies for end-of-life products. The International Journal of Logistics Management. 19:367–388. DOI: 10.1108/09574090810919206.
111.	Harris, L.C. 2010. Fraudulent consumer returns: Exploiting retailers' return policies. European Journal of Marketing. 44(6):730–747. DOI: 10.1108/03090561011032694.
112.	Hazen, B.T., Cegielski, C. & Hanna, J.B. 2011. Diffusion of green supply chain management. The International Journal of Logistics Management. 22(3):373–389. DOI: 10.1108/09574091111181372.
113.	Hazen, B.T., Hall, D.J. & Hanna, J.B. 2012. RL disposition decision-making. International Journal of Physical Distribution & Logistics Management. 42(3):244–274. DOI: 10.1108/09600031211225954.
114.	Hazen, B.T., Overstreet, R.E., Hall, D.J., Huscroft, J.R. & Hanna, J.B. 2015. Antecedents to and outcomes of RL metrics. Industrial Marketing Management. 46:160–170. DOI: 10.1016/j.indmarman.2015.01.017.
115.	Hernández, J.E., Poler, R., Mula, J. & Lario, F. 2011. The reverse logistic process of an automobile supply chain network supported by a collaborative decision-making model. Group Decision and Negotiation. 20(1):79–114. DOI: 10.1007/s10726-010-9205-7.
116.	Ho, G.T.S., Choy, K., Lam, C.H. & Wong, W. 2012. Factors influencing implementation of RL: a survey among Hong Kong businesses. Measuring Business Excellence. 16(3):29–46. DOI: 10.1108/13683041211257394.
117.	Hong, J.Y., Suh, E.H. & Hou, L.Y. 2008. Identifying the factors influencing the performance of reverse supply chains (RSC). International Journal of Sustainable Engineering. 1(3):173–187. DOI: 10.1080/19397030802511004.
118.	Hsu, C., Tan, K. & Zailani, S.H. 2016. Strategic orientations, sustainable supply chain initiatives, and RL: Empirical evidence from an emerging market. International Journal of Operations & Production Management. 36(1):86–110.
119.	Hsu, H.S., Alexander, C.A. & Zhu, Z. 2009. Understanding the RL operations of a retailer: a pilot study. Industrial Management & Data Systems. 109(4):515–531. DOI: 10.1108/02635570910948641.
120.	Hsueh, J.T. & Lin, C.Y. 2015. Constructing a network model to rank the optimal strategy for implementing the sorting process in RL: Case study of photovoltaic industry. Clean Technologies and Environmental Policy. 17(1):155–174. DOI: 10.1007/s10098-014-0770-3.
121.	Huang, Y. & Yang, M. 2014. RL innovation, institutional pressures and performance. Management Research Review. 37(7):615–641. DOI: 10.1108/MRR-03-2013-0069.
122.	Huscroft, J.R., Hazen, B.T., Hall, D.J. & Hanna, J.B. 2013a. Task-technology fit for RL performance. International Journal of Logistics Management, The. 24:230–246. DOI: 10.1108/IJLM-02-2012-0011.
123.	Huscroft, J.R., Hazen, B.T., Hall, D.J., Skipper, J.B. & Hanna, J.B. 2013b. RL: Past research, current management issues, and future directions. International Journal of Logistics Management. 24(3):304–327. DOI: 10.1108/IJLM-04-2012-0024.
124.	Jack, E.P., Powers, T.L. & Skinner, L. 2010. RL capabilities: antecedents and cost savings. International Journal of Physical Distribution & Logistics Management. 40(3):228–246. DOI: 10.1108/09600031011035100.
125.	Janakiraman, N., Syrdal, H.A. & Freling, R. 2016. The Effect of Return Policy Leniency on Consumer Purchase and Return Decisions: A Meta-analytic Review. Journal of Retailing. 226–235. DOI: 10.1016/j.jretai.2015.11.002.
126.	Janse, B., Schuur, P. & De Brito, M.P. 2010. A RL diagnostic tool: The case of the consumer electronics industry. International Journal of Advanced Manufacturing Technology. 47(5–8):495–513. DOI: 10.1007/s00170-009-2333-z.
127.	Jayaraman, V. 2006. Production planning for closed-loop supply chains with product recovery and reuse: an analytical approach. International Journal of Production Research. 44(5):981–998. DOI: 10.1080/00207540500250507.
128.	Jayaraman, V., Ross, A. & Agarwal, A. 2008. Role of information technology and collaboration in RL supply chains. International Journal of Logistics Research and Applications. 11(February 2015):409–425. DOI: 10.1080/13675560701694499.
129.	Jena, S.K. & Sarmah, S.P. 2015. Measurement of consumers' return intention index towards returning the used products. Journal of Cleaner Production. 108:1–12. DOI: 10.1016/j.jclepro.2015.05.115.
130.	Jindal, A. & Sangwan, K.S. 2015. Evaluation of collection methods in RL by using fuzzy mathematics. Benchmarking. 22(3):393–410. DOI: 10.1108/BIJ-05-2013-0062.
131.	Kabir, M.I. 2013. RL in pharmaceutical industry. International Journal of Supply Chain Management. 2(1):96–100.
132.	Kannan, D., Garg, K., Jha, P. & Diabat, A. 2016. Integrating disassembly line balancing in the planning of a RL network from the perspective of a third party provider. Annals of Operations Research. 1–24. DOI: 10.1007/s10479-016-2272-7.

#	QCA RL LITERATURE - ARTICLES
133.	Kannan, G. 2009. Fuzzy approach for the selection of third party RL provider. Asia Pacific Journal of Marketing and Logistics. 21(3):397–416. DOI: 10.1108/13555850910973865.
134.	Kannan, G., Pokharel, S. & Kumar, P.S. 2009. A hybrid approach using ISM and fuzzy TOPSIS for the selection of RL provider. Resources, Conservation and Recycling. 54(1):28–36. DOI: 10.1016/j.resconrec.2009.06.004.
135.	Kara, S., Rugrungruang, F. & Kaebernick, H. 2007. Simulation modelling of RL networks. International Journal of Production Economics. 106(1):61–69. DOI: 10.1016/j.ijpe.2006.04.009.
136.	Kara, S.S. & Onut, S. 2010. A stochastic optimization approach for paper recycling RL network design under uncertainty. International Journal of Environmental Science & Technology. 7(4):717–730. DOI: 10.1007/BF03326181.
137.	Kassem, S. & Chen, M. 2013. Solving RL vehicle routing problems with time windows. The International Journal of Advanced Manufacturing Technology. 68(1–4):57–68. DOI: 10.1007/s00170-012-4708-9.
138.	Keh, P., Rodhain, F., Meissonier, R. & Llorca, V. 2012. Financial performance, environmental compliance, and social outcomes: The three challenges of RL. Case Study of IBM Montpellier. Supply Chain Forum: An International Journal. 13(3):26–39.
139.	Khor, K.S. & Udin, Z.M. 2012. Impact of RL Product Disposition towards Business Performance in Malaysian E & E Companies. Journal of Supply Chain and Customer Relationship Management. 2012:1–19. DOI: 10.5171/2012.699469.
140.	Khor, K.S. & Udin, Z.M. 2013. RL in Malaysia: Investigating the effect of green product design and resource commitment. Resources, Conservation and Recycling. 81:71–80. DOI: 10.1016/j.resconrec.2013.08.005.
141.	Khor, K.S., Udin, Z.M., Ramayah, T. & Hazen, B.T. 2016. RL in Malaysia: The Contingent role of institutional pressure. International Journal of Production Economics. 175:96–108. DOI: 10.1016/j.ijpe.2016.01.020.
142.	Kilic, H.S., Cebeci, U. & Ayhan, M.B. 2015. RL system design for the waste of electrical and electronic equipment (WEEE) in Turkey. Resources, Conservation and Recycling. 95(2015):120–132. DOI: 10.1016/j.resconrec.2014.12.010.
143.	Kim, J. & Lee, D. 2015. A case study on collection network design, capacity planning and vehicle routing in RL. International Journal of Sustainable Engineering ISSN. 8(1):66–76. DOI: 10.1057/jors.2013.168.
144.	Kim, K., Song, I., Kim, J. & Jeong, B. 2006. Supply planning model for remanufacturing system in RL environment. Computers and Industrial Engineering. 51(2):279–287. DOI: 10.1016/j.cie.2006.02.008.
145.	Kim, T. & Goyal, S.K. 2011. Determination of the optimal production policy and product recovery policy: The impacts of sales margin of recovered product. International Journal of Production Research. 49(9):2535–2550. DOI: 10.1080/00207543.2010.532918.
146.	Kim, T., Goyal, S.K. & Kim, C.H. 2013. Lot-streaming policy for forward-RL with recovery capacity investment. International Journal of Advanced Manufacturing Technology. 68(1–4):509–522. DOI: 10.1007/s00170-013-4748-9.
147.	Kinobe, J.R., Gebresenbet, G., Niwagaba, C.B. & Vinnerås, B. 2015. RL system and recycling potential at a landfill: A case study from Kampala City. Waste Management. 42:82–92. DOI: 10.1016/j.wasman.2015.04.012.
148.	Ko, H.J. & Evans, G.W. 2007. A genetic algorithm-based heuristic for the dynamic integrated forward/RL network for 3PLs. Computers and Operations Research. 34(2):346–366. DOI: 10.1016/j.cor.2005.03.004.
149.	Kongar, E., Haznedaroglu, E., Abdelghany, O. & Bahtiyar, M.O. 2015. A novel IT infrastructure for RL operations of end-of-life pharmaceutical products. Information Technology and Management. 16(1):51–65. DOI: 10.1007/s10799-014-0195-z.
150.	Konstantaras, I., Skouri, K. & Jaber, M.Y. 2010. Lot sizing for a recoverable product with inspection and sorting. Computers and Industrial Engineering. 58(3):452–462. DOI: 10.1016/j.cie.2009.11.004.
151.	Kuczenski, B. & Geyer, R. 2013. PET bottle RL - Environmental performance of California's CRV program. International Journal of Life Cycle Assessment. 18(2):456–471. DOI: 10.1007/s11367-012-0495-7.
152.	Kumar, S. & Putnam, V. 2008. Cradle to cradle: RL strategies and opportunities across three industry sectors. International Journal of Production Economics. 115(2):305–315. DOI: 10.1016/j.ijpe.2007.11.015.
153.	Kumar, S., Dieveney, E. & Dieveney, A. 2009. Reverse logistic process control measures for the pharmaceutical industry supply chain. International Journal of Productivity and Performance Management. 58(2):188–204. DOI: 10.1108/17410400910928761.
154.	Kumar, V., Kumar, V., Brady, M., Garza-Reyes, J.A. & Simpson, M. 2016. Resolving forward-RL multi-period model using evolutionary algorithms International Journal of Production Economics. DOI: 10.1016/j.ijpe.2016.04.026.
155.	Lai, K.H., Wu, S.J. & Wong, C.W.Y. 2013. Did RL practices hit the triple bottom line of Chinese manufacturers? International Journal of Production Economics. 146(1):106–117. DOI: 10.1016/j.ijpe.2013.03.005.
156.	Lambert, S., Riopel, D. & Abdul-Kader, W. 2011. A RL decisions conceptual framework. Computers and Industrial Engineering. 61(3):561–581. DOI: 10.1016/j.cie.2011.04.012.
157.	Lau, K.H. & Wang, Y. 2009. RL in the electronic industry of China: a case study. Supply Chain Management: An International Journal. 14(6):447–465. DOI: 10.1108/13598540910995228.
158.	Lee, C.H. & Rhee, B.D. 2007. Channel coordination using product returns for a supply chain with stochastic salvage capacity. European Journal of Operational Research. 177(1):214–238. DOI: 10.1016/j.ejor.2005.10.044.
159.	Lee, C.K.M. & Lam, J.S.L. 2012. Managing RL to enhance sustainability of industrial marketing. Industrial Marketing Management. 41(4):589–598. DOI: 10.1016/j.indmarman.2012.04.006.
160.	Lee, D.H. & Dong, M. 2009. Dynamic network design for RL operations under uncertainty. Transportation Research Part E: Logistics and Transportation Review. 45(1):61–71. DOI: 10.1016/j.tre.2008.08.002.

#	QCA RL LITERATURE - ARTICLES
161.	Lee, J.E., Chung, K.Y., Lee, K.D. & Gen, M. 2015. A multi-objective hybrid genetic algorithm to minimize the total cost and delivery tardiness in a RL. Multimedia Tools and Applications. 74(20):9067–9085. DOI: 10.1007/s11042-013-1594-6.
162.	Lee, Y.J., Baker, T. & Jayaraman, V. 2012. Redesigning an integrated forward–RL system for a third party service provider: an empirical study. International Journal of Production Research. 50(November 2013):5615–5634. DOI: 10.1080/00207543.2011.651538.
163.	Lhafiane, F., Elbyed, A. & Bouchoum, M. 2015a. Multi-Agent System Architecture Oriented Prometheus Methodology Design for RL. International Journal of Computer, Electrical, Automation, Control and Information Engineering. 9(8):1827–1833.
164.	Lhafiane, F., Elbyed, A. & Bouchoum, M. 2015b. RL Information Management Using Ontological Approach. International Journal of Computer, Electrical, Automation, Control and Information Engineering. 9(2):396–401.
165.	Li, S., Wang, N., Jia, T., He, Z. & Liang, H. 2016. Multiobjective Optimization for Multiperiod. IEEE Transactions on Engineering Management. 63(2):223–236. DOI: 10.1109/TEM.2016.2516986.
166.	Li, X. & Olorunniwo, F. 2008. An exploration of RL practices in three companies. Supply Chain Management: An International Journal. 13(5):381–386. DOI: 10.1108/13598540810894979.
167.	Li, Y., Wei, C. & Cai, X. 2012. Optimal pricing and order policies with B2B product returns for fashion products. International Journal of Production Economics. 135(2):637–646. DOI: 10.1016/j.ijpe.2011.05.004.
168.	Li, Y., Xu, L. & Li, D. 2013. Examining relationships between the return policy, product quality, and pricing strategy in online direct selling. International Journal of Production Economics. 144(2):451–460. DOI: 10.1016/j.ijpe.2013.03.013.
169.	Lieckens, K. & Vandaele, N. 2012. Multi-Level RL Network Design Under Uncertainty. International Journal of Production Research. 50(1):23–40. DOI: 10.1080/00207543.2011.571442.
170.	Lu, Z. & Bostel, N. 2007. A facility location model for logistics systems including reverse flows: The case of remanufacturing activities. Computers and Operations Research. 34(2):299–323. DOI: 10.1016/j.cor.2005.03.002.
171.	Luitel, P., Lieckens, K. & Vandaele, N. 2014. RL supply chain network design: Models and issues. International Journal of Supply Chain Management. 3(3):86–103.
172.	Mafakheri, F. & Nasiri, F. 2013. Revenue sharing coordination in RL. Journal of Cleaner Production. 59:185–196. DOI: 10.1016/j.jclepro.2013.06.031.
173.	Mahapatra, R.N., Biswal, B.B. & Mohanty, R.P. 2013. A Modified Reverse Supply Chain with Remanufacturing for Sustainable Product Cycle. International Journal of Supply Chain Management. 2(2):51–59.
174.	Mahmoudzadeh, M., Mansour, S. & Karimi, B. 2013. To develop a third-party RL network for end-of-life vehicles in Iran. Resources, Conservation and Recycling. 78:1–14. DOI: 10.1016/j.resconrec.2013.06.006.
175.	Mangla, S.K., Govindan, K. & Luthra, S. 2016. Critical Success Factors for RL in Indian Industries: A Structural Model. Journal of Cleaner Production. 129:608–621. DOI: 10.1016/j.jclepro.2016.03.124.
176.	Matar, N., Jaber, M. & Searcy, C. 2014. A RL inventory model for plastic bottles. The International Journal of Logistics Management. 25(2):315–333. DOI: 10.1108/IJLM-12-2012-0138.
177.	Mazahir, S., Lassagne, M. & Kerbache, L. 2011. RL and push-pull manufacturing systems: The case of electronic products. Supply Chain Forum: An International Journal. 12(2):92–103.
178.	Min, H. & Ko, H. 2008. The dynamic design of a RL network from the perspective of third-party logistics service providers. International Journal of Production Economics. 113(1):176–192. DOI: 10.1016/j.ijpe.2007.01.017.
179.	Min, H., Ko, H.J. & Ko, C.S. 2006. A genetic algorithm approach to developing the multi-echelon RL network for product returns. Omega. 34(1):56–69. DOI: 10.1016/j.omega.2004.07.025.
180.	Minnema, A., Bijmolt, T.H.A., Gensler, S. & Wiesel, T. 2016. To Keep or Not to Keep: Effects of Online Customer Reviews on Product Returns. Journal of Retailing. 92(3):253–267. DOI: 10.1016/j.jretai.2016.03.001.
181.	Mishra, N., Kumar, V. & Chan, F.T.S. 2012. A multi-agent architecture for RL in a green supply chain. International Journal of Production Research. 50(9):2396–2406. DOI: 10.1080/00207543.2011.581003.
182.	Mollenkopf, D.A., Rabinovich, E., Laseter, T.M. & Boyer, K.K. 2007. Managing internet product returns: A focus on effective service operations. Decision Sciences. 38(2):215–250. DOI: 10.1111/j.1540-5915.2007.00157.x.
183.	Morgan, T.R., Richey Jr, R.G. & Autry, C.W. 2016. Developing a RL competency: The influence of collaboration and information technology. International Journal of Physical Distribution & Logistics Management. 46(3):293–315.
184.	Mukhopadhyay, S.K. & Setaputra, R. 2006. The role of 4PL as the RL integrator: Optimal pricing and return policies. International Journal of Physical Distribution & Logistics Management. 36(9):716–729. DOI: 10.1108/09600030610710872.
185.	Mukhopadhyay, S.K. & Setaputra, R. 2011. Return policy in product reuse under uncertainty. International Journal of Production Research. 49(17):5317–5332. DOI: 10.1080/00207543.2010.523723.
186.	Mutha, A. & Pokharel, S. 2009. Strategic network design for RL and remanufacturing using new and old product modules. Computers and Industrial Engineering. 56(1):334–346. DOI: 10.1016/j.cie.2008.06.006.
187.	Narayana, S.A., Elias, A. & Pati, R.K. 2014. RL in the pharmaceuticals industry: a systemic analysis. The International Journal of Logistics Management. 25(2):379–398. DOI: 10.1108/IJLM-08-2012-0073.
188.	Nativi, J.J. & Lee, S. 2012. Impact of RFID information-sharing strategies on a decentralized supply chain with RL operations. International Journal of Production Economics. 136(2):366–377. DOI: 10.1016/j.ijpe.2011.12.024.

#	QCA RL LITERATURE - ARTICLES
189.	Nenes, G. & Nikolaidis, Y. 2012. A multi-period model for managing used product returns. International Journal of Production Research. 50(5):1360–1376. DOI: 10.1080/00207543.2011.609650.
190.	Ni, J.Z., Flynn, B.B. & Jacobs, F.R. 2014. Impact of product recall announcements on retailers financial value. International Journal of Production Economics. 153:309–322. DOI: 10.1016/j.ijpe.2014.03.014.
191.	Niknejad, A. & Petrovic, D. 2014. Optimisation of integrated RL networks with different product recovery routes. European Journal of Operational Research. 238(1):143–154. DOI: 10.1016/j.ejor.2014.03.034.
192.	Nikolaou, I.E., Evangelinos, K.I. & Allan, S. 2013. A RL social responsibility evaluation framework based on the triple bottom line approach. Journal of Cleaner Production. 56:173–184. DOI: 10.1016/j.jclepro.2011.12.009.
193.	Olorunniwo, F.O. & Li, X. 2010. Information sharing and collaboration practices in RL. Supply Chain Management: An International Journal. 15(6):454–462. DOI: 10.1108/13598541011080437.
194.	Olorunniwo, F.O. & Li, X. 2011. An Overview of Some RL Practices in the United States. Supply Chian Forum: An International Journal. 12(3):2–10.
195.	Ordoobadi, S.M. 2009. Outsourcing RL and remanufacturing functions: a conceptual strategic model. Management Research News. 32(9):831–845. DOI: 10.1108/01409170910980344.
196.	Östlin, J., Sundin, E. & Björkman, M. 2008. Importance of closed-loop supply chain relationships for product remanufacturing. International Journal of Production Economics. 115(2):336–348. DOI: 10.1016/j.ijpe.2008.02.020.
197.	Partida, B. 2011. Leaders Show Power of RL. Supply Chain Management Review. 62–65.
198.	Petersen, J.A. & Kumar, V. 2009. Are Product Returns a Necessary Evil? Antecedents and Consequences. Journal of Marketing. 73(3):35–51. DOI: 10.1509/jmkg.73.3.35.
199.	Piplani, R. & Saraswat, A. 2012. Robust optimisation approach to the design of service networks for RL. International Journal of Production Research. 50(5):1424–1437. DOI: 10.1080/00207543.2011.571942.
200.	Pishvaee, M.S., Kianfar, K. & Karimi, B. 2010. RL network design using simulated annealing. International Journal of Advanced Manufacturing Technology. 47(1–4):269–281. DOI: 10.1007/s00170-009-2194-5.
201.	Pochampally, K.K. & Gupta, S.M. 2012. Use of linear physical programming and Bayesian updating for design issues in RL. International Journal of Production Research. 50(1):1349–1359. DOI: 10.1080/00207543.2011.571933.
202.	Pokharel, S. & Mutha, A. 2009. Perspectives in RL: A review. Resources, Conservation and Recycling. 53(4):175–182. DOI: 10.1016/j.resconrec.2008.11.006.
203.	Ponce-cueto, E., Manteca, J.Á.G. & Carrasco-Gallego, R. 2011. RL Practices for Recovering Mobile Phones in Spain. Supply Chain Forum. 12(2):104–114. DOI: 10.1080/16258312.2011.11517264.
204.	Pourmohammadi, H., Rahimi, M. & Dessouky, M. 2008. Logistics for Distribution of Industrial Waste / Byproducts: A Joint Optimization of Operation and. Supply Chain Forum: An International Journal. 9:2–18.
205.	Prahinski, C. & Kocabasoglu, C. 2006. Empirical research opportunities in reverse supply chains. Omega. 34:519–532. DOI: 10.1016/j.omega.2005.01.003.
206.	Prakash, C. & Barua, M.K. 2015. Integration of AHP-TOPSIS method for prioritizing the solutions of RL adoption to overcome its barriers under fuzzy environment. Journal of Manufacturing Systems. 37:599–615. DOI: 10.1016/j.jmsy.2015.03.001.
207.	Prakash, C. & Barua, M.K. 2016a. A combined MCDM approach for evaluation and selection of third-party RL partner for Indian electronics industry. Sustainable Production and Consumption. 7(August 2015):66–78. DOI: 10.1016/j.spc.2016.04.001.
208.	Prakash, C. & Barua, M.K. 2016b. An analysis of integrated robust hybrid model for third-party RL partner selection under fuzzy environment. Resources, Conservation and Recycling. 108:63–81. DOI: 10.1016/j.resconrec.2015.12.011.
209.	Presley, A., Meade, L. & Sarkis, J. 2007. A strategic sustainability justification methodology for organizational decisions: a RL illustration. International Journal of Production Research. 45(18–19):4595–4620. DOI: 10.1080/00207540701440220.
210.	Rahimifard, S., Coates, G., Staikos, T., Edwards, C. & Abu-Bakar, M. 2009. Barriers, drivers and challenges for sustainable product recovery and recycling. International Journal of Sustainable Engineering. 2(2):80–90. DOI: 10.1080/19397030903019766.
211.	Rajagopal, P., Sundarm, V.P.K. & Naidu, B.M. 2015. Future Directions of RL in Gaining Competitive Advantages: A Review of Literature. International journal of supply chain management. 4(1):39–48.
212.	Ramírez, A.M. 2012. Product return and logistics knowledge: Influence on performance of the firm. Transportation Research Part E: Logistics and Transportation Review. 48(6):1137–1151. DOI: 10.1016/j.tre.2012.06.001.
213.	Ravi, V. & Shankar, R. 2006. RL operations in paper industry: a case study. Journal of Advances in Management Research. 3(2):88–94. DOI: 10.1108/09564230910978511.
214.	Ravi, V. & Shankar, R. 2015. Survey of RL practices in manufacturing industries: an Indian context. Benchmarking: An International Journal. 22(5):874–899. DOI: 10.1108/09564230910978511.
215.	Ravi, V. 2014. RL Operations in Automobile Industry: A Case Study Using SAP-LAP Approach. Global Journal of Flexible Systems Management. 15(4):295–303. DOI: 10.1007/s40171-014-0073-x.
216.	Ravi, V., Shankar, R. & Tiwari, M.K. 2008. Selection of a RL project for end- of-life computers: ANP and goal programing approach. International Journal of Production Research. 46(4849–4870). DOI: 10.1080/00207540601115989.
217.	Reimann, M. 2016. Accurate Response with Refurbished Consumer Returns. Decision Sciences. 47(1):31–59. DOI: 10.1111/deci.12150.

#	QCA RL LITERATURE - ARTICLES
218.	Rogers, D.S., Lembke, R. & Benardino, J. 2013. RL: A new core competency. Supply chain management review. (May/June):40–47. Available: http://www.scmr.com/article/reverse_logistics_a_new_core_competency.
219.	Rogers, D.S., Melamed, B. & Lembke, R.S. 2012. Modeling and analysis of RL. Journal of Business Logistics. 33(2):107–117. DOI: 10.1111/j.0000-0000.2012.01043.x.
220.	Roy, J., Nollet, J. & Beaulieu, M. 2006. RL Networks and Governance Structures. Supply Chain Forum: An International Journal. 7(2):58–68.
221.	Ruiz-Benitez, R. & Muriel, A. 2014. Consumer returns in a decentralized supply chain. International Journal of Production Economics. 147:573–592. DOI: 10.1016/j.ijpe.2013.05.010.
222.	Ruiz-Benítez, R., Ketzenberg, M. & van der Laan, E.A. 2014. Managing consumer returns in high clockspeed industries. Omega. 43:54–63. DOI: 10.1016/j.omega.2013.06.004.
223.	Saen, R.F. 2010. A new model for selecting third-party RL providers in the presence of multiple dual-role factors. International Journal of Advanced Manufacturing Technology. 46(1–4):405–410. DOI: 10.1007/s00170-009-2092-x.
224.	Salema, M.I.G., Barbosa-Povoa, A.P. & Novais, A.Q. 2007. An optimization model for the design of a capacitated multi-product RL network with uncertainty. European Journal of Operational Research. 179(3):1063–1077. DOI: 10.1016/j.ejor.2005.05.032.
225.	Salema, M.I.G., Barbosa-Povoa, A.P. & Novais, A.Q. 2010. Simultaneous design and planning of supply chains with reverse flows: A generic modelling framework. European Journal of Operational Research. 203(2):336–349. DOI: 10.1016/j.ejor.2009.08.002.
226.	Sarkis, J., Helms, M.M. & Hervani, A.A. 2010. RL and social sustainability. Corporate Social Responsibility and Environmental Management. 17(6):337–354. DOI: 10.1002/csr.220.
227.	Sasikumar, P. & Kannan, G. 2008a. Issues in reverse supply chains, part I: end-of-life product recovery and inventory management–an overview. International Journal of Sustainable Engineering. 1(3):154–172. DOI: 10.1080/19397030802433860.
228.	Sasikumar, P. & Kannan, G. 2008b. Issues in reverse supply chain, part III: classification and simple analysis. International Journal of Sustainable Engineering. 1(4):234–249. DOI: 10.1080/19397030802509974.
229.	Sasikumar, P., Kannan, G. & Haq, A.N. 2010. A multi-echelon RL network design for product recovery-a case of truck tire remanufacturing. International Journal of Advanced Manufacturing Technology. 49(9–12):1223–1234. DOI: 10.1007/s00170-009-2470-4.
230.	Schultmann, F., Zumkeller, M. & Rentz, O. 2006. Modeling reverse logistic tasks within closed-loop supply chains: An example from the automotive industry. European Journal of Operational Research. 171(3):1033–1050. DOI: 10.1016/j.ejor.2005.01.016.
231.	Selvi, M.S. & Kayar, Y. 2016. RL activities in enterprises and implementation reasons. International Journal of Research in Business & Social Science. 5(1):15–29.
232.	Seo, J., Yoon, S. & Vangelova, M. 2015. Shopping plans, buying motivations, and return policies: Impacts on product returns and purchase likelihoods. Marketing Letters. DOI: 10.1007/s11002-015-9381-y.
233.	Serrato, M.A., Ryan, S.M. & Gaytán, J. 2007. A Markov decision model to evaluate outsourcing in RL. International Journal of Production Research. 45(18–19):4289–4315. DOI: 10.1080/00207540701450161.
234.	Shaharudin, M.R., Govindan, K., Zailani, S. & Tan, K.C. 2015. Managing product returns to achieve supply chain sustainability: an exploratory study and research propositions. Journal of Cleaner Production. 101:1–15. DOI: 10.1016/j.jclepro.2015.03.074.
235.	Shaharudin, M.R., Zailani, S. & Tan, K.C. 2015. Barriers to product returns and recovery management in a developing country: Investigation using multiple methods. Journal of Cleaner Production. 96:220–232. DOI: 10.1016/j.jclepro.2013.12.071.
236.	Shaik, M. & Abdul-Kader, W. 2012. Performance measurement of RL enterprise: a comprehensive and integrated approach. Measuring Business Excellence. 16(2):23–34. DOI: 10.1108/13683041211230294.
237.	Shaik, M.N. & Abdul-Kader, W. 2014. Comprehensive performance measurement and causal-effect decision making model for RL enterprise. Computers and Industrial Engineering. 68(1):87–103. DOI: 10.1016/j.cie.2013.12.008.
238.	Shakantu, W.., Muya, M., Tookey, J.E. & Bowen, P.A. 2009. Conceptualising RL in a construction context: re-defining its contours. Journal of Contemporary Management. 6:81–96.
239.	Sharif, A.M., Irani, Z., Love, P.E.D. & Kamal, M.M. 2012. Evaluating reverse third-party logistics operations using a semi-fuzzy approach. International Journal of Production Research. 50(9):2515–2532. DOI: 10.1080/00207543.2011.581012.
240.	Sharma, S. & Singh, G. 2013. RL: Design implications on the basis of product types sharing identical supply chain member motivations. Uncertain Supply Chain Management. 1(1):33–44. DOI: 10.5267/j.uscm.2013.05.001.
241.	Sharma, S.K., Mahapatra, S. & Parappagoudar, M.B. 2016. Benchmarking of product recovery alternatives in RL. Benchmarking: An International Journal. 23(2):406–424. DOI: 10.1108/09564230910978511.
242.	Sheu, J.B. & Gao, X.Q. 2014. Alliance or no alliance - Bargaining power in competing reverse supply chains. European Journal of Operational Research. 233(2):313–325. DOI: 10.1016/j.ejor.2013.09.021.
243.	Sheu, J.B. 2007. A coordinated RL system for regional management of multi-source hazardous wastes. Computers and Operations Research. 34(5):1442–1462. DOI: 10.1016/j.cor.2005.06.009.
244.	Shi, X., Li, L.X., Yang, L., Li, Z. & Choi, J.Y. 2012. Information flow in RL: An industrial information integration study. Information Technology and Management. 13(4):217–232. DOI: 10.1007/s10799-012-0116-y.
245.	Shi, Y., Nie, J., Qu, T., Chu, L.K. & Sculli, D. 2015. Choosing reverse channels under collection responsibility sharing in a closed-loop supply chain with re-manufacturing. Journal of Intelligent Manufacturing. 26(2):387–402. DOI: 10.1007/s10845-013-0797-z.

#	QCA RL LITERATURE - ARTICLES
246.	Silva, D.A.L., Renó, G.W.S., Sevegnani, G., Sevegnani, T.B. & Truzzi, O.M.S. 2013. Comparison of disposable and returnable packaging: A case study of RL in Brazil. Journal of Cleaner Production. 47:377–387. DOI: 10.1016/j.jclepro.2012.07.057.
247.	Singhry, H.B. 2015. An extended model of sustainable development from sustainable sourcing to sustainable RL: A supply chain perspective. International Journal of Supply Chain Management. 4(4):115–125.
248.	Škapa, R. & Klapalová, A. 2012. RL in Czech companies: increasing interest in performance measurement. Management Research Review. 35:676–692. DOI: 10.1108/01409171211247686.
249.	Skinner, L.R., Bryant, P.T. & Richey, R.G. 2008. Examining the impact of RL disposition strategies. International Journal of Physical Distribution & Logistics Management. 38(7):518–539. DOI: 10.1108/09600030810900932.
250.	Soleimani, H. & Govindan, K. 2014. RL network design and planning utilizing conditional value at risk. European Journal of Operational Research. 237(2):487–497. DOI: 10.1016/j.ejor.2014.02.030.
251.	Srivastava, S.K. & Srivastava, R.K. 2006. Managing product returns for RL. International Journal of Physical Distribution & Logistics Management. 36(7):524–546. DOI: 10.1108/09600030610684962.
252.	Srivastava, S.K. 2008. Network design for RL. Omega. 36(4):535–548. DOI: 10.1016/j.omega.2006.11.012.
253.	Stock, J.R. & Mulki, J.P. 2009. Product returns processing: An examination of practices of manufacturers, wholesalers/distributors, and retailers. Journal of Business Logistics. 30(1):33–62. DOI: 10.1002/j.2158-1592.2009.tb00098.x.
254.	Subhashini, S. 2016. An Outline of RL. The International Journal of Business & Management. 4(2):8–13.
255.	Sundin, E. & Dunbäck, O. 2013. RL challenges in remanufacturing of automotive mechatronic devices. Journal of Remanufacturing. 3(1):2. DOI: 10.1186/2210-4690-3-2.
256.	Suyabatmaz, A., Altekin, F.T. & Şahin, G. 2014. Hybrid simulation-analytical modeling approaches for the RL network design of a third-party logistics provider. Computers and Industrial Engineering. 70:74–89. DOI: 10.1016/j.cie.2014.01.004.
257.	Tan, A.W.K. & Kumar, A. 2006. A decision-making model for RL in the computer industry. The International Journal of Logistics Management. 17(3):331–354. DOI: 10.1108/09574090610717518.
258.	Tavana, M., Zareinejad, M. & Santos-Arteaga, F.J. 2016. An intuitionistic fuzzy-grey superiority and inferiority ranking method for third-party RL provider selection. International Journal of Systems Science: Operations & Logistics. 2016(November):1–20. DOI: 10.1080/23302674.2016.1256448.
259.	Tavana, M., Zareinejad, M., Di Caprio, D. & Kaviani, M.A. 2016. An integrated intuitionistic fuzzy AHP and SWOT method for outsourcing RL. Applied Soft Computing Journal. 40:544–557. DOI: 10.1016/j.asoc.2015.12.005.
260.	Tiwari, R.K. 2013. Identification of factors affecting reverse chain performance in relation to customer satisfaction using ISM Modelling & MICMAC Analysis. Uncertain Supply Chain Management. 1:237–252. DOI: 10.5267/j.uscm.2013.08.005.
261.	Toyasaki, F., Wakolbinger, T. & Kettinger, W.J. 2013. The value of information systems for product recovery management. International Journal of Production Research. 51(4):1214–1235. DOI: 10.1080/00207543.2012.695090.
262.	Tsai, W.H. & Hung, S. 2009. Treatment and recycling system optimisation with activity-based costing in WEEE RLM: an environmental supply chain perspective. International Journal of Production Research. 47(19):5391–5420. DOI: 10.1080/00207540801927183.
263.	Turrisi, M., Bruccoleri, M. & Cannella, S. 2013. Impact of RL on supply chain performance. International Journal of Physical Distribution & Logistics Management. 43(7):564–585. DOI: 10.1108/IJPDLM-04-2012-0132.
264.	Tuzkaya, G., Gülsün, B. & Önsel, Ş. 2011. A methodology for the strategic design of RL networks and its application in the Turkish white goods industry. International Journal of Production Research. 49(15):4543–4571. DOI: 10.1080/00207543.2010.492804.
265.	Tuzkaya, G.B. & Gülsün, B.B. 2008. Evaluating centralized return centers in a RL network: An integrated fuzzy multi-criteria decision approach. International Journal of Environmental Science and Technology. 5(3):339–352. DOI: 10.1007/BF03326029.
266.	Vahabzadeh, A., Asiaei, A. & Zailani, S. 2015. Reprint of "green decision-making model in RL using FUZZY-VIKOR method". Resources, Conservation and Recycling. 104:334–347. DOI: 10.1016/j.resconrec.2015.10.028.
267.	Vijayan, G., Kamarulzaman, N.H., Mohamed, Z.A. & Abdullah, A.M. 2014. Sustainability in food retail industry through RL. International Journal of Supply Chain Management. 3(2):11–23.
268.	Vlachos, I.P. 2016. RL capabilities and firm performance: the mediating role of business strategy. International Journal of Logistics Research and Applications. 1–19. DOI: 10.1080/13675567.2015.1115471.
269.	Wang, Z., Yao, D.Q. & Huang, P. 2007. A new location-inventory policy with RL applied to B2C e-markets of China. International Journal of Production Economics. 107(2):350–363. DOI: 10.1016/j.ijpe.2006.09.012.
270.	Weeks, K., Gao, H., Alidaeec, B. & Rana, D.S. 2010. An empirical study of impacts of production mix, product route efficiencies on operations performance and profitability: a RL approach. International Journal of Production Research. 48(4):1087–1104. DOI: 10.1080/00207540802566428.
271.	Wilcox, W., Horvath, P.A., Griffis, S.E. & Autry, C.W. 2011. A Markov model of liquidity effects in RL processes: The effects of random volume and passage. International Journal of Production Economics. 129(1):86–101. DOI: 10.1016/j.ijpe.2010.09.005.
272.	Wu, S. 2014. Warranty return policies for products with unknown claim causes and their optimisation. International Journal of Production Economics. 156:52–61. DOI: 10.1016/j.ijpe.2014.05.016.
273.	Xanthopoulos, A. & Iakovou, E. 2009. On the optimal design of the disassembly and recovery processes. Waste Management. 29(5):1702–1711. DOI: 10.1016/j.wasman.2008.11.009.

#	QCA RL LITERATURE - ARTICLES
274.	Xiao, T., Shi, K. & Yang, D. 2010. Coordination of a supply chain with consumer return under demand uncertainty. International Journal of Production Economics. 124(1):171–180. DOI: 10.1016/j.ijpe.2009.10.021.
275.	Xie, Y. & Breen, L. 2014. Who cares wins? A comparative analysis of household waste medicines and batteries RL systems. Supply Chain Management: An International Journal. 19(4):455–474. DOI: 10.1108/SCM-07-2013-0255.
276.	Xu, L., Li, Y., Govindan, K. & Xu, X. 2015. Consumer returns policies with endogenous deadline and supply chain coordination. European Journal of Operational Research. 242(1):88–99. DOI: 10.1016/j.ejor.2014.09.049.
277.	Yan, Q., Yong, H., Qinli, D. & Stokes, P. 2012. RL network design model based on e-commerce. International Journal of Organizational Analysis. 20(2):251–261. DOI: 10.1108/19348831211227864.
278.	Yang, F., Hu, P., Zhao, F. & Hu, C. 2015. Customer returns model in a dual-channel supply chain. Journal of Modelling in Management. 10(3):360–379. DOI: 10.1108/JM2-03-2015-0014.
279.	Ye, F., Zhao, X., Prahinski, C. & Li, Y. 2013. The impact of institutional pressures, top managers' posture and RL on performance - Evidence from China. International Journal of Production Economics. 143(1):132–143. DOI: 10.1016/j.ijpe.2012.12.021.
280.	Yoo, S.H. 2014. Product quality and return policy in a supply chain under risk aversion of a supplier. International Journal of Production Economics. 154:146–155. DOI: 10.1016/j.ijpe.2014.04.012.
281.	Yoo, S.H., Kim, D. & Park, M. 2014. Pricing and return policy under various supply contracts in a closed-loop supply chain. International Journal of Production Research. 53(1):106–126. DOI: 10.1080/00207543.2014.932927.
282.	Yu, H. & Solvang, W.D. 2016. A general RL network design model for product reuse and recycling with environmental considerations. The International Journal of Advanced Manufacturing Technology. DOI: 10.1007/s00170-016-8612-6.
283.	Yuan, R., Liu, M.J., Chong, A.Y. & Tan, K.H. 2016. An empirical analysis of consumer motivation towards reverse exchange. Supply Chain Management: An International Journal. 21(2):180–193. DOI: 10.1108/SCM-08-2015-0327.
284.	Zandieh, M. & Chensebli, A. 2016. RL network design: A water flow-like algorithm approach. OPSEARCH. DOI: 10.1007/s12597-016-0250-0.
285.	Zhang, D.Z. 2013. An integrated production and inventory model for a whole manufacturing supply chain involving RL with finite horizon period. Omega. 41(3):598–620. DOI: 10.1016/j.omega.2012.07.001.
286.	Zhou, L., Naim, M. & Wang, Y. 2007. Soft systems analysis of RL battery recycling in China. International Journal of Logistics Research and Applications. 10(1):57–70. DOI: 10.1080/13675560600717847.
287.	Zhou, X. & Zhou, Y. 2015. Designing a multi-echelon RL operation and network: A case study of office paper in Beijing. Resources, Conservation and Recycling. 100:58–69. DOI: 10.1016/j.resconrec.2015.04.009.
288.	Zikopoulos, C. & Tagaras, G. 2015. Reverse supply chains: Effects of collection network and returns classification on profitability. European Journal of Operational Research. 246(2):435–449. DOI: 10.1016/j.ejor.2015.04.051.
289.	Zuluaga, J.P.S., Thiell, M. & Perales, R.C. 2016. Reverse cross-docking. Omega. 1–10. DOI: 10.1016/j.omega.2016.01.010.

A.2 CODING FRAMEWORK FOR QCA

Final coding framework for the QCA of RL literature, which was also used for the initial coding of the interviews with industry experts (deductively).

Code category	Description
CatA: Pre-receipt processes	**These are the processes that take place before the organisation receives the product at the facility. Therefore, this category includes customer return request, gatekeeping, collection and transportation.**
CatA_Sub1: Customer return request	This is the process where the customer notifies the organisation of a product return. This can include any content regarding the processes a customer can follow to notify a firm.
CatA_Sub2: Gatekeeping process	A function where the organisation decides a return is accepted or not. The focus on gatekeeping in this part is the elements that explain the physical process of gatekeeping and not the outcomes of successful or poor gatekeeping abilities. Also added to this could be the RMA process.
CatA_Sub3: Collection	This is a process where the item is moved back from the customer to the facility. The focus here is on the physical process and not strategies or decisions regarding collection.
CatA_Sub4: Transportation of return	This involves the physical movement of products to the facilities. Transportation decisions or strategies will not be included in this category.
CatA_Sub5: Miscellaneous pre-receipt process	Any new content that does not fit into customer return request, gatekeeping, collection and transportation of returns.
CatB: Post-receipt processes	**These are the processes that take place when product returns arrive at facilites and involve RL operations in facilities and the destinations returned products travel. The processes include receiving, processing, inspection and sorting, disposition and redistribution**
CatB_Sub1: Receiving	This involves processes where the returned product arrives at the facility and unloading the products and assigning it to sorters or inspectors
CatB_Sub2: Processing	Can involve issuing credit to customers, data entry regarding the condition of the returns, also which treatment options should the firm follow. It seems that processing can take place at all stages in the RL process.

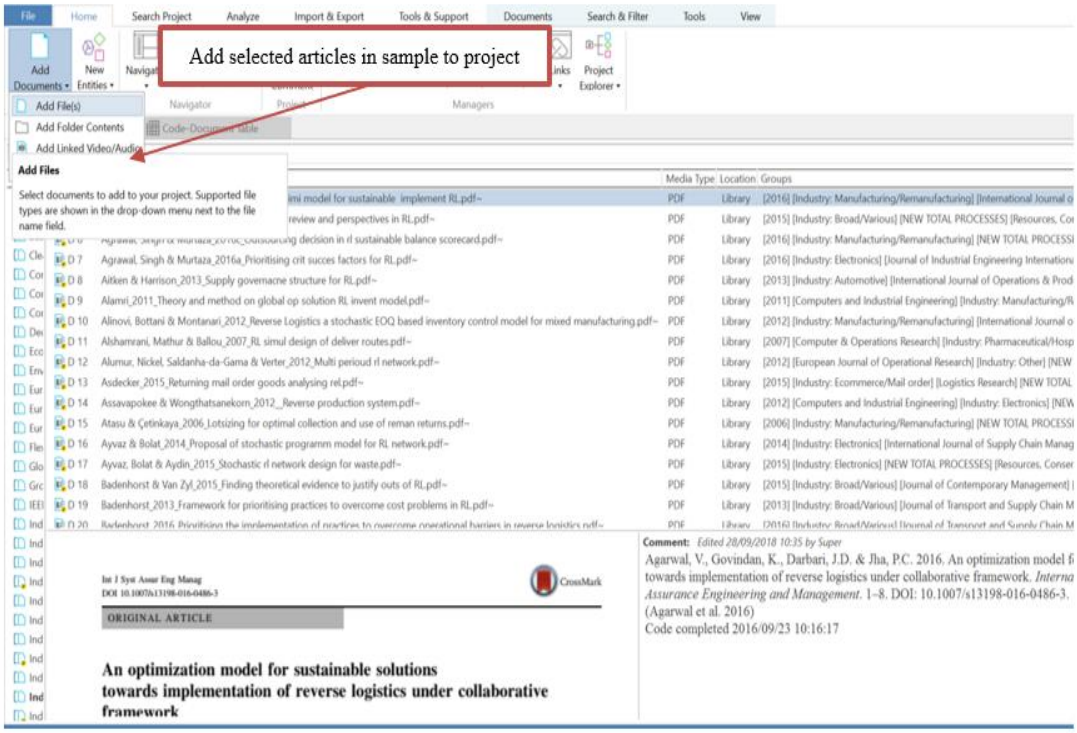
CatB_Sub3: Inspection/sorting	Inspection and sorting are where the overall appearance and state of the returned products are evaluated more intensively than during gatekeeping (Agrawal et al. 2015:78). Again the focus will be on the physical processes and not on strategies or practices.
CatB_Sub3_1: Inspection	Determining the condition of the product after receiving
CatB_Sub3_2: Sorting	Where the returned products are placed into categories, defective or non-defective. This process will also result in determining which disposition option would be followed.
CatB_Sub4: Disposition	Considered the most important process in RL. This process involves several options to decide the fate of returned products. The options can be reuse, recovery and other exit options. Excluded from disposition (for study) is material recovery, remanufacturing and waste disposal.
CatB_Sub4_1: Reuse	Reuse entails reusing or reselling the returned product in its current condition.
CatB_Sub4_2: Repair	Repair involves the work of fixing and replacing malfunctioning components of a product in order to restore the existing used product to a working order (Khor & Udin, 2012: 7).
CatB_Sub4_3: Refurbish	Refurbishing involves the replacement of some parts and upgrading the key components of the returned product (Gandolfo & Sbrana, 2008: 33).
CatB_Sub4_4: Exit options of returns	These other alternatives for product disposition, where retailers mostly shift the responsibility for product recovery to other supply chain parties or due to product condition using alternative markets to sell product returns.
CatB_Sub4_4a: Sell on secondary market	This is where the organisation chooses a route that is outside its normal market. For instance, ebay, factory stores and clearance stores.
CatB_Sub4_4b: Ship to vendor	This is where the organisation decides to ship the product back to the manufacturer/supplier.
CatB_Sub4_4c: Sell to third party	This is where the organisation decides to sell the product to a third-party buyer (such as a jobber)
CatB_Sub4_4d: Miscellaneous exist options	Other exist options that falls outside the already mentioned categories.
CatB_Sub5: Redistribution	The final RL process that takes place after disposition, where recovered/returned products return to markets.
CatB_Sub6: Miscellaneous post-receipt processes	New post-receipt processes are any new processes that can form part of post-receipt processes but fall outside of the receiving, inspection/sorting, disposition and exit option categories.
CatC: Consumer returns	**Returns between end users and retailers (excludes distribution returns and manufacturing returns)**
CatC_Sub1: General consumer returns	Included in consumer returns are B2C commercial returns, service returns, end-of-use returns, warranty returns and recalls. Excludes end-of-life returns.
CatC_Sub2: Miscellaneous types of returns	These will include types of returns that falls outside any of the other return categories
CatD: RL Practices	**Included in this category are all the practices that contribute to the effective management of RL. It also includes strategies and management decision-making. This category is broad since various practices can exist. The most important is that a practice clearly improves or contributes to the effective management of RL.**
CatD_Sub1: Integrations	Integration can take place at functional level and supply chain level. This category will include content regarding having a holistic approach to RL (like integrated logistics)
CatD_sub1_1: Supply chain integration	This involves all the processes regarding collaborating, sharing information, contracts, negotiations and meetings with supply chain partners. The focus must be on relationships and SCI strategies that can improve RLM
CatD_sub1_2: Cross-functional integrations	Different functions from the organisation work together to improve the entire RL process.
CatD_sub1_3: Customer integrations/ engagements	This entails involving the customer in the RL process. This category will include customer engagement and practices to improve customer service/satisfaction. A distinction should be made between consumers (end-users) and retailers and wholesalers (customers of the manufacturer).
CatD_sub2: Outsourcing/insourcing	This is where the organisation makes decisions regarding outsourcing or insourcing RL processes or activities
CatD_sub2_1: Outsource to third parties	This involves outsourcing to any other parties in the RL process. This can include 3PL providers but also any other party that can perform any of the functions within the RL process.
CatD_sub2_2: Keep RL in-house	This is where the organisation decides to keep RL internal and not to outsource any part of RL.
CatD_Sub3: IT practice	Information practices are related to any technology, system, or software that can improve RLM and improve returns processes. Here it is more about the strategies and the type of technologies that organisations use for RL and why these technologies improve RLM.
CatD_sub3_1: General IT	This is anything related to IT in general. Therefore, if literature discuss the strategies and requirements for technology and systems in RL without specifying the specific technology types it can be included in this category. However, if literature contains a sentence that mentions the types of technologies that exit, it can still be coded to this category.
CatD_sub3_2: Internet or web-based	Any IT related to the internet or web-based systems, like online shopping platforms, can be included in this category
CatD_sub3_3: Traditional forward IT	Any traditional logistics technologies, for example, ERP, EDI, WMS, TMS, CRM or anything that is normally used for FL. However, this excludes barcodes and RFID
CatD_sub3_4: RFID and barcode	Anything related to RFID and barcoding. This can include tags, scanners, readers and computer software related to RFID and barcode technologies
CatD_sub3_5: RL technologies	Any technologies that are specifically used for RL, for example, return software and returns management software. Exclude any technologies that can be used for other business functions.
CatD_sub4: Performance measurement	Any metrics or measurements that organisations use to determine its performance in RL.
CatD_sub5: Resource commitment	This category can contain any resources that organisations will need to invest in to improve the RL process (financial, human, technology).
CatD_sub6: Financial management practices	These are practices related to cost reporting, controls and accounting systems. This category can also include identification of costs in RL.
CatD_sub7: Strategic	Focus on any procedures and formal strategies for the effective RLM of consumer returns. Anything related to RL in the

planning and procedures	overall strategic plan of the organisation, standardised processes for RL, SOPs or formalised procedure which includes written rules and procedures for RL
CatD_sub8: Return avoidance and gatekeeping practices	These are either strategies or processes that organisations implement to reduce returns or avoid returns. Gatekeeping should not be confused with the process of gatekeeping, the focus here is on the strategic decisions as well as the reasons why gatekeeping should be a standard practice for improving the RL process.
CatD_sub9: Staff and management practices	These are practices related to management and staff involvement in the RL process. This includes top management support and involvement in RL, practices related to dedicated managers in RL, establishing a dedicated function for RL and staff training
CatD_sub10: Disposition practices	This section should not be confused the disposition process. Different cost structures and revenue recovery are associated with the different disposition strategies. The focus must be on disposition decisions, strategies and practices that can lead to effective recovery of product returns.
CatD_sub11: Facility/locations strategies	This includes strategies regarding the location and type facilities that organisations can utilise in RL and the requirements and outcomes of general facility/location strategies.
CatD_sub12: Miscellaneous practices	Any other practices/strategies or decisions identified that were not identified in previous categories

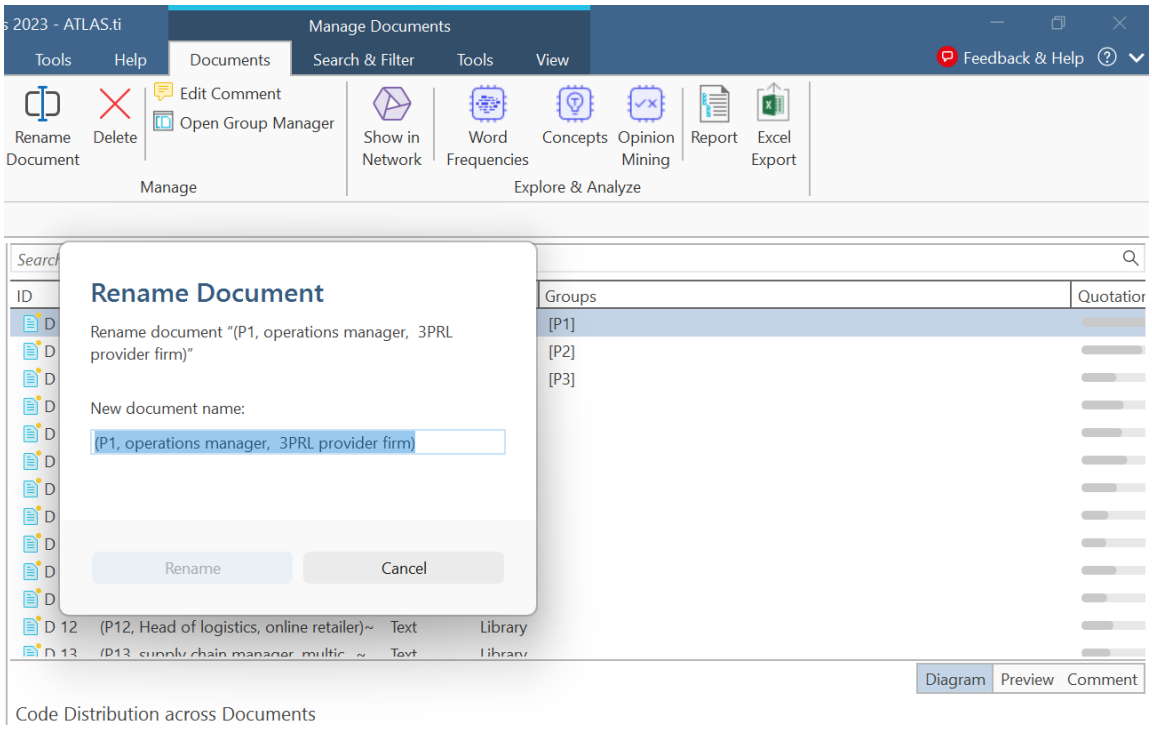
Appendix B - Using ATLAS.ti for QCA methodology

Although this Appendix relates to the QCA methodology discussed in chapter 3, ATLAS.ti was also used for the interviews with industry experts. Therefore, both qualitative methods followed the same procedures in ATLAS.ti.

B.1 PREPARING MATERIALS FOR CODING IN ATLAS.TI

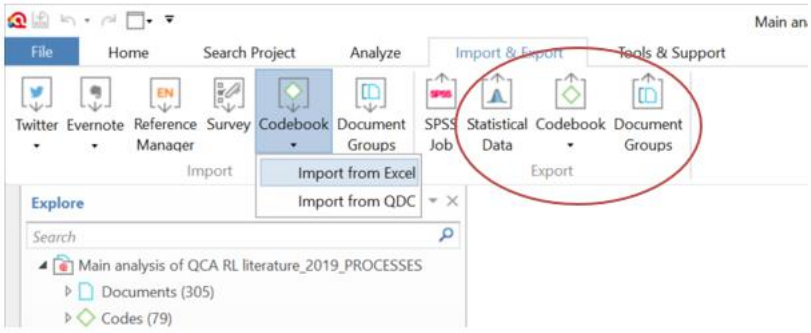


(See section 3.3.2.6.1 for the discussion of preparing codes in ATLAS.ti)



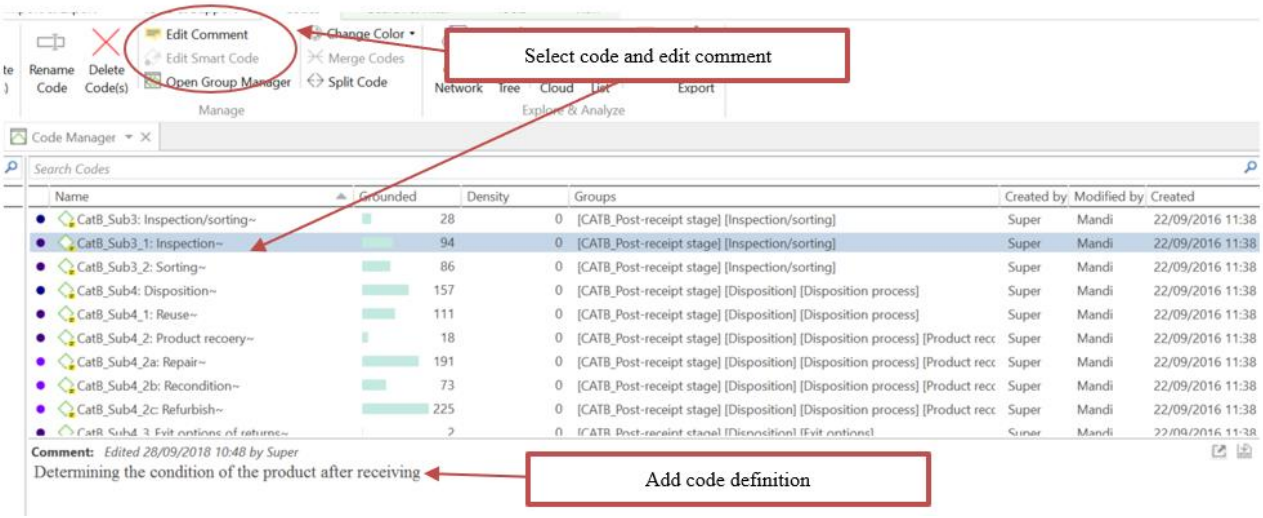
(Renaming the document section 7.3.5.2.2 for the interviews with industry experts)

B.2 IMPORTING CODES FROM THE IMPORT FUNCTION IN ATLAS.TI.



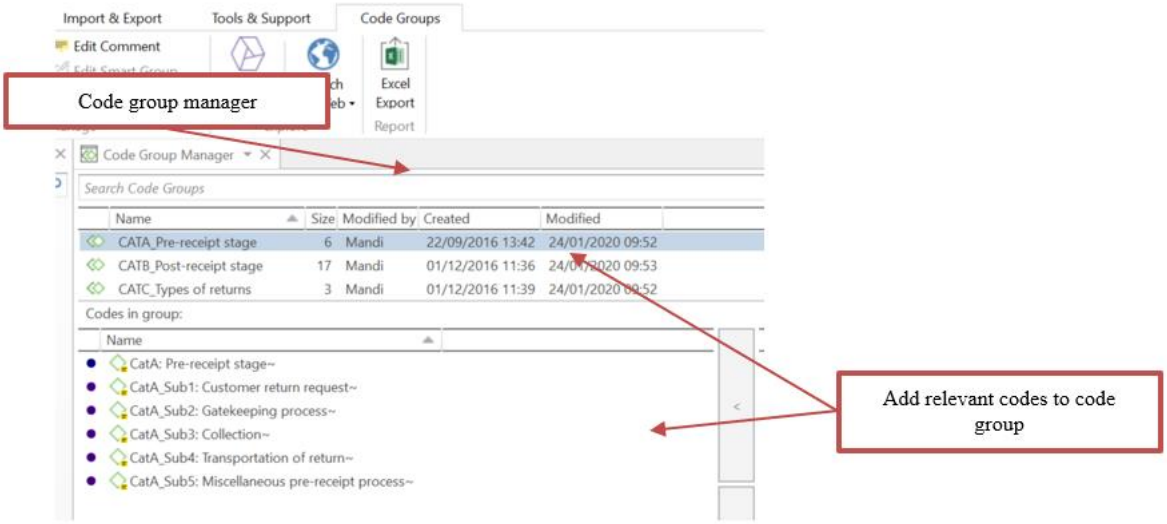
(See code frame used for import in **Error! Reference source not found.** and discussion of importing codes in section 3.3.2.6.2)

B.3 CREATING CODE DEFINITIONS IN ATLAS.TI



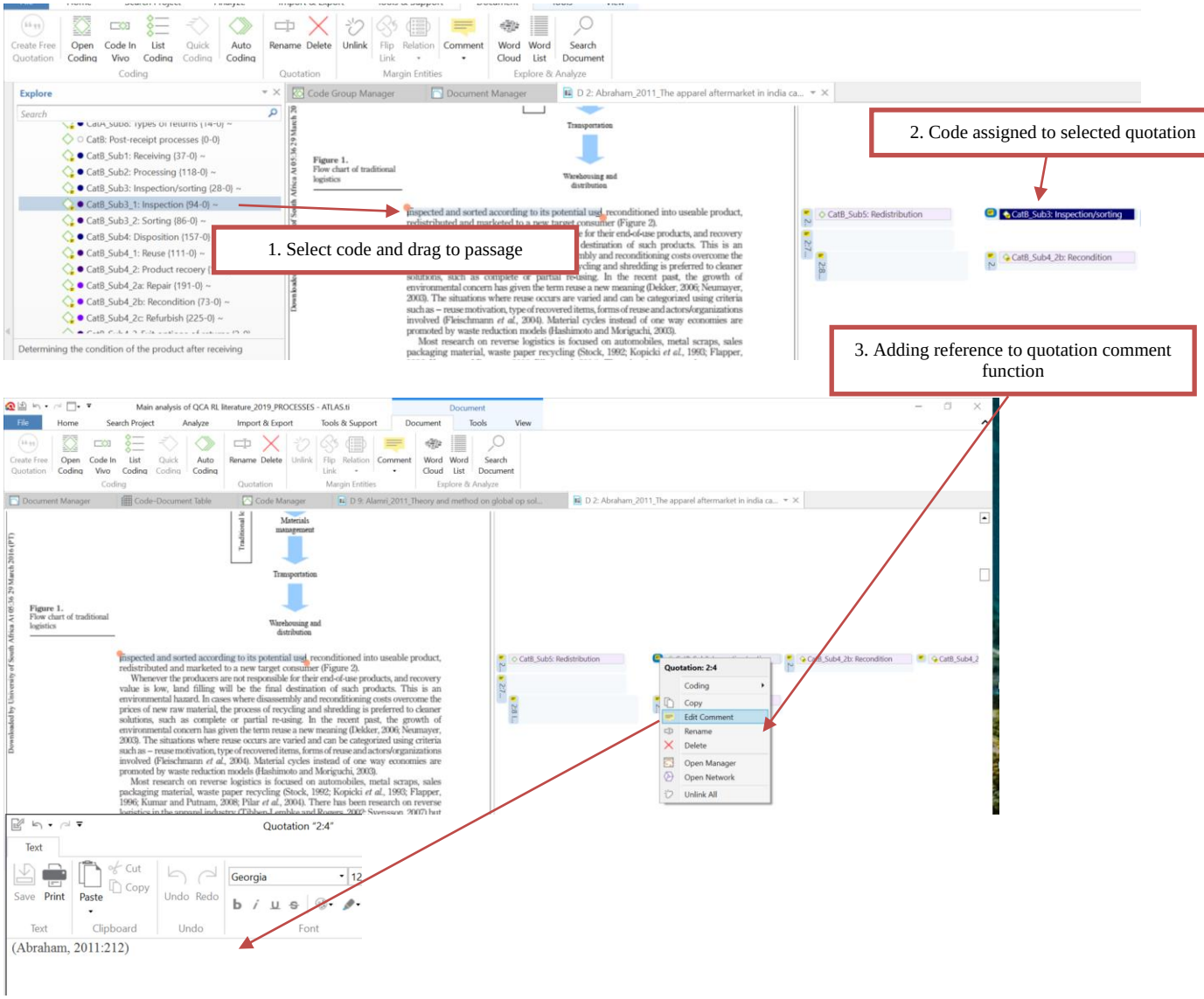
(See code definitions in **Error! Reference source not found.** and discussion of adding code definitions in section 3.3.2.6.2)

B.4 ASSIGNING CODES TO CODE GROUPS IN ATLAS.TI



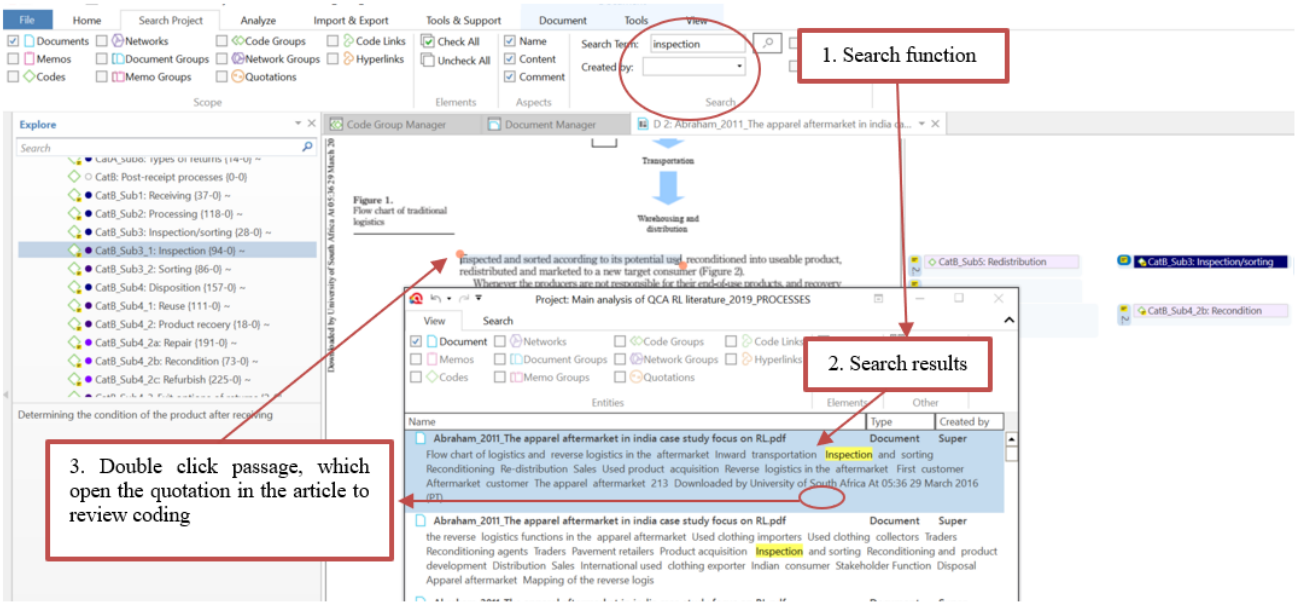
(See discussion of adding codes to code groups in section 3.3.2.6.2)

B.5 EXAMPLE OF CODING ARTICLES IN ATLAS.TI



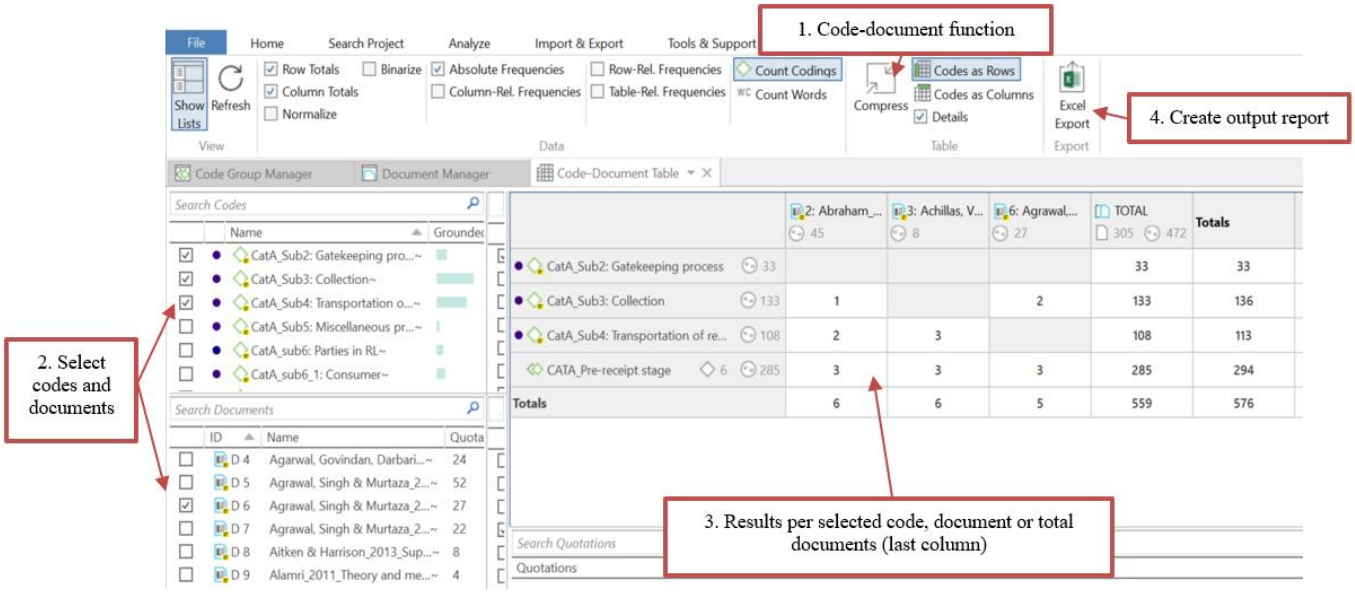
(See section 3.3.2.6.3 for the discussion of the initial coding process)

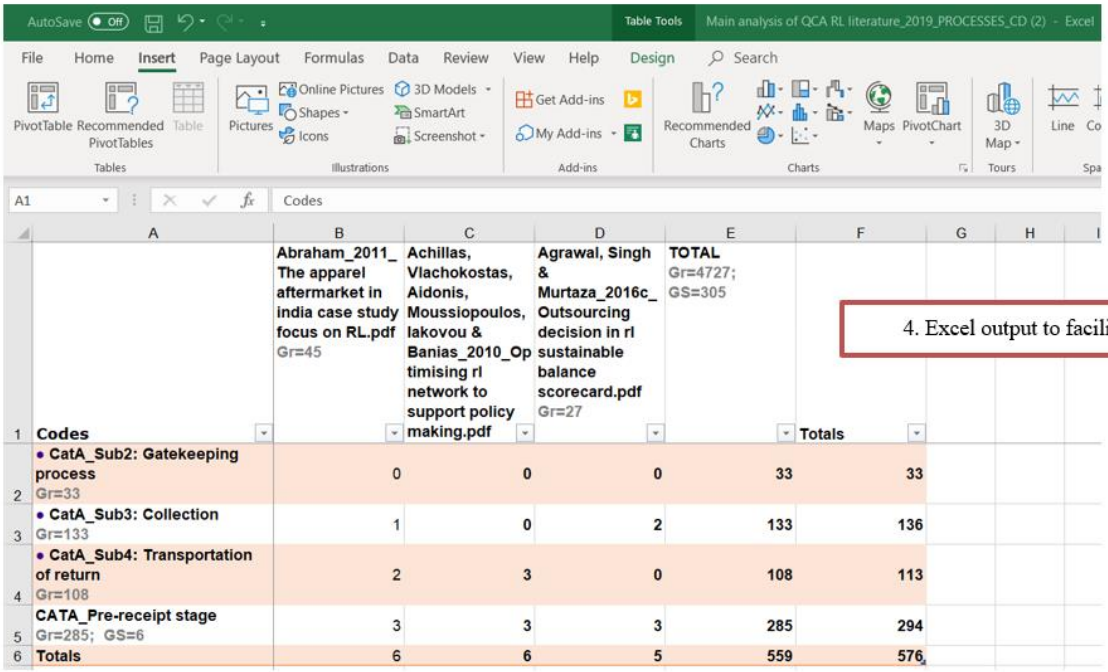
B.6 EXAMPLE OF SEARCH FUNCTION IN ATLAS.TI



(See section 3.3.2.6.3 for the discussion of using the search function to ensure accuracy of the coding results)

B.7 EXAMPLE OF CODE-DOCUMENT TABLE IN ATLAS.TI FOR QUANTITATIVE RESULTS





AutoSave Off | Table Tools | Main analysis of QCA RL literature_2019_PROCESSES_CD (2) - Excel

File Home Insert Page Layout Formulas Data Review View Help Design Search

PivotTable Recommended PivotTables Table | Pictures Online Pictures Shapes Icons 3D Models SmartArt Screenshot | Get Add-ins My Add-ins | Recommended Charts Maps PivotChart | 3D Map | Line

Tables Illustrations Add-ins Charts Tours

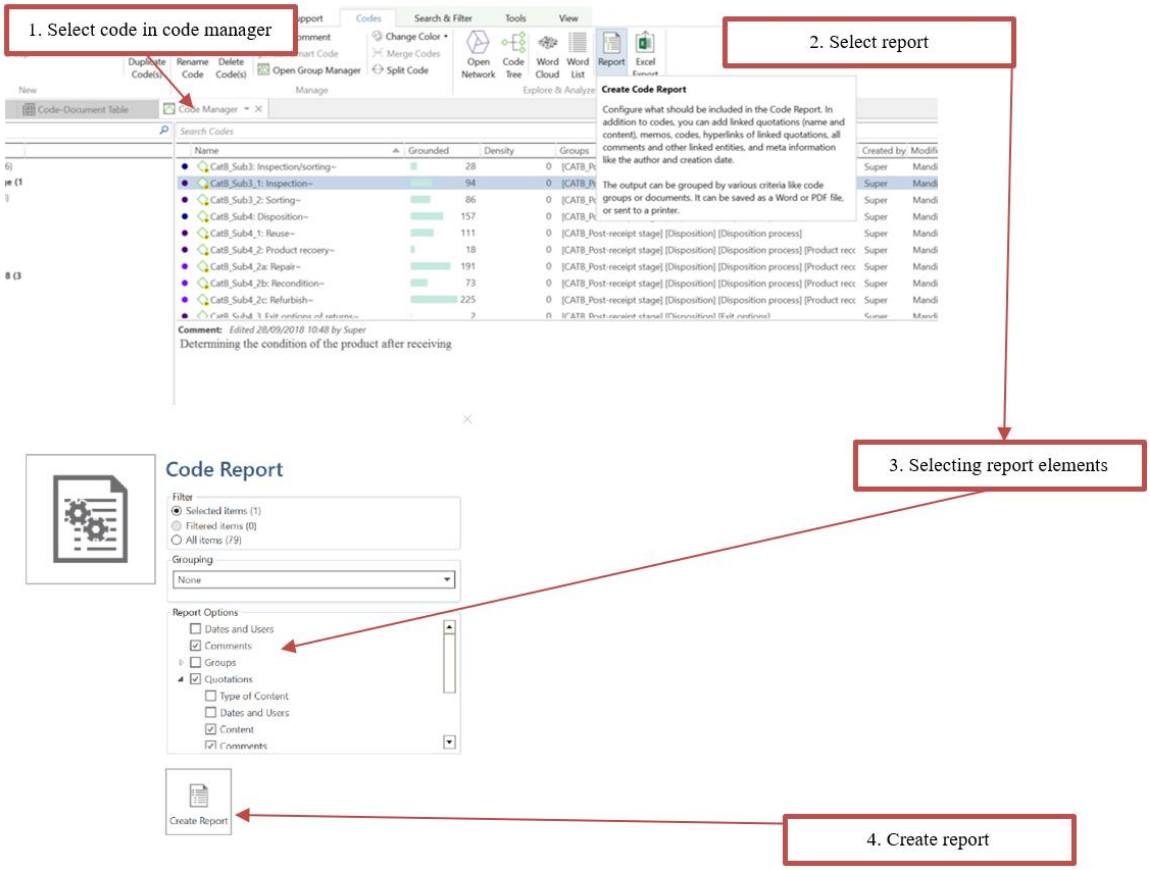
A1 Codes

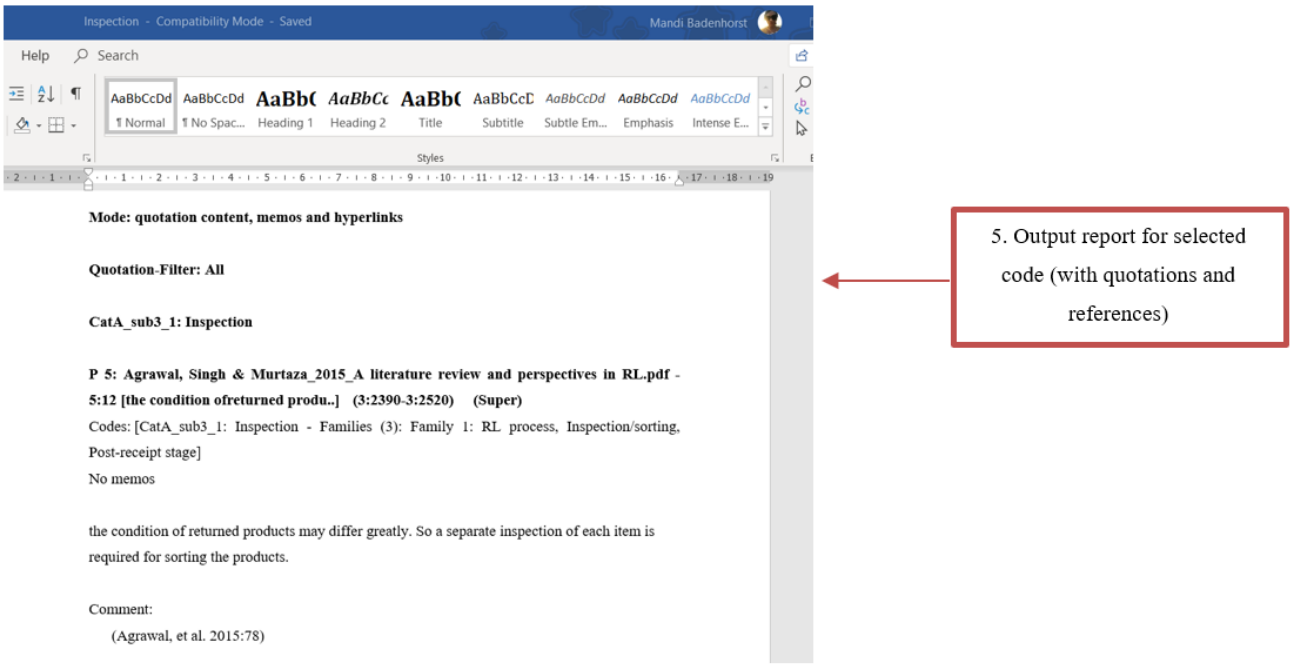
	A	B	C	D	E	F	G	H	I
1	**Codes**	**Abraham_2011_ The apparel aftermarket in india case study focus on RL.pdf** Gr=45	**Achillas, Vlachokostas, Aidonis, Moussiopoulos, Iakovou & Banias_2010_Optimising rl network to support policy making.pdf**	**Agrawal, Singh & Murtaza_2016c_ Outsourcing decision in rl sustainable balance scorecard.pdf** Gr=27	**TOTAL** Gr=4727; GS=305	**Totals**			
2	• **CatA_Sub2: Gatekeeping process** Gr=33	0	0	0	33	33			
3	• **CatA_Sub3: Collection** Gr=133	1	0	2	133	136			
4	• **CatA_Sub4: Transportation of return** Gr=108	2	3	0	108	113			
5	**CATA_Pre-receipt stage** Gr=285; GS=6	3	3	3	285	294			
6	**Totals**	6	6	5	559	576			

4. Excel output to facilitate analysis

(See section **Error! Reference source not found.** for the discussion of using code-document tables in ATLAS.ti for quantitative results)

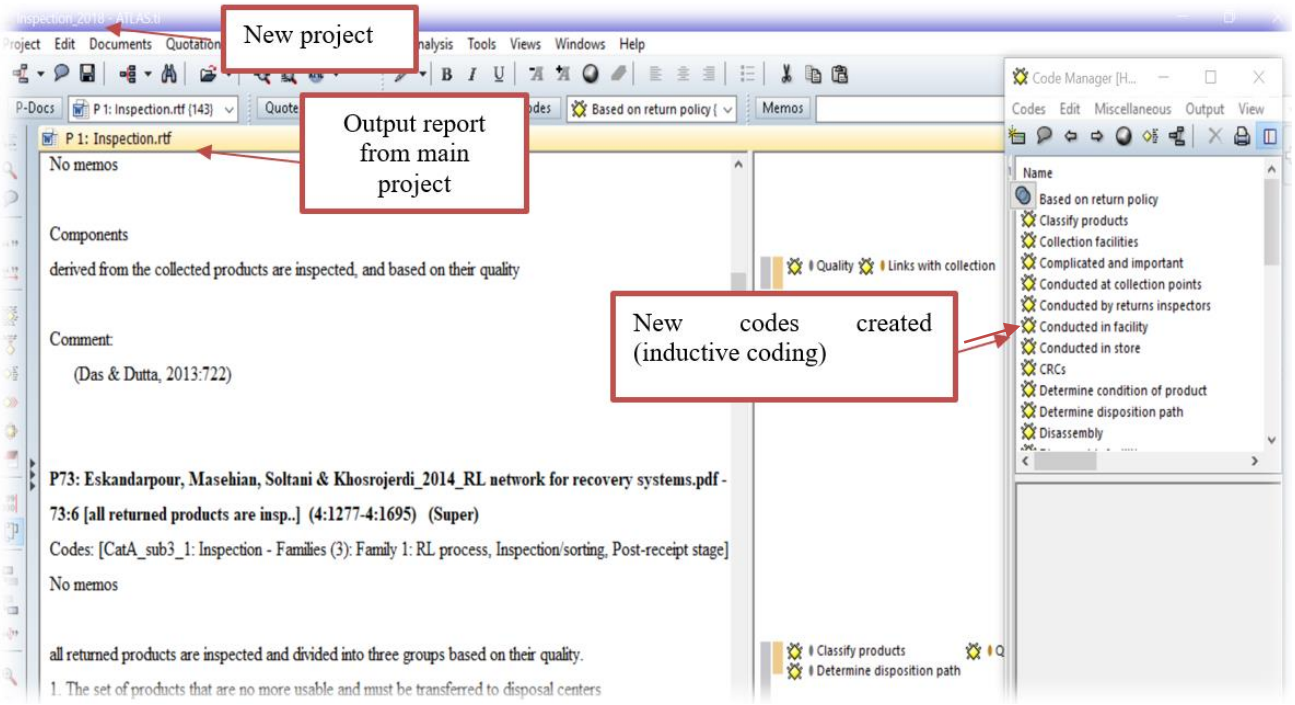
B.8 EXAMPLE OF CREATING CODE QUOTATION OUTPUT REPORTS FOR QUALITATIVE ANALYSIS





(See section **Error! Reference source not found.** for the discussion of creating a quotation output report for selected codes)

B.9 EXAMPLE OF INDUCTIVE CODING FROM CODE CATEGORIES



(See section 3.3.2.6.5 for the discussion related to inductive codings)

Appendix C QCA of RL literature results

C.1 CODE FREQUENCIES OF THE MAIN CATEGORIES FROM THE QCA OF RL LITERERATURE

The results shown in this section is the demographical information of the QCA on RL literature.

The results presented in the table are based on the Excel export function of ATLAS.ti for all the main categories identified in the coding frame (Appendix A.2) based on the research questions. The totals indicate the number of quotations (literature passages) in the content assigned to the main categories presented in the table. This table relates to figure 4.3 in chapter 4.

MAIN CATEGORY	FREQUENCIES
Types of consumer returns	149
Pre-receipt RL processes	288
Post-receipt RL processes	1224
RL practices	1730
Totals	3391

C.2 CODE FREQUENCIES OF PRE-RECEIPT PROCESS CATEGORIES FROM THE QCA OF RL LITERERATURE

The results presented in this table are based on the Excel export function of ATLAS.ti for all the code categories of pre-receipt RL processes identified in the coding frame (Appendix A.2). The totals indicate the number of quotations (literature passages) in the content assigned to the code categories presented in the table. This table relates to figure 4.5 in chapter 4.

CODE CATEGORIES	FREQUENCY
Customer return request	23
Gatekeeping process	33
Collection	130
Transportation	102
Totals	288

C.3 CODE FREQUENCIES OF POST-RECEIPT PROCESS CATEGORIES FROM THE QCA OF RL LITERERATURE

The results presented in this table are based on the Excel export function of ATLAS.ti for all the code categories of post-receipt RL processes identified in the coding frame (Appendix A.2). The totals indicate the number of quotations (literature passages) in the content assigned to the code categories presented in the table. This table relates to figure 5.3 in chapter 5.

CODE CATEGORIES	FREQUENCIES
Receiving	37
Inspection	93
Sorting	88
Processing	121
Disposition	835
Redistribution	50
Total	1224

Since the disposition process consisted of several sub-code categories, representing disposition options and exit options. The results presented in the following table are based on the Excel export function of ATLAS.ti for all the sub-code categories of the disposition processes identified in the coding frame (Appendix A.2). The totals indicate the number of quotations (literature passages) in the content assigned to the sub-code categories presented in the table. This table relates to figure 5.8 in chapter 5.

Disposition categories	Frequency
General disposition	155
Reuse	109
Repair	191
Refurbish	225
Exit options	155
Total	835

C.4 CODE FREQUENCIES OF RL PRACTICE CATEGORIES FROM THE QCA OF RL LITERERATURE

The results presented in this table are based on the Excel export function of ATLAS.ti for all the code categories of RL practices identified in the coding frame (Appendix A.2). The totals indicate the number of quotations (literature passages) in the content assigned to the code categories presented in the table. This table relates to figure 6.3 in chapter 6.

CODE CATEGORIES	TOTAL

IT practices	340
Integration practices	299
RL in/outsourcing	203
RL disposition practices	258
Performance measurement (PM)	150
Facility/location practices	183
Resource commitment (RC)	51
Financial management (FM)	70
Return prevention and avoidance (RPA)	66
Strategic planning and procedural (SPP)	56
Management and staff practices	54
Total	1730

Since the some of the practices consisted of several sub-code categories, the results presented in the following table are based on the Excel export function of ATLAS.ti for all the sub-code categories of the RL practices identified in the coding frame (Appendix A.2). The totals indicate the number of quotations (literature passages) in the content assigned to the sub-code categories presented in the table. This table relates to various figures in chapter 6.

PRACTICE	TOTAL
General IT	100
Internet or web-based	32
Traditional forward IT	72
RFID and barcode	100
RL technologies	36
Supply chain integration (SCI)	186
Customer integration (CI)	85
Cross-functional integration (CFI)	28
RL outsourcing	174
RL insourcing	29
RL disposition practices	258
Performance measurement (PM)	150
Facility/location practices	183
Resource commitment (RC)	51
Financial management (FM)	70
Return prevention and avoidance (RPA)	66
Strategic planning and procedural (SPP)	56
Management and staff practices	54

Total	1730

Appendix D – Interviews with industry expert data collection and analysis information

D.1 INTERVIEW PROTOCOL

Interview protocol and discussion guide during interviews with industry experts:

UNISA university of south africa

SEMI-STRUCTURED INTERVIEW PROTOCOL – DISCUSSION GUIDE

A FRAMEWORK FOR THE REVERSE LOGISTICS OF CONSUMER RETURNS IN ONLINE RETAILING

Dear participant

Thank you for your time and willingness to participate in this study. My name is Amanda Badenhorst and I am doing research with Orpha Cilliers, a professor in the Department Applied Management, towards a PhD in Management studies at the University of South Africa. The purpose of this interview is to determine the practices required for the effective management of reverse logistics for consumer returns in online retailing.

I would like for this interview, which will last for about 30 - 45 minutes, to be an open and informal discussion. The information will be regarded as strictly confidential. I assure you that your identity and your details will not be revealed in the findings of this study. If you feel uncomfortable with any of the questions, you have the right to opt not to answer that particular question. You may also stop the interview at any time, without providing a reason and with no consequences to you. May I record this interview for accuracy and quality purposes? This recording will only be used for the purposes of this study and will not be made available to any other third party.

I would to confirm that you have read the participant information sheet and signed the informed consent form to verify that you understand the purpose of this interview. Do you have any questions before we start?

MAIN QUESTIONS

A. INTERVIEWEE BACKGROUND

1. Can you please tell me more about your background and level of expertise in the field of reverse logistics?

Before we start with the questions, I just want to add that all the questions are applicable to the reverse logistics of consumer returns in online retailing. Therefore, I will not repeat the reverse logistics of consumer returns in online retailing and will only refer to the term reverse logistics where applicable.

B. OVERVIEW OF CONSUMER RETURNS IN ONLINE RETAILING

This section cover the reasons and types of consumer returns, the facilities used for consumer returns and the roles and responsibilities of the parties involved in the reverse logistics processes for consumer returns in online retailing.

1. The reasons and types of consumer returns in online retailing

1.1 Can you tell me more about the type of consumer returns in the online retailing industry?
1.2 In your opinion, what are the most common reasons for consumer returns and why?

2. Operation facilities used for the reverse logistics processes of consumer returns in an online environment

2.1 Can you tell me more about the reverse logistics processes and activities that take place in operational facilities?

3. The parties involved in the reverse logistics processes of consumer returns in an online environment

3.1 Can you please tell me more about the internal and external parties involved in reverse logistics?

C. REVERSE LOGISTICS PRACTICES FOR CONSUMER RETURNS IN ONLINE RETAILING

Included in this category are all the practices that may contribute to the effective management of reverse logistics. It also includes strategies and management decision-making. This category is broad since various practices can exist. The most important is that a practice clearly improves or contributes to the effective management of reverse logistics.

1. The information systems and technologies typically implemented to manage the reverse logistics processes of consumer returns in online retailing

1.1 In your opinion, what are the most important technologies and systems that online retailers can implement, to manage their reverse logistics for consumer returns? **Probe:** Can you explain why you say so?

1.2 Overall, do you think that the investment and use of information technologies for the management of reverse logistics for consumer returns are important practices for online retailers to consider?

1.2.1 **If yes,** why do you say so?
1.2.2 **If no,** why do you say so?

2. Internal/external integrations needed for the effective management of reverse logistics for consumer returns in online retailing

2.1 In your opinion, what are the typical supply chain integration strategies (such as information sharing and collaboration) that can be implemented for the effective management of reverse logistics? **Probe:** Can you tell me more about these integration strategies and why they are important?

2.2 In your view, how can online retailers achieve inter-departmental or cross-functional integration for the effective management of reverse logistics? **Probe:** Can you tell me more about these integration strategies and why they are important?

2.3 In your view, do you think that it is important for online retailers to consider "consumer integration" such as information sharing as an important practice?
If yes, why do you say so?
If no, why do you say so?

2.4 Overall, do you think that internal/external integrations are important practices for online retailers to manage their reverse logistics processes?
2.4.1 **If yes,** why do you say so?
2.4.2 **If no,** why do you say so?

3. Typical resources that online retailers use for the management of reverse logistics?
3.1 In your view, do you think that resource commitment (such as financial, human and infrastructure) is an important practice in the reverse logistics management for consumer returns in online retailing?
3.1.1 **If yes,** why do you say so?
3.1.2 **If no,** please explain to me why you feel this way?

4. Outsourcing to third parties as reverse logistics practices in online retailing?
4.1 In your opinion, is it a good practice to outsource the whole reverse logistics process or only specific reverse logistics activities?
4.1.1 **If yes,** why do you say so?
4.1.2 **If no,** can you explain why this is the case?
4.2 Can you tell me more about the specific reverse logistics activities that are normally outsourced and why?
4.3 Can you please tell me more about the typical third parties that online retailers can employ to manage their reverse logistics?

5. Disposition or recovery strategies (i.e. reuse, repair, return to manufacturer or sell to a third party) that should be considered by online retailers

5.1 In your opinion, what are the factors that influence disposition decisions and why?
5.2 In your view, should disposition decisions be part of the online retailer's strategic planning?
5.2.1 **If yes,** why do you say so?
5.2.2 **If no,** can you tell me why you feel this way?

6. Performance measurements that online retailers can use to determine their performance in reverse logistics?

6.1 In your opinion, do you think that it is important for online retailers to measure their performance in reverse logistics?
6.1.1 **If yes,** why do you say so?
6.1.2 **If no,** can you tell me why you feel this way?
6.2 In your opinion, what are the most important performance metrics (such as costs, quality and time) that online retailers should use and why?

7. Operational facilities and/or location strategies in reverse logistics?

7.1 In your opinion, do you think that centralised operation facilities are better than decentralised facilities for reverse logistics? **Probe:** Why do you say so?
7.2 In your view, do you think that online retailers should use their traditional forward logistics facilities (such as warehouses) for reverse logistics activities?
7.2.1 **If yes,** why do you say so?
7.2.2 **If no,** why do you think it is better to separate the facilities?
7.3 What are some of the factors that influence online retailer's facility/location strategies in reverse logistics? **Probe:** Why do you say so?

8. Staff and managerial practices needed for the effective management of reverse logistics in online retailing

8.1 In your opinion, do you think that online retailers should appoint a dedicated manager and/or create a separate function for their reverse logistics?
8.1.1 **If yes,** why do you say so?
8.1.2 **If no,** why do you feel this way?
8.2 In your view, do you belief that training is needed for staff involved in reverse logistics?
8.2.1 **If yes,** why do you say so?
8.2.2 **If no,** why do you feel this way?

9. Cost and accounting systems used for reverse logistics?

9.1 In your opinion, what are the typical reverse logistics costs for online retailers? **Probe:** Can you tell me more about each of these costs?
9.2 In your opinion, should online retailers use their normal accounting systems to manage their reverse logistics cost?
9.2.1 **If yes,** why do you say so?
9.2.2 **If no,** why do you feel this way?

D. CONCLUSION

Do you have anything to add to our discussion, that you belief is important in the reverse logistics management for consumer returns in online retailing?

Do you know of any other individual/s that qualify to participate in this study? Do you want to a summary of the findings once the research has been published?

Please feel contact me if you can think of anything else you would like to share with me regarding the study.

Thank you for taking the time out of your busy schedule to meet with me. You have been very helpful.

D.2 INTERVIEW QUESTIONS CHECKLIST

Checklist used to structure the interview protocol for the interviews with industry experts.

Aspects of an Interview Protocol	Y	N	Feedback for Improvement
Interview Protocol Structure			
Beginning questions are factual in nature			
Key questions are majority of the questions and are placed between beginning and ending questions			
Questions at the end of interview protocol are reflective and provide participant an opportunity to share closing comments			

A brief script throughout the interview protocol provides smooth transitions between topic areas			
Interviewer closes with expressed gratitude and any intents to stay connected or follow up			
Overall, interview is organized to promote conversational flow			
Writing of Interview Questions & Statements			
Questions/statements are free from spelling error(s)			
Only one question is asked at a time			
Most questions ask participants to describe experiences and feelings			
Questions are mostly open ended			
Questions are written in a non-judgmental manner			
Length of Interview Protocol			
All questions are needed			
Questions/statements are concise			
Comprehension			
Questions/statements are devoid of academic language			
Questions/statements are easy to understand			

Source: Castillo-Montoya (2016:825)

D.3 RECRUITMENT OF INDUSTRY EXPERTS: EXAMPLES

- *SAPICS RECRUITMENT COMMUNICATION EXAMPLES*

Interview call from SAPICS to members via email

From: Elaine Andrews <Elaine@sapics.org.za>
Sent: Thursday, July 23, 2020 10:26 AM
To: Elaine Andrews <Elaine@sapics.org.za>
Cc: Badenhorst, Mandi <Badena@unisa.ac.za>
Subject: [EXTERNAL] Invite to participate in a Phd in Management studies at the University of South Africa

Dear SAPICS Community Member

You have been selected to participated in a study being conducted by one of our members who is a Senior Lecturer at UNISA.

Mandi Badenhorst would great appreciate your contribution to a study entitled ***a framework for the reverse logistics management of consumer returns in online retailing***.

If you are willing and able, please contact Amanda Badenhorst | badena@unisa.ac.za directly.

Thank you
Elaine

My name is Amanda Badenhorst and I am doing research with Orpha Cilliers, a professor in the Department of Applied Management towards a PhD in Management studies at the University of South Africa. We are inviting you to participate in a study entitled **a framework for the reverse logistics management of consumer returns in online retailing.**

I am conducting this research to determine the processes, policies and practices for the effective management of reverse logistics with a focus on consumer returns in the online retailing industry. The aim of this study is to develop a framework for the effective management of reverse logistics focusing on consumer product returns in online retailing. This study is expected to collect important information that could guide online retailers to review policies, manage processes, and implement appropriate practices in terms of the reverse logistics management for consumer returns.

You are invited to participate in this study due to your knowledge of reverse logistics management. Therefore, you are either an owner/CEO/manager of an organisation that specialises in reverse logistics as a service for online retailers or you have managerial experience in the reverse logistics processes of online retailing.

The study involves semi-structured remote interviews with the options of telephone, Skype or Microsoft Teams, which will be audio recorded. If you agree to participate in this study, you will receive an interview protocol to familiarise yourself with the questions that will be asked during the interview. The questions will cover the reverse logistics practices for consumer returns in online retailing. The interview is expected to last approximately 30 minutes and will take place in the months of August and September 2020.

This study has received written approval from the Research Ethics Review Committee of the College of Economic and Management Science, Unisa. A copy of the approval letter can be obtained from the researcher if you so wish. Participating in this study is voluntary and you are under no obligation to consent to participation. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a written consent form. You are free to withdraw at any time and without giving a reason.

Attached to this email is a participant information sheet containing details of the study. I kindly request that you respond to this email informing me if you are willing or unwilling to participate in this study. Your agreement to participate would be greatly appreciated, since your participation could contribute significantly to the reverse logistics management for consumer returns in the online retailing industry.
If you agree to take part in this study, you will be asked to sign an informed consent form. In addition, you will also be asked to choose between a telephonic interview, Skype interview or Microsoft Teams inteview. You can also choose the interview time and date between August and September 2020 that will suit you.

It would be greatly appreciated if you would forward this invitation to two (or more) contacts in your network whom fulfil the criteria of this study. Thank you for taking time to read this information and for considering participating in this study. Your time and inputs are most valued!

Kind regards,

Follow-up to respondent from SAPICS example

Badenhorst, Mandi

From: Badenhorst, Mandi
Sent: Thursday, 23 July 2020 11:29
To: [redacted]
Attachments: RE: Invite to participate in a Phd in Management studies at the University of South Africa
A_Badenhorst_PARTICIPANT INFORMATION SHEET_2020.pdf; A_Badenhorst_Interview Protocol 2020.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Dear [redacted].

Thank you for your willingness to participate.

Kindly find the interview protocol and participation sheet attached. If you are an industry expertise or have knowledge and skill in the field of reverse logistics management, I will appreciate your contribution to the development of a framework for the reverse logistics management of consumer returns in online retailing.

Once you have read through attached documents and signed the declaration you can choose, a date and time in August/September and the interview method (telephone, Microsoft Teams or Skype) that will suit you.

It would be greatly appreciated if you would forward this invitation to two (or more) contacts in your network whom fulfil the criteria of this study. Thank you for taking time to read this information and for considering participating in this study. Your time and inputs are most valued!

Feel free to contact me, if you have any other questions.

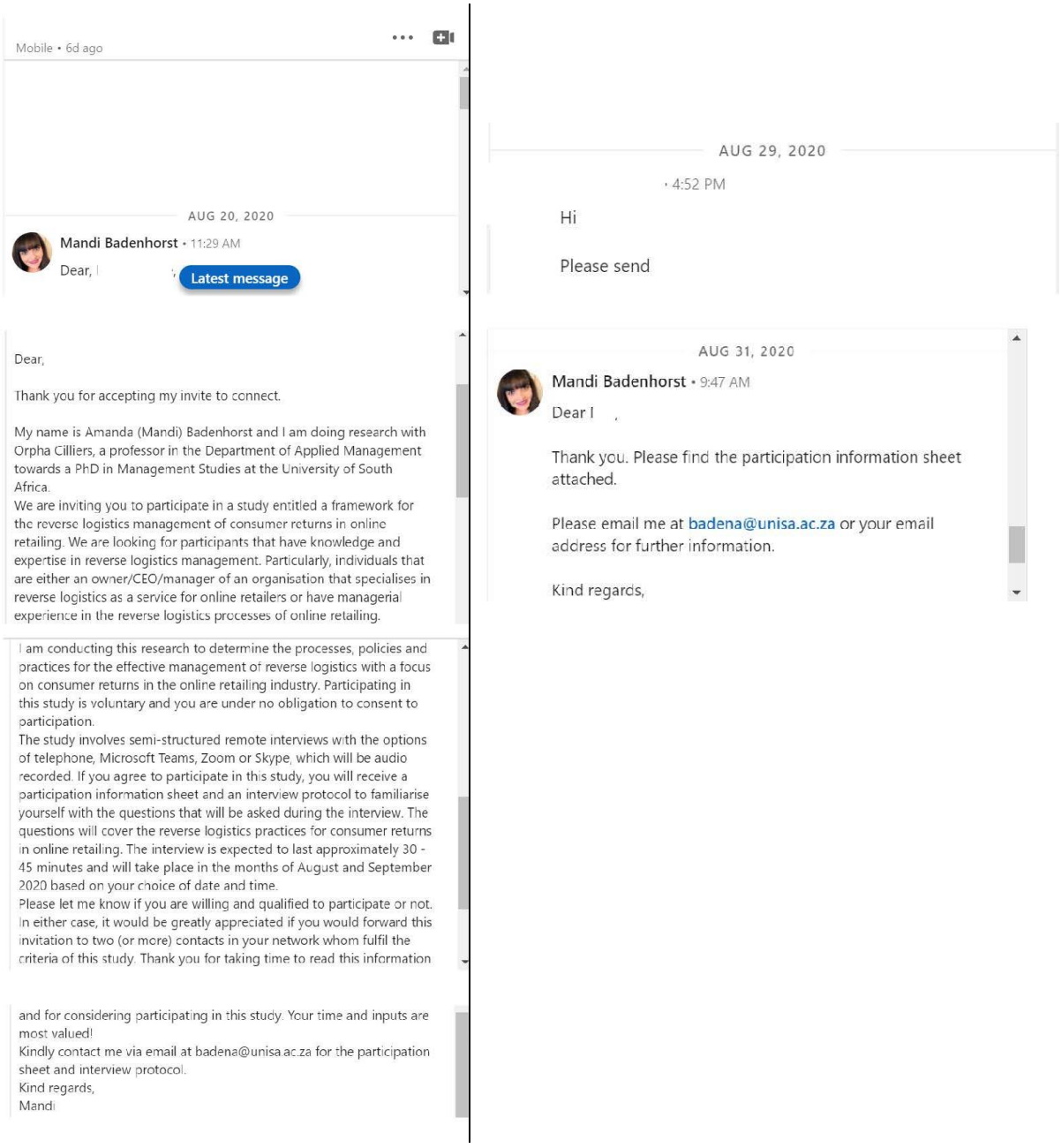
Kind regards,

UNISA university of south africa

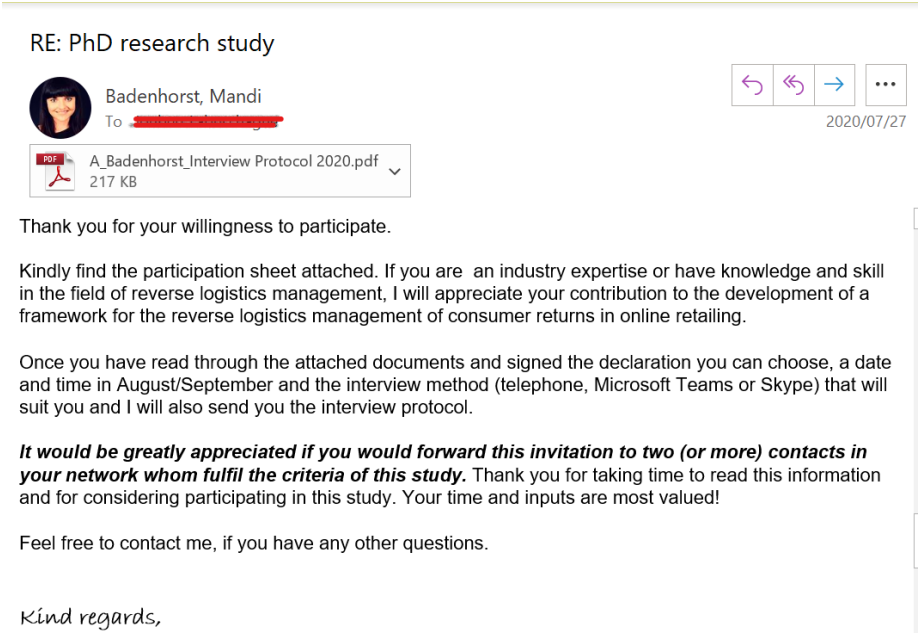
Ms Mandi Badenhorst

- *LINKEDIN RECRUITMENT COMMUNICATION EXAMPLES*

Sample call to participate message on LinkedIn: (Name redacted to protect the privacy of the individual).



Follow-up message via email to respondent from LinkedIn



RE: PhD research study

Badenhorst, Mandi
To [redacted]

2020/07/27

A_Badenhorst_Interview Protocol 2020.pdf
217 KB

Thank you for your willingness to participate.

Kindly find the participation sheet attached. If you are an industry expertise or have knowledge and skill in the field of reverse logistics management, I will appreciate your contribution to the development of a framework for the reverse logistics management of consumer returns in online retailing.

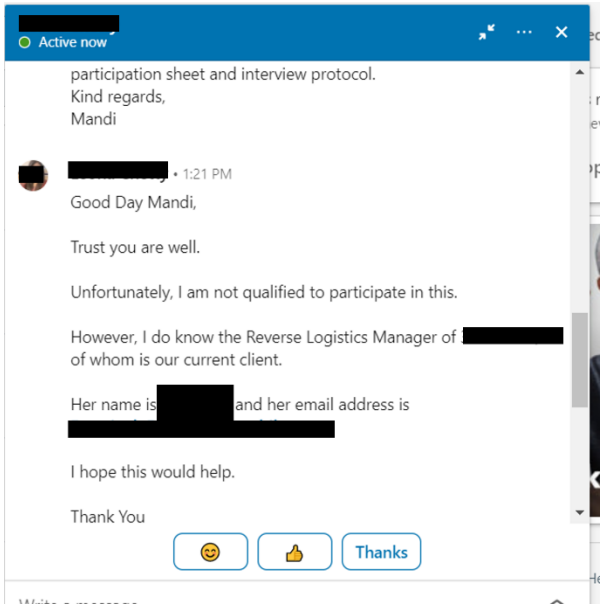
Once you have read through the attached documents and signed the declaration you can choose, a date and time in August/September and the interview method (telephone, Microsoft Teams or Skype) that will suit you and I will also send you the interview protocol.

It would be greatly appreciated if you would forward this invitation to two (or more) contacts in your network whom fulfil the criteria of this study. Thank you for taking time to read this information and for considering participating in this study. Your time and inputs are most valued!

Feel free to contact me, if you have any other questions.

Kind regards,

Example of snowball referral from LinkedIn



[redacted]
Active now

participation sheet and interview protocol.
Kind regards,
Mandi

[redacted] • 1:21 PM
Good Day Mandi,

Trust you are well.

Unfortunately, I am not qualified to participate in this.

However, I do know the Reverse Logistics Manager of [redacted] of whom is our current client.

Her name is [redacted] and her email address is [redacted]

I hope this would help.

Thank You

Thanks

- *GOOGLE RECRUITMENT COMMUNICATION EXAMPLES*

Sample email to organisations – Name redacted for privacy purposes

Badenhorst, Mandi

From: Badenhorst, Mandi
Sent: Monday, 27 July 2020 10:08
To: .co.za
Subject: PhD study assistance

Good day,

My name is Amanda (Mandi) Badenhorst and I am doing research with Orpha Cilliers, a professor in the Department of Applied Management towards a PhD in Management Studies at the University of South Africa. We are inviting you to participate in a study entitled **a framework for the reverse logistics management of consumer returns in online retailing.** I am conducting this research to determine the processes, policies and practices for the effective management of reverse logistics with a focus on consumer returns in the online retailing industry.

I am looking for potential participants that are either an owner/CEO/manager of an organisation that specialises in reverse logistics as a service for online retailers or individuals with managerial experience in the reverse logistics processes of online retailing.

The study involves semi-structured remote interviews with the options of telephone, Skype or Microsoft Teams, which will be audio recorded. The questions will cover the reverse logistics practices for consumer returns in online retailing. The interview is expected to last approximately 30 minutes and will take place in the months of August and September 2020.

This study has received written approval from the Research Ethics Review Committee of the College of Economic and Management Science, Unisa. A copy of the approval letter can be obtained from the researcher if you so wish. Participating in this study is voluntary and you are under no obligation to consent to participation. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a written consent form. Participants are free to withdraw at any time and without giving a reason.

I will appreciate it if you can forward my invite to any members in your organisation whom fulfil the criteria of this study, or individuals that can send my official call to participate to the members of your organisation.

Your time and inputs are most valued!

Kind regards,

UNISA university of south africa

1

D.4 INTERVIEW PREPARATION PROCEDURES

- *SAMPLE EMAIL TO PARTICIPANTS FOR SCHEDULING THE INTERVIEWS*

From: "Badenhorst, Mandi" <Badena@unisa.ac.za>
Date: Friday, 31 July 2020 at 14:07
T [redacted]
Subject: Participation in PhD follow up

Dear [redacted]

This email serves as a reminder to confirm your participation in the PhD study, titled *a framework for the reverse logistics management of consumer returns in online retailing.*

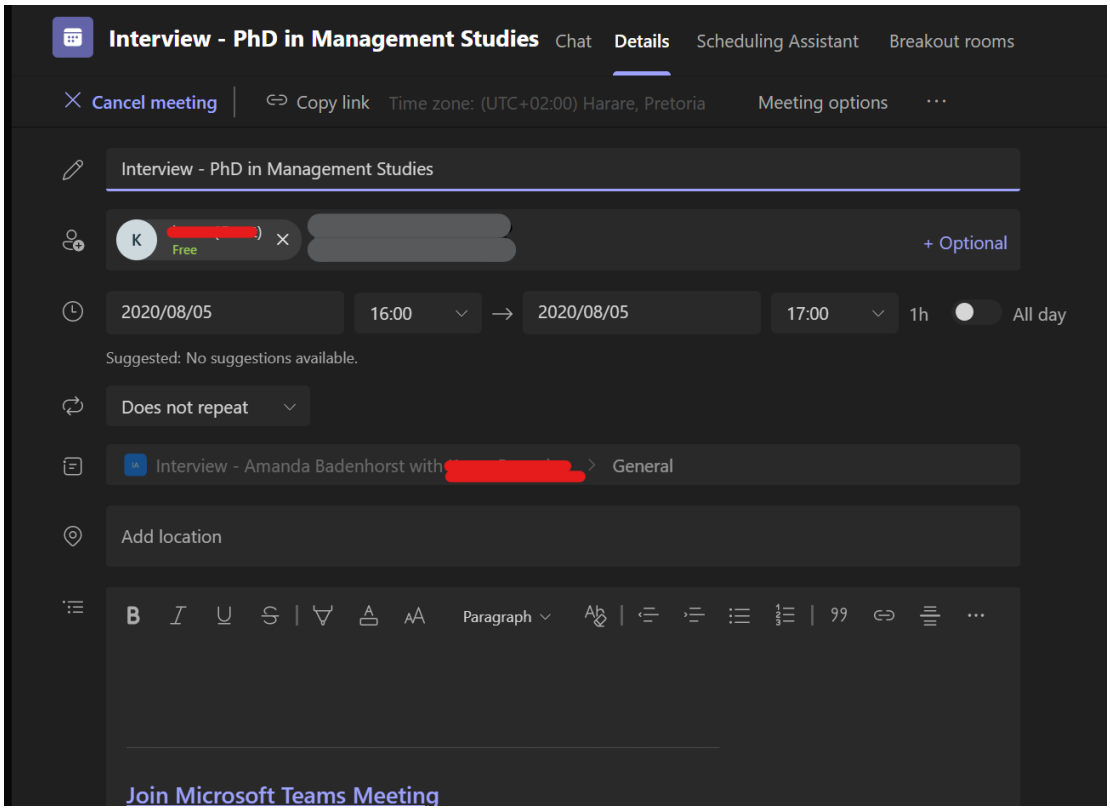
Can you kindly let me know the date (in August/September), time and interview platform (Microsoft Teams, Skype or Telephone) that will suit you?

Additionally, please sign the informed consent form, if I have not received it. Please remember that this study is voluntary, and you can withdraw at any time before or during the interview.

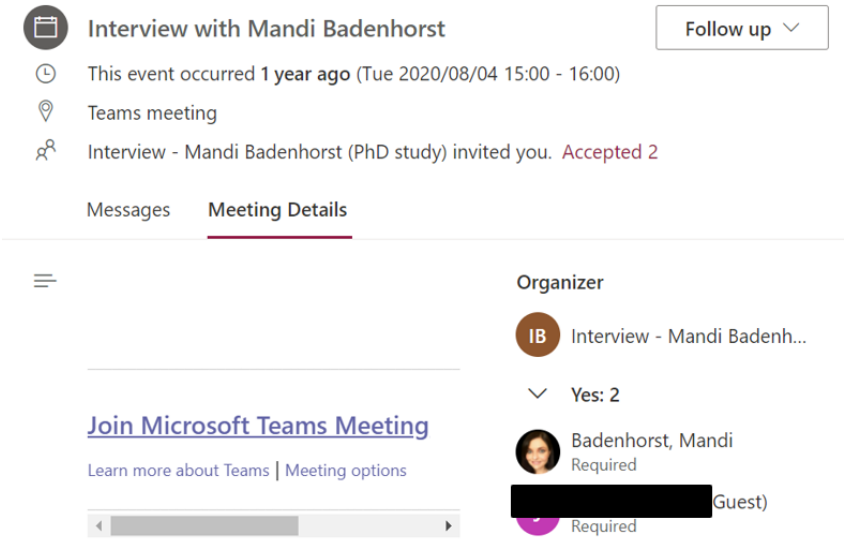
For your convenience I am attaching the informed consent form, participation information sheet and interview protocol.

Thank you again for your valuable time, it is genuinely appreciated.
Looking forward to your response.

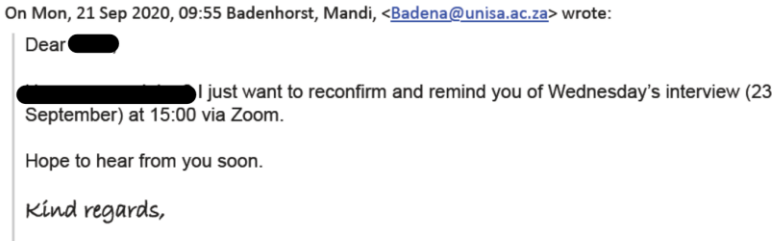
- *EXAMPLE OF SCHEDULING TOOL IN MICROSOFT TEAMS*



- *INTERVIEW SCHEDULING INVITE*

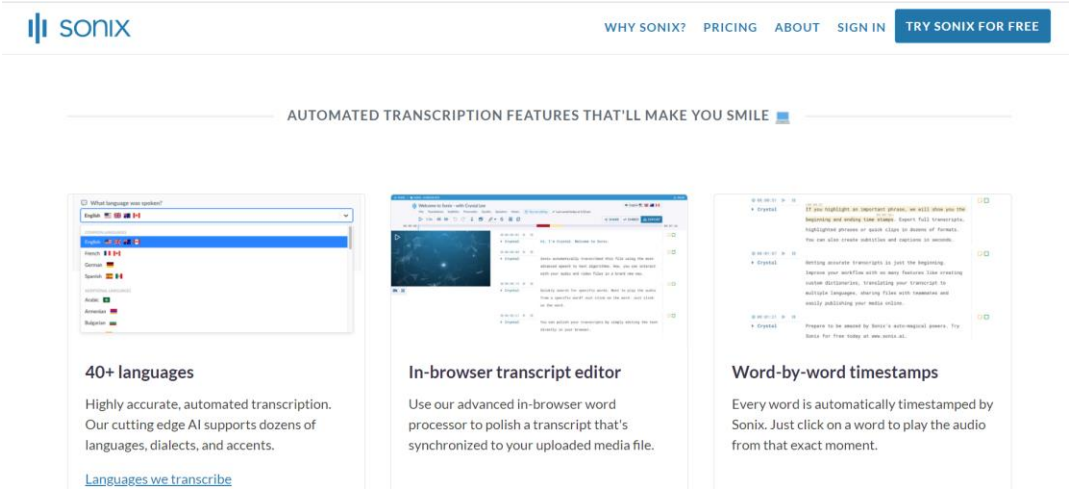


- *CONFIRMATION EMAIL SAMPLE*



D.5 PHASE 1 – TRANSCRIPTION INFORMATION

INFORMATION ON TRANSCRIPTION SERVICE USED TO TRANSCRIBE INTERVIEW RECORDINGS



Speaker labeling

Every paragraph represents a new speaker. Easily label who said what with our speaker dropdown.

Automated diarization

Sonix will automatically identify speakers and separate exchanges into different paragraphs.

Upload with existing transcript

Already have a transcript? Upload the transcript and media file to Sonix and we'll stitch the audio to your existing transcript.

Notes and commenting

Easily add your notes or comment directly in your transcript.

Text exports (DOCX, TXT, PDF)

Flexible exporting of the text in your transcript in either Microsoft Word, TXT, or PDFs and many other formats.

Subtitle exports (SRT, VTT)

Download your transcript in the most popular subtitle formats (SRT & VTT).

Custom dictionary

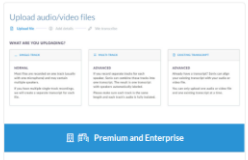
Add specific words and phrases to your own custom dictionary. We'll prioritize these words when transcribing.

Multiple custom dictionaries

Set up multiple dictionaries for different content or clients. Then, choose them during upload.

Automated timecode realignment

After polishing your transcript, perfectly realign your transcript with the audio.



Multitrack uploads

Upload multiple tracks and Sonix will combine them into one transcript with the speakers automatically labeled.

SECURE STORAGE?

Yes. Enterprise-grade.

Enterprise-grade storage for all of your sensitive transcripts and media files.

SECURE IN TRANSIT?

SSL Secured

Bank-level, SSL-secured data transfers to protect your media and transcripts.

SECURE LOGIN?

Two-factor authentication

For extra security, enable two-factor authentication to ensure your account's safety.

WHY SONIX?

The world's best

Sonix is consistently reviewed as the best automated transcription software.

SONIX IS A SECURE, FLEXIBLE WORKSPACE FOR ALL OF YOUR MEDIA FILES

Secure file storage

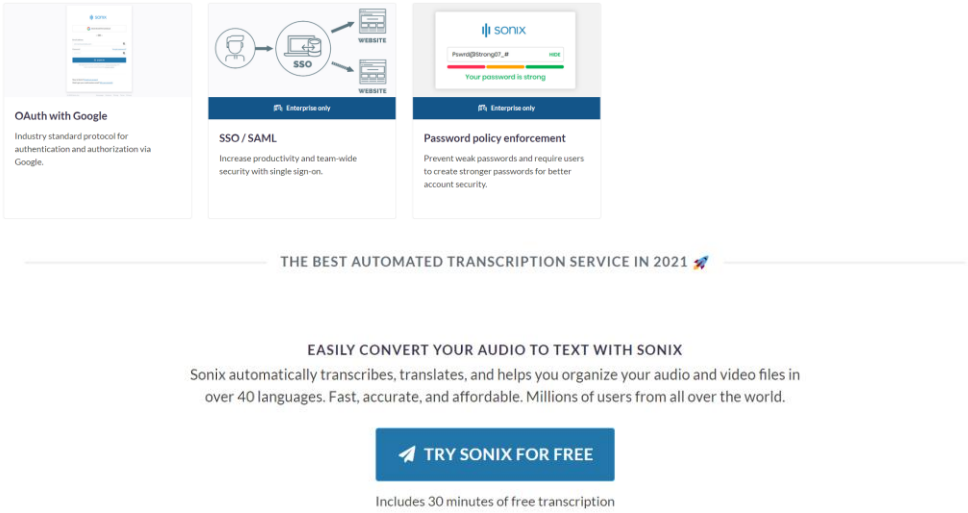
All your data is safe and secure with Sonix. Enterprise-grade security for all users and their files.

SSL & at-rest encryption

Your data is protected at rest and in transit. We use bank-level SSL certificates and encryption algorithms.

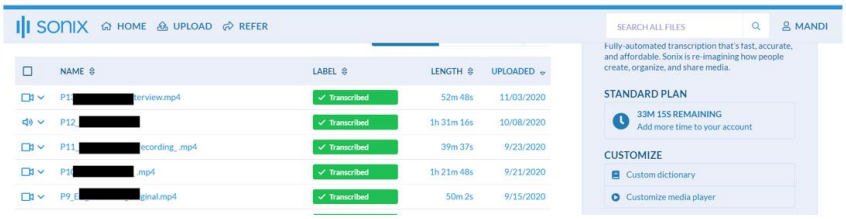
Two factor authentication

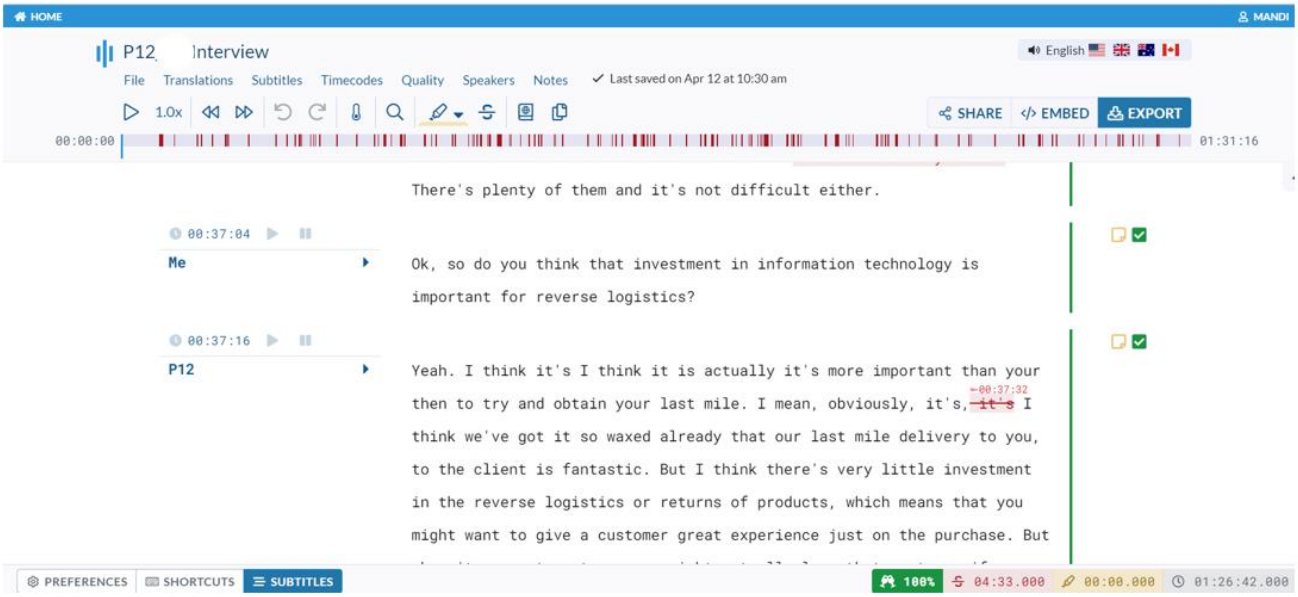
Six-digit security code generated by your phone required to log into your account.



(See https://sonix.ai/)

EXAMPLE OF TRANSCRIPTION OF INTERVIEWS WITH INDUSTRY EXPERTS

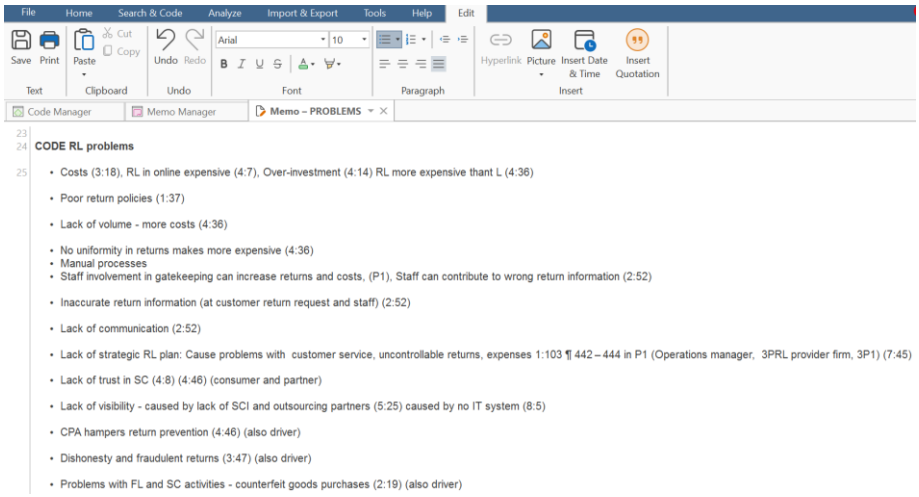




D.6 PHASE 2 – GENERATING CODES

NOTES ON INDUCTIVE CODES

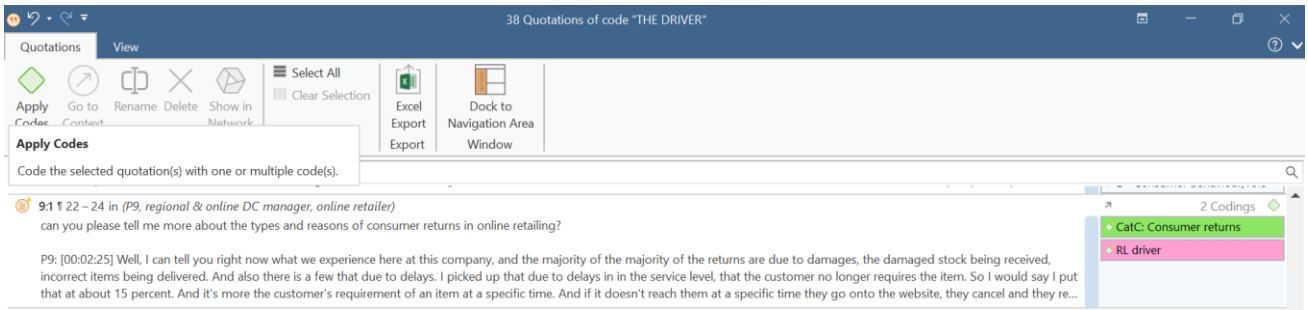
Example applicable to section 7.3.8.3.2, which focuses on commenting on inductive codes during the second coding round.



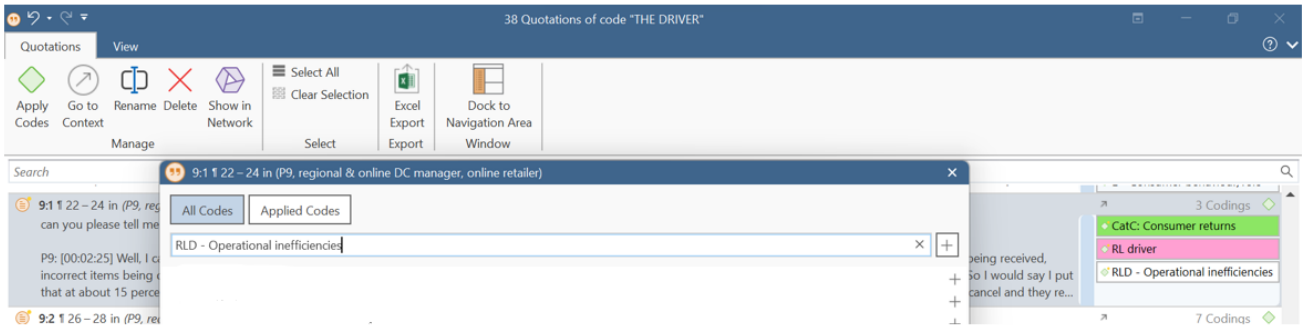
- *EXAMPLES OF RECODING BROAD CODES IN ATLAS.TI*

Example applicable to section 7.3.8.3.2

- Double clicking on the code RL driver in ATLAS.ti:



- Adding new inductive codes to the quotation initially coded with the broad code RL driver



- *PHASE 2 - FINAL CODING FRAME*

Deductive codes from QCA for descriptive analysis, and inductive code categories and codes.

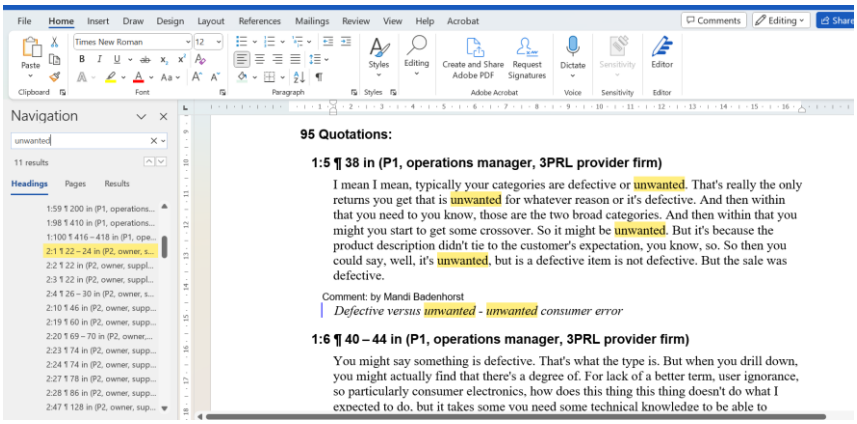
CODES	DESCRIPTION
Deductive codes	Codes applied to the descriptive analysis
Customer return request	This is the process where the customer notifies the organisation of a product return. This can include any content regarding the processes a customer can follow to notify a firm.
Gatekeeping process	A function where the organisation decides a return is accepted or not. The focus on gatekeeping in this part is the elements that explain the physical process of gatekeeping and not the outcomes of successful or poor gatekeeping abilities. Also added to this could be the RMA process.
Collection	This is a process where the item is moved back from the customer to the facility. The focus here is on the physical process and not strategies or decisions regarding collection.
Transportation of return	This involves the physical movement of products to the facilities. Transportation decisions or strategies will not be included in this category.
Receiving	This involves processes where the returned product arrives at the facility and unloading the products and assigning it to sorters or inspectors
Processing	Can involve issuing credit to customers, data entry regarding the condition of the returns, also which treatment options should the firm follow.
Inspection	Determining the condition of the product after receiving
Sorting	Where the returned products are placed into categories, defective or non-defective. This process will also result in determining which disposition option would be followed.
Disposition	Considered the most important process in RL. This process involves several options to decide the fate of returned products. The options can be reuse, recovery and other exit options. Excluded from disposition (for study) is material recovery, remanufacturing and waste disposal.
DISP - Reuse	Reuse entails reusing or reselling the returned product in its current condition.
DISP - Repair	Repair involves the work of fixing and replacing malfunctioning components of a product in order to restore the existing used product to a working order (Khor & Udin, 2012: 7).
DISP - Refurbish	Refurbishing involves the replacement of some parts and upgrading the key components of the returned product (Gandolfo & Sbrana, 2008: 33).
DISP - Exit options of returns	These other alternatives for product disposition, where retailers mostly shift the responsibility for product recovery to other supply chain parties or due to product condition using alternative markets to sell product returns.
DISP - Sell on secondary market	This is where the organisation chooses a route that is outside its normal market. For instance, eBay, factory stores and clearance stores.
DISP - Ship to vendor	This is where the organisation decides to ship the product back to the manufacturer/supplier.
DISP - Sell to third party	This is where the organisation decides to sell the product to a third-party buyer (such as a jobber)
Consumer returns	Returns between end users and retailers (excludes distribution returns and manufacturing returns)
CR - General consumer returns	Included in consumer returns are B2C commercial returns, service returns, end-of-use returns, warranty returns and recalls. Excludes end-of-life returns.
CR - Miscellaneous types of returns	These will include types of returns that falls outside any of the other return categories

Inductive codes	Codes applied to theme development and reflexive analysis
RL Benefits and importance of RLM	Any benefits derived from RL practices and any reference to the significance of RLM
RL Drivers	Drivers of product returns
RLD - Lenient returns	Can include practices to encourage returns, no-question asked return acceptance, no gatekeeping, limited return conditions
RLD - Operational inefficiencies	Can include defective manufacturing and poor procurement, FL inefficiencies that contribute to returns and RL inefficiencies that contribute to returns
RLD - Fraudulent behaviour	Anything related to fraudulent return behaviour from consumers
RLD - Online shopping practices	Includes poor pictures, descriptions or a lack of guides that can lead to returns
RLD - Management inefficiencies	Internal management practices that can increase returns
RL Problems	Extending the drivers and include problems that lead to ineffective or poor RLM, poor RL process and problems that impact customer service
RLP - Communication problems	Poor communication between parties in RL
RLP - Cost-related problems	Associate with high costs, cost inefficiencies, poor cost management and poor accounting
RLP - Party-related problems	Problems in party relationships, e.g. distrust and poor integration
RLP - Poor RLM	Involves lack of planning, lack of resources, lack of strategies and procedures, ineffective decision-making and management inattention
RLP - IT problems	Poor systems and manual operations
RLP - Inefficiencies in the return process	Any problems related to return processes that can cause
Resources and investments	Any resources and investment requirements needed for effective RLM
RI - human resources and investment	Human resources needed for RLM, can include training and development of staff
RI - IT and infrastructure investment	IT resources needed for RLM
RI - Financial resources	Financial resources needed for RLM
Measurement and control	Measuring performance for effective RLM
MC - Measuring staff performance	Any practices related to measure staff performance for RLM
MC - Measuring SC performance	Any practices related to measure SC performance for RLM
MC - Measuring customer service performance	Any practices related to measure customer service performance for RLM
MC - Functional control	Any practices that help control the RL function
MC - Operational control	Practice related to control RL processes
MC - Product/brand control	Any practice that helps control over product returns and brand image of online retailer
MC - Policies and procedures	Any policies and procedures that help with RLM, including return policies, return strategies and SOPs
Centralisation	Can be centralised facilities or anything related to centralisation for RLM
Decentralisation	Can be decentralised facilities or anything related to decentralisation for RLM
Outsourcing RL	Any outsourcing practices for RLM
OUT - Decision factors in outsourcing	Factors for effective outsourcing decisions
OUT - Options	Outsourcing options that online retailers can consider for RLM
OUT - Reasons	Reasons for outsourcing RL
Information and communication	Any practices related to information and communication needed for RLM
IC - Information	Any practices that help to manage information for RLM

management	
IC - Information sharing between parties	Practices that enable effective information sharing
IC - IT types	Types of IT that can be used for RLM
IC - Visibility	Practices that enhance transparency and visibility in the return process
RL Relationships	Any practices that help improve party relationships for effective RLM
RLR - Internal relationships	Practices that help internal relationships and integration between functions
RLR - SC relationships	Practices that help SC relationships and integration
RLR - Consumer relationships	Practices that help consumer relationships and integration
Consumer-centricity	Any practices that focus on customer satisfaction, service and retention for RLM
CC - Consumer-centric RL processes	Any practices related to RL processes that can lead to satisfaction
CC - Consumer-centric returns	Any practices related to lenient returns
CC - Consumer expectations	Practices to identify consumer expectations
CC - Consumer trust	Practices to enhance consumer trust
CC - Consumer experience	Practices to enhance consumer return experiences
Reduce returns	Practices that prevent high or fraudulent returns
RR - Operational improvements	FL and RL operational improvements for return reduction
RR - Investigate returns	Practices to identify the reasons or causes for returns
RR - Gatekeeping function	Practices related to gatekeeping and inspection to prevent returns
RR - Online store improvements	Online shopping practices that can reduce returns, e.g. product descriptions, videos and photos
Cost reduction and management	Any practices related to cost for the effective RLM of consumer returns
CRM - Cost savings	Any practice to save costs
CRM - Cost identification	Any practice to identify cost for RLM
CRM - Cost avoidance	Any practice that can avoid or prevent costs
CRM - Cost management and accounting	Any practice that helps manage costs
CRM - Financial recovery	Any practice related to recovery of costs, can include product recovery and disposition practices

- *DESCRIPTIVE ANALYSIS EXAMPLES*

Example of keyword search to compare QCA with interview findings discussed in section 7.3.8.3.3



Examples of comparing the interview and QCA findings, using the data tables from chapters 4 and 5

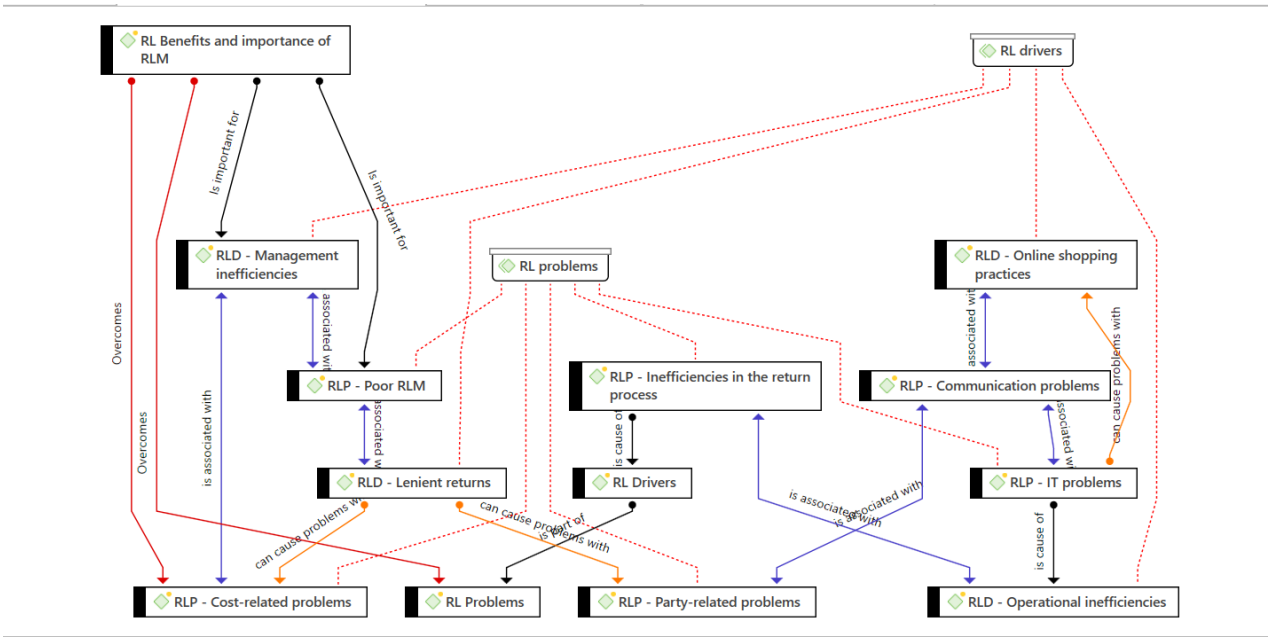
CATEGORY	SUBCATEGORY	KEY QUOTATIONS QCA	KEY QUOTATIONS INTERVIEWS
Product condition	• ***Defective upon arrival***	• *"Defective […] product was inoperable at first use." (Genchev 2009:146)* • *"[…] failure of new products […]." (Jena & Sarmah, 2015:822)*	• *"An example might be I might use reasons for returns such as […] dead-on-arrival […]." (P12, Head of logistics, online retailer)*
Consumer error/fault return reasons (push returns)	• ***Order errors*** • ***False failures*** • ***Problems experienced with products*** • ***Buyer's remorse/ change of mind*** • ***Dissatisfaction*** • ***Unwanted***	• *"Other reasons stated for customer returns include wrong products ordered."* (Li & Olorunniwo 2008:385) • *"Most products are returned not because they are defective or damaged, but for other reasons such as […] the wrong product was ordered in the first place."* (Olorunniwo & Li, 2011:4) • *Many customers could not operate the equipment and therefore returned the product as faulty." (*Bernon & Cullen, 2007:48*)* • *"[…] most product returns are in perfect working order– that is they have no defects. These returned products are commonly referred to as false failure returns and they constitute more than two-thirds of all returns." (*Ruiz-Benítez *et al.* 2014:54) • *"A major reason for returns was the difficulty that customers experienced with the instructions provided with the products."* (Bernon & Cullen, 2007:48) • *"[…] problems with item descriptions, installation, or instructions; […]."* (Bower & Maxham, 2012:114) • *"[…] customers return the products for several reasons, for example […] the customers are unhappy with the functionality of the product […]."* (Gonçalves & Silva, 2016:71) • *"[…] variety of reasons including buyer's remorse […]."* (Bernon *et al.* 2011:491) • *"Marketing-related causes for returns must also be addressed, including […] customers who change their mind after the initial purchase".* (Genchev, 2009:140) • *"[…] consumer-induced returns (e.g., customer changed mind, did not like the product after seeing it, did not like styling)."* (Mollenkopf *et al.* 2007:242) • *"Most products are returned not because they are defective or damaged, but for other reasons such as […] the customers changing their minds […]."* (Olorunniwo & Li, 2011:4) • *"[…] most common reasons for product returns were […] change of mind […] and regret about buying impulsively."* (Seo *et al.* 2015:2) • *"[…] customer is not satisfied with the product's quality."* (Li *et al.* 2013:453) • *"After receiving and trying the product, the customer may feel that it does not match its expectations, and then decide to return back the product."* (Yang *et al.* 2015:363) • *"[…] customers decide to return an unwanted item."* Rogers *et al.* (2013:42)	• *"Look, the types of returns are diverse […] from incorrectly chosen products […]." (P7, owner, 3PRL provider firm)* • *"So if, if the item is found to be in working condition and then […] it was actually just the consumer who purchased the incorrect product and didn't read that it's not compatible with the device, etc." (P5, general manager, online retailer)* • *"[…] with online more so than others, is that people buying it and they haven't tried it on in the store and they either find that the colour is wrong, or the sizing doesn't fit and." (P8, logistics manager, multichannel retailer)* • *"[…] the majority of our returns that we've had now are all buyer's remorse, I don't really need this product […]." (P10, Head of Sales and Logistics, OEM/multichannel retailer)* • *"We've got different reasons that the customers can select for returns […] So most common is, I've changed my mind, obviously, at being an online store, a lot of customers don't have the product in hand and therefore when they get the item, it is not as they expected it. And they say they change their mind, and they would like a different variation of product." (P3, returns manager, online retailer)* • *Some of them some of the returns was […] the product doesn't perform as advertised." (P5, general manager, online retailer)* • *"So you might well say this customer has returned […] Jimmy Choo stilettos, saying that as an unwanted item. In other words, they've decided that they know they don't want them […]." (P1, operations manager, 3PRL provider firm)*

D.7 PHASE 3 – GENERATING THEMES OF INTERVIEWS – PHASE 3

Example applicable to section 7.3.8.4.

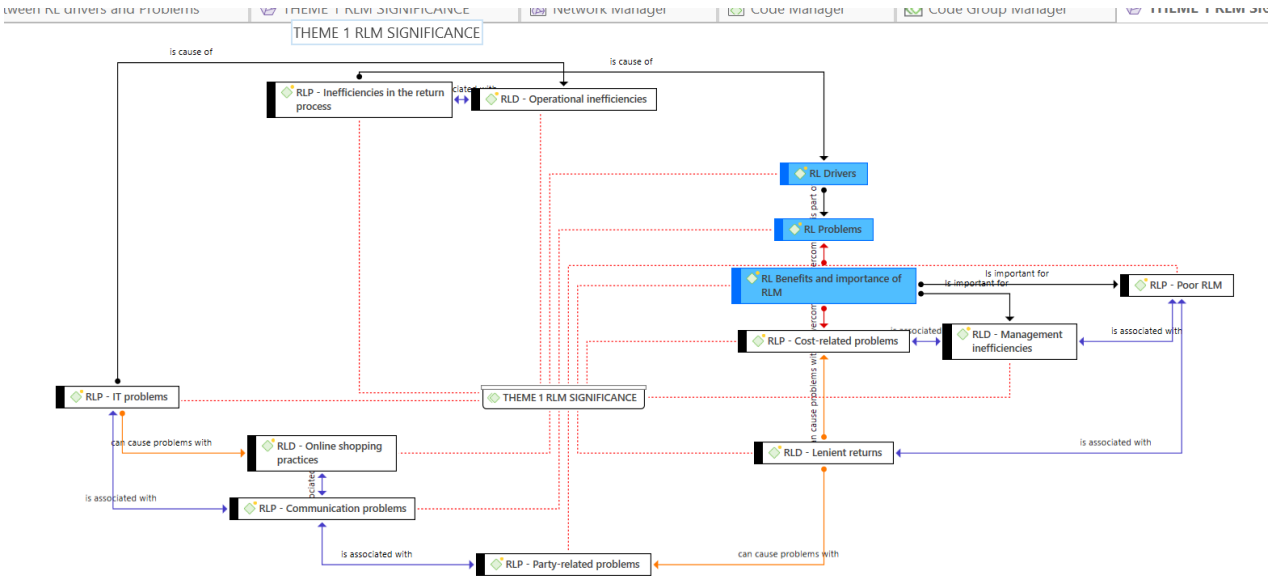
- *EXAMPLE OF STUDYING CODE RELATIONSHIPS USING ATLAS.TI NETWORK FUNCTION*

Using the network function in ATLAS.ti for studying the relationships between codes for theme generation.



- *EXAMPLES OF USING THE NETWORK FUNCTION TO GROUP CODES INTO THEMES*

The figure below shows an example of grouping codes into themes and subthemes, using the network function of ATLAS.ti.



- *NOTES FOR GENERATING INITIAL THEMES*

Notes based on observations, initial notes created in the coding process, notes created from revisiting interview transcripts in phase 3 and exploring relationships between codes.

Code Manager | Memo Manager | Memo – PROBLEMS | Memo – Search for themes

GENERATING THEMES.
NOTES from comments, initial notes during coding and network functions

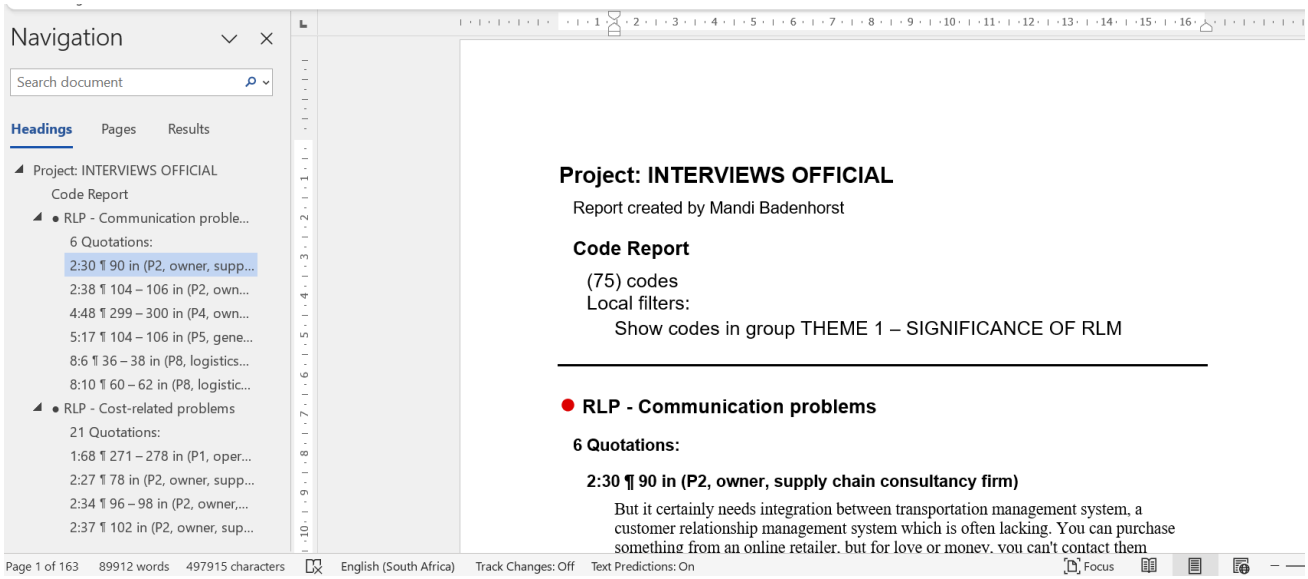
- *Understanding the significance of RLM - consequences of mismanagement, problems, costs, drivers, benefits. Why is it important to manage RL? What are the implications if ignored? [Codes: RL drivers, RL problems, RL benefits and importance]. Subthemes - RL drivers, RL problems and RL benefits and importance*
- *RL decision-making elements and influencing factors - factors the influence decision plans, disposition, insource/outsource - all things costs/benefit decisions. Factors that must be considered for effective RLM. [Codes: RL outsourcing, centralisation and decentralisation, content from RL resources and investments, and customer relationships, information, reduction, cost management also applies. Should this be a separate theme or subtheme within a theme? Subthemes - Considerations for RLM and Factors that influence decisions*
- *RL relationship & information management - Consumer return relationship management - all things consumer, CI, Returns supply chain relationship management - supplier agreements, courier 3PLs, SCI, also internal relationships and communication. Important link to party problems in RL. Types of systems important for information management and communication. Why is information sharing important? [Codes: Relationship management, information and communication and consumer-centric]. Subthemes - Information management, consumer communication and relationships, and internal and SC communication and relationships*
- *RL reduction and recovery- reducing returns and costs can be important for RLM, relates to the drivers and cost related problems. Also financial recovery and management. Why is it important to reduce RL and recovery of financials in RLM? However, consider cost management. Maybe more appropriate for business management [Codes: reducing returns, cost reduction and management, measurement and control]. Subthemes - Return reduction and control and cost reduction and recovery strategy.*
- *Business management for RLM - Focuses on resources and investments. What resources needed to improve RLM? How are retailers generally managing their business? This can be measurements, general and return policies, procedures (standards) and control mechanisms. Will financial management not potentially fit here? Check again in reviewing themes [Codes: measures and controls, RL investment and resources, policies and procedures]. Subthemes - Policies, plans and measures for RLM and resource management*

D.8 PHASE 4 – REVIEWING THEMES

Examples related to phase 4 discuss in section.

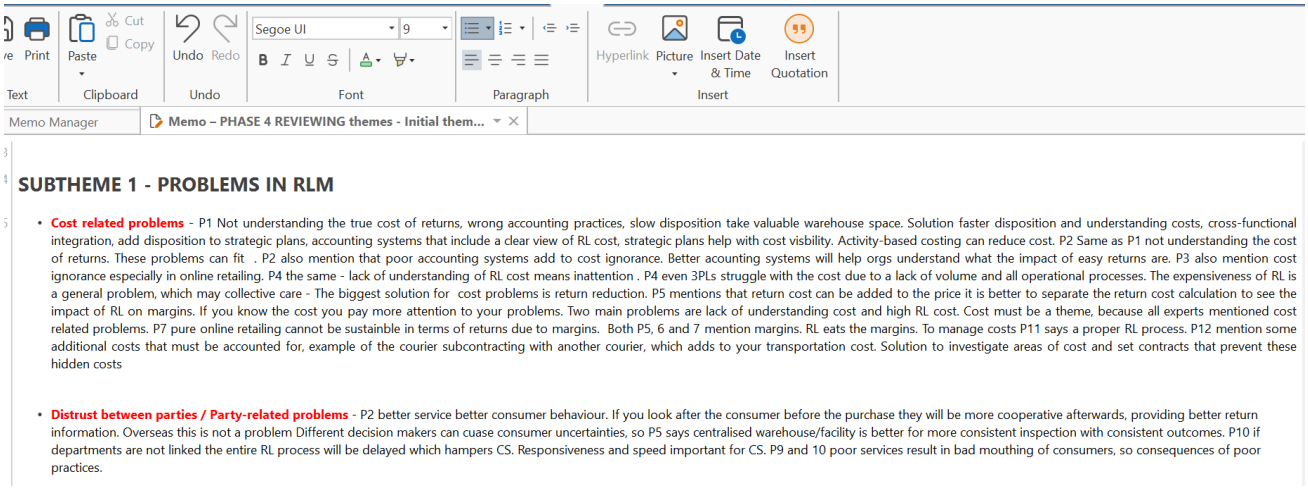
- *OUTPUT REPORTS FOR REVIEWING THEMES*

Step 1 of reviewing themes discussed in section 7.3.8.5.2.



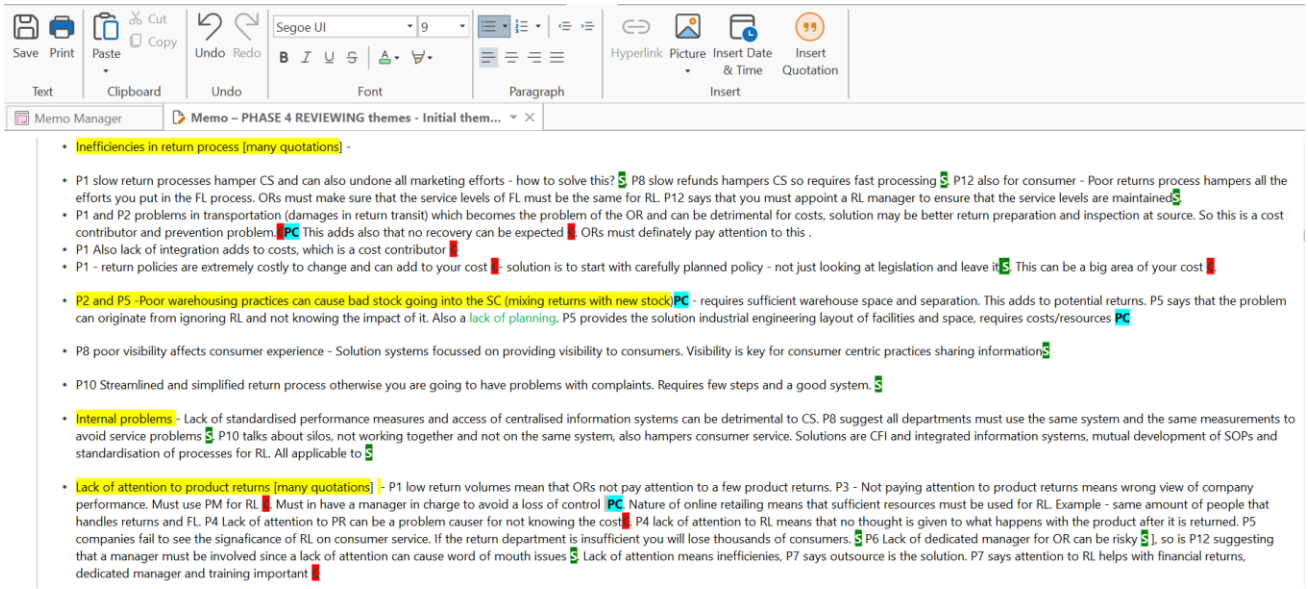
- *REVIEWING THEMES EXAMPLE OF NOTES TAKEN IN READING THE EXTRACTS AND IDENTIFICATION OF NEW THEMES*

Step 2 of reviewing themes discussed in section 7.3.8.5.2.



- *EXAMPLE OF ASSIGNING CODES TO THE NOTES CREATED IN STEP 2*

Step 3 of reviewing themes discussed in section 7.3.8.5.2, returning to the initial notes and assigning codes representing the themes to the comments from step 2.



D.9 PHASE 5 – SELECTING AND ORGANISING QUOTATIONS FOR NARRATIVES

The table shows and example of selecting and organising quotations for phase 5 of the analysis, discussed in section 7.3.8.6. These tables formed the foundation of quotation tables used for the presentation of findings.

THEME 1: PREVENTION AND CONTROL	
Theme elements	**Supporting quotations**
Importance of theme	• "[…] you are always going to have an element of returns. But you can reduce, I believe you can reduce the percentage of returns." (P12, Head of logistics, online retailer) • "[…] returns are always kind of like an afterthought for a lot of companies. So, if you don't manage it proactively and like every single day, it is something that can get out of hand extremely quickly." (P3, returns manager, online retailer)
SUBTHEME 1 – PREVENTION AND CONTROL PITFALLS AND PROBLEMS	
Operational failures - FL failures - RL process inefficiencies	• "[…] pick accuracy is a big driver of returns for obvious reasons." (P5, general manager, online retailer) • "But people, the consumers talk amongst each other about the product quality, and you start losing sales because of a bad experience that one consumer had with the product that was bought online that had a defect […]." (P2, owner, supply chain consultancy firm) • "If your evaluators are stupid, they'll put products into bad stock, which are not supposed to be there, or they'll put products into good stock that are not supposed to be there either. And you create a perpetual problem of returns because these guys are not doing the job correctly […] you don't want to resell bad stuff. You don't want to be known in the trade as the guy that takes back rubbish and sends you [the new consumer] back rubbish." (P5, general manager, online retailer) • "[…] keep the return segregated from, call it, clean stock that hasn't been dispatched so that you don't have cross contamination of items and possibilities of counterfeit goods, for example, entering your supply chain through a back door or having defective merchandise entering your supply chain again." (P2, owner, supply chain consultancy firm)
Poor website and systems	• "[…] the dumbest thing you can do is to use old or dated or incorrect photography." (P5, general manager, online retailer) • "[…] reverse logistics is simply not possible without a solid technology platform, because what you'll end up doing is you'll sit in a position where you manually logging things in, but you've got no idea of who's doing what, [and] how to track it." (P5, general manager, online retailer)
Poor prevention - Lenient returns - Poor gatekeeping	• "I've seen in the marketplace and people that shared this with me and because it is so easy and there are such a variety of online retailers […] it's very easy to buy something at one online retailer and return it to another online retailer where you basically duplicate the transaction and then claim a return from it. And some of the online retailers are also selling counterfeit goods or goods that are not in the right format." (P2, owner, supply chain consultancy firm) • "[…] a no-questions-asked return policy […] it's difficult to say no to those customers, but your customers take chances." (P8, logistics manager, multichannel retailer)
Poor RLM - Inattention to RLM - Poor planning - Lack of resources	• "[…] reverse logistics […] doesn't receive focus. It doesn't receive attention […] [returned products] eventually gets swept out and thrown away, it is pilfered, etc." (P7, owner, 3PRL provider firm) • "[…] your biggest damages of your brand could be the product finding its way into illegal or illegitimate markets. […] That's one example of justification of why it should be in your strategic plan." (P7, owner, 3PRL provider firm) • "You want to make sure that your parcels return to you […], you want to be able to see that stuff, and if you don't invest in systems and information technology […] it's very difficult to manage that and actually proactively get the visibility [of product returns]." (P13, supply chain manager, multichannel retailer) • "And if you don't measure [RL], you can't manage it. So, whether it's reverse or not reverse, if you don't have a measurement process in place, you will not be able to manage something. It's impossible." (P6, logistics manager, multichannel retailer)
SUBTHEME 2: PREVENTION AND CONTROL PROPOSITIONS	
Proactive prevention - FL prevention - RL prevention	• "[…] if you can provide an exceptional forward logistics, your reverse logistics will reduce. No doubt about it." (P10, Head of Sales and Logistics, OEM/multichannel retailer) • "[…] make sure that your online image reflects exactly what the customer's going to get, so that it doesn't confuse them with colour or quality. And make sure that the metadata on your website […] is 100 percent accurate so that the sizes and weights and dimensions are all 100 percent right." (P8, logistics manager, multichannel retailer) • "[…] they will reduce the number of returns if they do attach a cost to the return." (P2, owner, supply chain consultancy firm)
Reactive prevention - Reactive prevention examination - Reactive prevention investigation	• "[…] you have robust feedback loops. So, when returns do happen, you're able to understand why. Look, you will always get a certain level of returns. But when they're driven by either operational process or product itself, unless you're getting that feedback, you're not going to fix these processes, you just exacerbate the problem. So, I think that those are probably key." (P1, operations manager, 3PRL provider firm) • "[…] looking at a root cause analysis as to what are the causes of the returns. I mean, it could be a myriad of things. It could be damages, it could be product issues, it could be actual products or dead-on-arrival products being latent damages, et cetera." (P10, Head of Sales and Logistics, OEM/multichannel retailer) • "[…] there needs to be the feedback loops into the business as well. If the same five-inch board-shorts keeps generating returns every summer, it's time to stop selling the five-inch board shorts or change its design." (P1, operations manager, 3PRL provider firm) • "[…] what we found with Retailer E was that the same consumer would keep trying to commit the fraud and they eventually just block their accounts." (P4, owner/CEO, 3PRL provider firm)

Return control - Return product and process control - Return function control	• "[…] if you want to run your reverse logistics process accurately, you definitely need someone to account for it. You definitely need someone to manage the flow of it […]." (P4, owner/CEO, 3PRL provider firm) • "[…] you need some kind of inbound visibility. You can imagine if you've got a warehouse that has limited receiving space and you've got fresh product being flown into a distribution centre, you need to know what your volumes are going to be for returns […]." (P1, operations manager, 3PRL provider firm) • "You need to have the right space also at your facility. You deal with returns when it does come back so that you can keep the return segregated from, call it, clean stock that hasn't been dispatched so that you don't have cross contamination of items […]." (P2, owner, supply chain consultancy firm) • "[…] you need an end-to-end inventory management system. So, you need to be able to create a reverse order, and systematically track and update the status of that order as it goes back into the DC […] So, you need to […] make sure that you don't lose that product and that you don't miss it somewhere in the system […]." (P5, general manager, online retailer**)** • "[…] a dedicated outsourced reverse logistics business […] Our facilities are adopted for [the] management of reverse logistics. […] our disposal mechanisms are all in terms of policy, in terms of the management of brand equity. We do all those things and commit ourselves and contract ourselves to make sure the products get disposed of in the correct fashion." (P7, owner, 3PRL provider firm) • "[…] that's all about how you set up your internal controls […] is it easier in one place when everything comes back, [and] one team dealing with it […] to keep an eye on that." (P13, supply chain manager, multichannel retailer) • "[…] you'd have to have a manager to make sure that things are kept in control." (P8, logistics manager, multichannel retailer) • "[…] if you do not have standard processes and regulations in place […] you do get the people selling off or taking stock or hand it out to staff, and then just say, but we weren't aware that it's not allowed. Where your policy and guidelines give you clear indication what needs to be done with return stock." (P11, Demand and sales manager, FMCG distributor) • "I still have to measure that ultimate percentage level […] to make sure that it doesn't creep up on me […]. I still need to make sure that returns as a department doesn't grow." (P6, logistics manager, multichannel retailer)
Parameters - Volume - Product - Organisational - Cost versus benefits - SC - Market-related - Legislation - Environmental	• "[…] you would exit the supplier if they've got more comebacks than what is normal. And that's an obvious red flag. You simply exit that supplier and say, you know what, we've got too many comebacks. You are tarnishing our brand, so cheers." (P5, general manager, online retailer) • "But the value-add team, they would have to take that garment out of the bag […] to see whether there are any makeup marks or any dirt marks […] to see whether it's actually been worn. If so, they'll return it to the customer, and say, you know what, you wore it, we've got lipstick, mascara or deodorant or perfume on the jacket, we can't resell it. Sorry you take it [back], you keep it." (P5, general manager, online retailer) • "So, you need sort of sufficient testing capacity if you're really going to validate and assess these products […] if you're going to approach it from a 'we want to protect ourselves from fraud', then you need to build these mechanisms […]." (P1, operations manager, 3PRL provider firm) • "It all depends on your network design […] we've centralised [RL] because the decision-making criteria is more consistent in one depot in the country […]. So, it's a managerial control decision versus a cost optimised decision."." (P8, logistics manager, multichannel retailer) • "There's a cost involved in uploading photographs, […] because all of those photographs have to be hosted and stored and someone needs to take it and upload it and all of that." (P2, owner, supply chain consultancy firm) • "[…] integration with a stock management system […], which can be both internal and external, so internal your own, warehouse and external with a third party, that's if they would like to integrate, that is first prize, it's easier to control […] on the reverse logistic side […]." (P12, Head of logistics, online retailer) • "[…] you couldn't really dictate to the customer because you've got such a small penetration into the market, you literally have everything to lose. So, they were a lot more accommodating than what they were supposed to be. […] the next level of innovation in South Africa is where the penetration increases, the online retailers will become a lot more sticky and saying, you know what? Sorry, pall, I'm not going to take that back, you broke it, or you didn't use it properly." (P5, general manager, online retailer) • "[…] the product is going to come back to you anyway […] because […] the Consumer Protection Act works against you. So, you could implement a verification process [in the facility], which is the gatekeeper." (P4, owner/CEO, 3PRL provider firm) • "The problem about returns, it's not ever flowing, like you don't get product in, product out. So, it's a big request from our side to the supplier to actually get the products out […] in this lockdown period, the stock on hand that we have for returns […] piled up greatly […]." (P3, returns manager, online retailer
SUBTHEME 3: PREVENTION AND CONTROL PROFITS	
Product return profits - Reduce/avoid unnecessary returns - Reduce/avoid fraudulent returns	• "[…] on our website, if you want to log a return for something that you've changed your mind, but you've ordered it outside the [return] period […], it automatically rejects it. I think that's a great way to avoid unnecessary returns." (P3, returns manager, online retailer) • "[…] by digitising your returns policy […] Your computer system understands what the product is and when they bought it […] and allows that customer to return it or rejects the return with treatable messaging that avoids those sorts of fraudulent returns […]." (P1, operations manager, 3PRL provider firm)
Operational profits - Return control, handing and visibility - RL process speed and efficiency - Inventory management	• "I would definitely have it all together. Because it relates directly then to the existing or current stock that you may carry or may not carry, and you've got immediate control." (P12, Head of logistics, online retailer) • "[…] you need an end-to-end inventory management system. So, what I mean by that, you need to be able to create a reverse order. And systematically track and update the status of that order as it goes back into the DC […] So, you need to keep accurate track of where that product is in the system […]." (P5, general manager, online retailer) • "[…] the staff needs to be trained […] on the [return] process […] in order to function efficiently." (P4, owner/CEO, 3PRL provider firm) • "[…] the reverse logistics manager is actually managing the [return] inventory component […]." (P1, operations manager, 3PRL provider firm)
Organisational profits - Organisational performance - Improve RLM	• "So, the customer wasn't happy and complained, you know, the customer always complained due to something that was an error in their order […]. So, it just becomes so important for us because this is where we improve our business. You know, we pull from that complaint's we pull from that to iron out the creases […]." (P9, regional & online DC manager, online retailer)

	• "I use the courier's delivery online platform, whatever they've got, I use that […] for reverse logistics control and management, because they've got already all the steps in there that you would need, which is I've received your item, I'm in transit, and I'm back in the hub, I've confirmed it back in the hub, and I've taken ownership of it, there is the receipt of it." (P12, Head of logistics, online retailer) • "[…] appoint additional resources to make reverse logistics a division that manages the returns […]." (P10, Head of Sales and Logistics, OEM/multichannel retailer)
External profits - SC profits - Market profits	• "I see benefit in the data for any supplier. You can quite easily pick up certain trends on returns that can be valuable for any supplier, whether it sizes, whether it's malfunctioning of a product, whether it is any reason for the return […] then that highlights certain data issues that you can take on with that […] supplier or manufacturer." (P12, Head of logistics, online retailer) • "[…] you would exit the supplier if they've got more comebacks than what is normal. And that's an obvious red flag. You simply exit that supplier and say, you know what, we've got too many comebacks. You are tarnishing our brand, so cheers." (P5, general manager, online retailer) • Our facilities are adopted for [the] management of reverse logistics. […] our disposal mechanisms are all in terms of policy, in terms of the management of brand equity. We do all those things and commit ourselves and contract ourselves to make sure the products get disposed of in the correct fashion." (P7, owner, 3PRL provider firm)
Other theme profits - Improve consumer service, satisfaction and retention - Reduce and avoid costs	• "[…] we try to reduce the amount of times […] the customer goes to social media badmouthing your company […] And the way you do it again is by providing the best customer service […] because if you providing this customer with the most exceptional service from the get go and he receives his product, I can tell you now already he'll embrace it." (P10, Head of Sales and Logistics, OEM/multichannel retailer) • "So, when a customer logs a return, they obviously need to take a photo of an item […] that person can see that item has been used. It obviously it gets declined right away. So, you don't have that cost incurred […] to send it back […] I think that's a great way to try to avoid unnecessary returns." (P3, returns manager, online retailer)

D.10 PHASE 6 – EXTRACT OF FINAL QUOTATION TABLE FOR WRITE-UP

The table shows an extract of the quotation tables used for the write-up of findings in phase 6, discussed in section 7.8.3.7 (step 1).

SUBTHEME CATEGORY	MAIN ELEMENT	KEY POINTS	KEY QUOTATIONS	COMMENTS
SUBTHEME 1: SERVICE PITFALLS AND PROBLEMS				
Internal culture	***Functional autonomy***	Silos mentality	*"I think when it comes to inter-departmental, it's, that the scary part that we have these days in organisations that everyone works in within silos. Right. And because everyone has an ego. Right. Who suffers in the end, the customer? Because I'm not going to do, I'll do it in my own time to prove a point to so-and-so. So you've got so for example, […] if logistics delays on some certain items or certain activities, it'll create an impact or bottleneck on the entire operation. OK. Same applies for the call centre. If the call centre, do not follow up on a call, I could have a delay on the entire process. If finance delay on refunding a customer that can, and remember, it's not only about collecting a unit and delivering it to the warehouse." (P10, Head of Sales and Logistics, OEM/multichannel retailer)*	Poor return experience Poor return processes and service failures
		Separate PM	*"[…] the worst thing that can happen is that different department gets measured on different things, and they are reporting on different aspects, which may not be customer centric." (P8, logistics manager, multichannel retailer)*	
	Internal preservation	Stringent returns	*"[…] if the customers sort of 18 days out and they wanted to return the product and you say, no, I'll never go back and buy it for those people again […]." (P4, owner/CEO, 3PRL provider firm)* *"You know, there are good reasons often to stop a customer from returning a product legitimately is the worst thing you can do to put a computer system in there, that says okay 14 days old I'm going to reject this. If it was me as a consumer, I would want to speak to a human being and say, hey pall, this is what I want to send back. And these are the reasons why I don't need a computer to tell me I'm 14 days out. I can't do it." (P4, owner/CEO, 3PRL provider firm)* *"[…] it shouldn't be a hassle for any person […] to return an item because then it will make them skittish to buy from you again." (P3, returns manager, online retailer)* *"I think it is because the online retailer that doesn't do so will be behind in the marketplace, because within a very short period of time, the consumer has come to expect that everything is a free delivery and is a free return." (P2, owner, supply chain consultancy firm)*	Loss of consumers Loss of market share Loss of sales
Poor RLM	***Inattention to RLM***	Lack of RL manager	*"[Dedicated manager for RL] Yeah […] Particularly in ecommerce, I think, because the reputational risks are so high […] to get it wrong is, is quite rife." (P6, logistics manager, multichannel retailer)*	P12 Damaged reputation
		Lack of	*"And your, your biggest risk in terms of customer retention sits in that returns*	Loss of

SUBTHEME CATEGORY	MAIN ELEMENT	KEY POINTS	KEY QUOTATIONS	COMMENTS
		knowledge on the importance of RL	*department. So that's another thing that people neglect is that they don't they don't necessarily understand that when things go wrong in that department, you are bound to lose thousands of customers by word of mouth." (P5, general manager, online retailer)* *"Amazon a product and they deliver that product tomorrow and you say, yay, what a great experience. But then you see, hang on, I've got a problem with this pen, and now I want to return this pen and you don't have that same experience, then you've lost all confidence in that company. So you've lost credibility." (P12, Head of logistics, online retailer)*	consumers and damaged reputation
	Poor planning	Problematic policies	*"[…] if you've got a poor returns policy and or poor returns process, all the effort that you're putting into marketing is being undone by this process." (P1, operations manager, 3PRL provider firm) [also applies above]* *"Yeah, I think obviously if you leave something open for interpretation from a customer perspective, which we've obviously had quite frequently, and then you get a lot of upset customers because the policy was a bit open-ended." (P3, returns manager, online retailer)*	Loss of market share
		Lack of formalisation and standardisation	*"[Formalisation and standardisation in RL] Absolutely, I think it is imperative because, […] If it doesn't happen within my own reasonable expectation, I get very, very frustrated." (P7, owner, 3PRL provider firm)* *"You know, there's nothing worse than a consumer having an expectation of X but getting Y because somebody decided that the SOP wasn't the one, they wanted to follow today." (P6, logistics manager, multichannel retailer)* *"[…] you do not want six or seven reclaim centres where the six or seven people that handled electronics all have a different view of what is used. Because that creates uncertainty with the consumer." (P5, general manager, online retailer)*	Frustration Dissatisfaction Uncertainty
		Poor outsourcing decisions	*"I am totally against outsourcing, because when you outsource, especially the reverse logistics […] because if you fail in that in any of those services or if your outsource company would fail in any of those services, it's YOU that will have to bear the brunt for it." (P9, regional & online DC manager, online retailer)* *"So, if I had to run a little courier service to manage my returns, the consumer experience would have been a shocker." (P6, logistics manager, multichannel retailer)*	Poor return processes and service failures
	Lack of RL investment and resources	Lack of commitment to resources	*"If you haven't made those investments and you're actually not going to be able to capitalise on your initial investment in attracting the customer and the initial sale because they won't come back." (P1, operations manager, 3PRL provider firm)* *"But I think there's very little investment in the reverse logistics or returns of products, which means that you might want to give a customer great experience just on the purchase. But when it comes to return, you might actually lose that customer if you don't deal with it properly." (P12, Head of logistics, online retailer)* *"[…] without investment in technology […] your customers will not shop with you anymore because they'll get much better experiences elsewhere because they'll know where their stuff is." (P8, logistics manager, multichannel retailer)* *"[resource commitment is] as important, if not equally as important as what you would spend on delivering your outbound experience. And like I said earlier, if you spent a whole lot of money developing a site that ships products, lovely experience on the outbound, lots of marketing goes into driving those customers. All that money is being spent and they come to return the product and it's a poor experience and you lose that customer." (P1, operations manager, 3PRL provider firm)*	P2 Inability to capitalise on investment loss of market-share Loss of consumer Unsatisfactory experience
		Lack of IT resources	*"[Investment in IT is] Absolutely crucial […] to smoothen the reverse logistics [process]. Because I tell you why, this is where online companies lose business and, in the end, they lose the customer's trust." (P9, regional & online DC manager, online retailer)*	Loss of consumer trust & market share
		Lack of financial resources	*"Now you want a smooth flow the same technology to apply, to be applied similarly into that smooth flow, backwards. That is what is not happening at the moment. And see. Obviously, I think companies don't want to outlay funds if there's no return. Yeah, that's more of an expense. You don't outlay money with an expense." (P9, regional & online DC manager, online retailer)*	Poor return processes and service failures
Information-related pitfalls	***Poor visibility***		*"There's nothing worse than a customer that doesn't know what. What's going on, how far in the process the return is, when are they getting their money? When are they getting their return, et cetera. So that's definitely the most tricky part in the whole situation, is keeping your customer informed on the progress that you are making." (P5, general manager, online retailer)* *"I mean, if you've ever bought online and you can't see what's happened to your order when you try to return it, it frustrates you and it probably will encourage you to shop somewhere else." (P8, logistics manager, multichannel*	Loss of consumer Frustration Poor experience

SUBTHEME CATEGORY	MAIN ELEMENT	KEY POINTS	KEY QUOTATIONS	COMMENTS
			retailer) *"Our visibility poor so customers will return something […] things happen in the background so the courier will collect it and then they will just have to wait until one day they get a refund. It's not visible as to what step in the process they're in very clearly. And some vendors or some retailers are doing it a lot better than us. So, I don't think bring us to industry." (P8, logistics manager, multichannel retailer)* *"[…] if you're not communicating and keeping the customer up to date, up to speed as to what's going on with his order, that really places a dampener on the customer experience." (P10, Head of Sales and Logistics, OEM/multichannel retailer)* *"[…] for reverse logistics […] the customer wants to see, have they logged my call? It's approved or not approved, and when are they going to come and collect. […] if you go with a company that does not have it, then it's, you going to be on the phone all the time. It's quite a bad experience then at the end of the day." (P12, Head of logistics, online retailer)*	
	Poor systems	Manual operations	*""[…] with your inventory system […] you need to keep accurate track of where that product is in the system […] you also need to make sure that you don't lose that product […] You sent me a product that I've returned to you. You've acknowledged the receipt of that product. But you haven't done anything about it yet, so I'm still sitting at this point as a customer, I'm sitting without money and I'm sitting without the product. […] that creates a hell of a lot of frustration from the customer's point of view." (P5, general manager, online retailer)* *"Whereas if you go with a company that does not have it, then it's, you going to be on the phone all the time. It's quite a bad experience then at the end of the day." (P12, Head of logistics, online retailer)*	Poor experience Frustrated and angry
		System failures	*"But if your front-line system is not up to scratch and there's a lot of glitches within that system, all right, then you're going to have massive problems. You're going to have huge void VOC levels. I mean, the customer level, the voice of customer is going to be crazy, the amount of calls, you know, your call centre is going to be, will experience a spam of calls from these customers because they feel that you know what? How can you have an online system that doesn't work for us? I mean, you quick to make, it's easy to make a purchase and you're quick to take my money. All right. But from a return's perspective, I have to go through probably six or seven activities to try and get my returns sorted out, you know?" (P10, Head of Sales and Logistics, OEM/multichannel retailer)*	Poor experience and anger
	Poor integration	Lack of SCI	*"[…] when the customer generates a return, she will obviously go into the website into her account and generate that return. And if the if the courier company and the fulfilment centre's ERPs are not plugged in and assessed and has a smooth flow in between the three ERPs, you know, then you're going to have a break in, you can have a break in communication and a delay. And this is what we don't want. And I figured out that something in this country at the moment that's very, immature. It's very slow. It has to be improved quite a bit. It has to be improved." (P9, regional & online DC manager, online retailer)*	Poor return processes and service failures
		Lack of CI	*"Because if it's not integrated, then the customer will not have access to all the relevant information and trust is established through transparency, which means access to current information." (P8, logistics manager, multichannel retailer)*	Loss of trust

Appendix E – Ethics and related documentation for interviews

E.1 PARTICIPATION SHEET

The participation sheet was provided to prospective participants during the recruiting stage of the interviews. This sheet also contributed to the ethical standards adopted throughout the research.

UNISA university of south africa

PARTICIPANT INFORMATION SHEET

20 July 2020

Title: **A framework for the reverse logistics management of consumer returns in online retailing.**

Dear Prospective Participant

My name is Amanda Badenhorst and I am doing research with Orpha Cilliers, a professor in the Department Applied Management, towards a PhD in Management studies at the University of South Africa. We are inviting you to participate in a study entitled a framework for the reverse logistics management of consumer returns in online retailing.

WHAT IS THE PURPOSE OF THE STUDY?

I am conducting this research to determine the processes, policies and practices for the effective management of reverse logistics with a focus on consumer returns in the online retailing industry. The aim of this study is to develop a framework for the effective management of reverse logistics focusing on consumer product returns in online retailing. This study is expected to collect important information that could guide online retailers to review policies, manage processes, and implement appropriate practices in terms of the reverse logistics management for consumer returns.

WHY AM I BEING INVITED TO PARTICIPATE?

You are invited to participate in this study due to your knowledge of reverse logistics management. Therefore, you are either an owner/CEO/manager of an organisation that specialises in reverse logistics as a service for online retailers or you have managerial experience in the reverse logistics processes of online retailing.

psychological and social harm. Participation is voluntary and you can withdraw from the study at any time before or during the interview.

WILL THE INFORMATION THAT I CONVEY TO THE RESEARCHER AND MY IDENTITY BE KEPT CONFIDENTIAL?

You have the right to insist that your name will not be recorded anywhere and that no one, apart from the researcher and researcher's supervisor, will know about your involvement in this research. Your answers will be given a code number or a pseudonym and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings. The researcher will transcribe and code the data and no other external party, apart from the supervisor, will have access to the data.

HOW WILL THE RESEARCHER(S) PROTECT THE SECURITY OF DATA?

A software programme ATLAS.ti will be used to analyse the data and all recorded data will be password protected on the researcher's computer. No external party will have access to the ATLAS.ti files used to analyse the data. The electronic copies of your answers will be stored in a password-protected folder for a period of five years for future or academic purposes, where after it will be permanently deleted from the hard drive of the researcher's computer.

WILL I RECEIVE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

You will not receive any payment nor incentives for participating in this study. You will receive the option of a (1) telephonic interview, (2) Skype interview or (3) virtual meeting software. If you choose a telephonic interview, the researcher will cover the telephonic costs. However, if you choose the option of an interview via Skype or Microsoft Teams, you and the researcher will equally be responsible for the cost of data, if needed.

HAS THE STUDY RECEIVED ETHICS APPROVAL?

This study has received written approval from the Research Ethics Review Committee of the College of Economic and Management Science, Unisa. A copy of the approval letter can be obtained from the researcher if you so wish.

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HOW WILL I BE INFORMED OF THE FINDINGS/RESULTS OF THE RESEARCH?

If you would like to be informed of the final research findings or require any further information, please contact the researcher Amanda Badenhorst telephonically on 084 5814285 or via email to badena@unisa.ac.za. Alternatively, if you are interested in any published material related to this study, you are also welcome to request such documents from the researcher.

Should you have concerns about the way in which the research has been conducted, you may contact Prof Orpha Cilliers telephonically on (012) 429 4030 or via email at cillijo@unisa.ac.za. Alternatively, contact the research ethics chairperson Mrs Poole of the Department Applied Management, telephonically on 012 433 4668 or via email at loedoc@unisa.ac.za.

Thank you for taking time to read this information sheet and for participating in this study.

Thank you.

Amanda Badenhorst

E.2 INFORMED CONSENT FORM

CONSENT TO PARTICIPATE IN THIS STUDY

I, _____ (participant name), confirm that the person asking my consent to take part in this research has told me about the nature, procedure, potential benefits and anticipated inconvenience of participation.

I have read (or had explained to me) and understood the study as explained in the information sheet.

I have had sufficient opportunity to ask questions and am prepared to participate in the study.

I understand that my participation is voluntary and that I am free to withdraw at any time without penalty (if applicable).

I am aware that the findings of this study will be processed into a research report, journal publications and/or conference proceedings, but that my participation will be kept confidential unless otherwise specified.

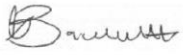
I agree to the audio recording of the semi-structured interviews.

I have received a signed copy of the informed consent agreement.

Participant Name & Surname..... (please print)

Participant Signature.....**Date**.....

Researcher's Name & Surname: Amanda Badenhorst

Researcher's signature: ..  ..... **Date**.....

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E.3 APPROVAL LETTERS FOR STUDY ASSISTANCE

UNISA university of south africa

REQUEST TO ASSIST WITH RESEARCH – SAPICS

19 April 2018

Dear SAPICS representative,

My name is Amanda Badenhorst and I am a registered member of SAPICS. I am doing research with Orpha Cilliers (also a registered member of SAPICS), a professor in the Department of Entrepreneurship, Supply Chain, Transport, Tourism and Logistics Management towards a PhD in Management studies at the University of South Africa. This letter serves as a request to assist me in conducting the empirical part of my study entitled

"A framework for the reverse logistics management of consumer returns in online retailing".

The focus of my study to determine the processes, policies and practices for the effective management of reverse logistics with a focus on consumer returns in the online retailing industry - a field with a lacking body of scientific literature and empirical studies. The aim of this study is to develop a framework for the effective management of reverse logistics focusing on consumer product returns in online retailing. This study is expected to collect vital information that could guide online retailers to review policies, manage processes, and implement appropriate practices in terms of the reverse logistics management of consumer returns

SAPICS's vast network of professional members in the logistics and retail sectors would be extremely valuable to contribute to my study. I would like to request if you (SAPICS) are willing to assist me in identifying possible participants from your list of members. I plan to send the invite to prospective participants in January 2019. Based on the processes prescribed in Unisa's Research Ethics Policy, I need a letter of CITLSA indicating your willingness to assist with the dissemination of the call to participate in this study.

The study involves semi-structured face-to-face interviews, or telephonic interviews or Skype interviews, which will be audio recorded. The interviews will be scheduled for February/March

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2019. The prospective participants in this study must have knowledge of reverse logistics management; therefore, they should either be (1) an owner/CEO/manager of a logistics organisation that specialises in reverse logistics as a service for online retailers, or (2) have managerial experience in online retailing and specifically the reverse logistics processes.

The specific value expected from the framework that will be developed in the study will lie in guiding online retailers to (1) get insight into the most effective reverse logistics processes, policies and practices, (2) recognise the importance of effective management of reverse logistics in online retailing, (3) increase profitability through improved reverse logistics management and (4) improve customer relationships. However, findings of this study could also contribute to the reverse logistics management of consumer returns in any organisation/industry/supply chain. Finally, this study will contribute in addressing the current lack of scientific academic literature on reverse logistics management in online retailing.

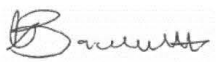
This study is categorised as low risk study, with the only foreseeable risk of harm to participants being the potential inconvenience of their time during the interview. This study will not lead to any physical, psychological and social harm. Participation is absolutely voluntary and participants can withdraw from the study at any time before or during the interview. The data will be captured anonymously and no individual participant's response will be identifiable.

If you would like to be informed of the final research findings or require any further information, please contact the researcher Amanda Badenhorst telephonically on 084 5814285 or via email to badena@unisa.ac.za. Also, if you are interested in any published material related to this study, you are also welcome to request such documents from the researcher.

Your favourable consideration of my request would be highly appreciated. If you agree to participate, please complete the details on the next page or alternatively, provide your own permission letter with your signature.

Yours sincerely

Amanda Badenhorst



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I, D van Rensburg grant permission to Amanda Badenhorst, a PhD in Management Studies student at the University of South Africa, to involve SAPICS to distribute the call to participate in research focused on developing a framework for the reverse logistics management of consumer returns in online retailing, to registered members of SAPICS.

Signature of SAPICS representative.....**Date**.....24 April 2018....

Researcher's Name & Surname: Amanda Badenhorst

Researcher's signature: . ..... **Date** 24/04/2018

I, Catherine Larkin grant permission to Amanda Badenhorst, a PhD in Management Studies student at the University of South Africa, to involve CILTSA to distribute the call to participate in research focused on developing a framework for the reverse logistics management of consumer returns in online retailing, to registered members of CILTSA.

Signature of CILTSA representative.....**Date** 4 May 2018

Researcher's Name & Surname: Amanda Badenhorst

Researcher's signature: . ..... **Date** 24/04/2018

E.4 ETHICS CLEARANCE CERTIFICATE

UNISA university of south africa

UNISA DESTTL ETHICS REVIEW COMMITTEE

Date: 15/06/2018

Reference number : 2018_CEMS_ESTTL_006
Name: Ms Amanda Badenhorst
Student number: 33351589
Staff number:

Dear Ms A Badenhorst

Decision: Ethics Approval from 06/2018 to 06/2021

Researcher(s): Ms Amanda Badenhorst
badena@unisa.ac.za
084 581 4285/ 012 433 4713

Supervisor (s): Prof JO Cilliers
cillijo@unisa.ac.za
082 788 5915/ 012 429 4030

Working title of research:

A framework for the reverse logistics management of consumer returns in online retailing

Qualification: PhD in Management Studies – Logistics (90021)

Thank you for the application for research ethics clearance by the Unisa DESTTL Ethics Review Committee for the above mentioned research. Ethics approval is granted for three years.

*The **low risk application** was **reviewed** by the DESTTL Ethics Review Committee in June 2018 in compliance with the Unisa Policy on Research Ethics and the Standard Operating Procedure on Research Ethics Risk Assessment. The decision was approved on the 14th of June 2018.*

The proposed research may now commence with the provisions that:

1. The researcher(s) will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.
2. Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study should be communicated in writing to the DESTTL Committee.

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3. The researcher(s) will conduct the study according to the methods and procedures set out in the approved application.
4. Any changes that can affect the study-related risks for the research participants, particularly in terms of assurances made with regards to the protection of participants' privacy and the confidentiality of the data, should be reported to the Committee in writing, accompanied by a progress report.
5. The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study. Adherence to the following South African legislation is important, if applicable: Protection of Personal Information Act, no 4 of 2013; Children's act no 38 of 2005 and the National Health Act, no 61 of 2003.
6. Only de-identified research data may be used for secondary research purposes in future on condition that the research objectives are similar to those of the original research. Secondary use of identifiable human research data require additional ethics clearance.
7. No field work activities may continue after the expiry date (06/2021). Submission of a completed research ethics progress report will constitute an application for renewal of Ethics Research Committee approval.

Note:

*The reference number **2018_CEMS_ESTTL_006** should be clearly indicated on all forms of communication with the intended research participants, as well as with the Committee.*

Yours sincerely,

Signature
Chair of DESTTL-RERC
E-mail: loedoc@unisa.ac.za
Tel: (012) 433-4668

Signature
Executive Dean: CEMS
E-mail: mogalmt@unisa.ac.za
Tel: (012) 429-4419

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UNISA DEPARTMENT APPLIED MANAGEMENT RESEARCH ETHICS REVIEW COMMITTEE (DAM-RERC)

15 June 2018 (Date of issue)
30 August 2022 (Date of amendment)

Ref #: 2018_CEMS_ESTTL_006
Student #33351589

Dear Ms A Badenhorst

Decision: Ethics Approval Extended to July 2024

Working title of research:

A framework for the reverse logistics management of consumer returns in online retailing

Qualification: Ph.D. in Management Studies – Logistics

Thank you for the application requesting **amendments** to the original research ethics certificate issued by the Department of Applied Management for the above-mentioned research in August 2022. The approval of the requested amendment is granted/extended for the study for the period 1 July 2021 – 31 July 2024.

*The **low-risk application** was reviewed by the departmental RERC in compliance with the Unisa Policy on Research Ethics by the University of South Africa using the expedited method.*

The proposed research may now continue with the proviso that:

1. *The researcher/s will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.*
2. *Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study, as well as changes in the methodology, should be communicated in writing to the UNISA Research Ethics Review Committee. An amended application could be requested if there are substantial*

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changes from the existing proposal, especially if those changes affect any of the study-related risks for the research participants.

3. *The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study.*

Kind regards,

Mrs Carmen Poole
DAM-RERC Chair
012 433 4668

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Appendix F – Editing certificate

29 February 2024

To whom it may concern

RE: Proofreading and formatting of the PhD Dissertation submitted by Amanda Badenhorst to the University of South Africa.

I hereby confirm that I, Cindy Schoeman, completed the proofreading and academic formatting of the PhD dissertation titled; 'A Framework for the Return Logistics Management of Consumer Returns in Online Retail Management', and that it was done so without any additional assistance.

Please feel free to get in touch with me at 076 191 7499 or at cslanguagesolutions@gmail.com regarding any queries or concerns.

Kind Regards,

Cindy Schoeman

Cindy Schoeman
CS Language Solutions