DEVELOPING A PROCUREMENT FRAMEWORK FOR THE SOUTH AFRICAN CLOTHING INDUSTRY

by

Ntombizodwa Jolinah Matsoma

Submitted in accordance with the requirements for the degree of

DOCTOR OF PHILOSOPHY

In the subject

MANAGEMENT STUDIES

(with specialisation in Supply Chain Management)

at the

UNIVERSITY OF SOUTH AFRICA

Supervisor: Prof. Marcus Ambe

April 2024

DECLARATION

I, Ntombizodwa J. Matsoma, declare that **Developing a Procurement Framework for the South African Clothing Industry** is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

I further declare that I submitted the thesis/dissertation to the appropriate originality detection system that is endorsed by Unisa and that it falls within the accepted requirements for originality.

I further declare that I have not previously submitted this work, or part of it, for examination at Unisa for another qualification or at any other higher education institution.

Signature: **Date:**

_____   _____

ACKNOWLEDGEMENTS

DEDICATION

This thesis is dedicated to my father, Abram, and my late mother, Boshiwe Kabini. You always encouraged me to study, believe in God, and pray from a tender age. Your parental role will be remembered forever.

Proverbs 22:6

Direct your children onto the right path; when they are older, they will not leave it.

ABSTRACT

The purpose of the study is to develop a procurement framework for the South African clothing industry. Procurement practice in the South African clothing industry faced a significant setback when retail buyers opted to buy from overseas suppliers instead of supporting local clothing manufacturers. Lack of resources, sustainability and skills, as well as reduced import tariffs, led to the closure of many clothing manufacturers. Although previous studies have investigated sustainability and competitiveness in the clothing industry, additional research is required to explore the procurement practices that prioritise local economic development in the South African clothing industry that is suffering as a result of global competition. The study administered a survey to managers, owners and procurement specialists operational in the South African clothing industry through the use of a snowball sampling method. The survey questions were structured and analysed using descriptive and inferential statistics. The R-software, JASP 0.16.3, was utilised to analyse the descriptive data. Inferential statistics was employed using structural equation model (SEM) to validate the study's model and hypotheses using the SAS 9.4 software.

The study revealed that procurement practices in the SA clothing industry are compromised because the procurement variables, such as demand planning, strategic sourcing, contracting, enterprise supplier development and strategic partnerships, are not aligned with the types of procurement that create value. Also, these variables need to comply with government policies and sustainable practice regulations. The study also found that the clothing industry in SA needs more resources and local support. The study proposed a framework that connects the different aspects of procurement practice, including demand planning, strategic sourcing, contracting, supplier development, and strategic partnerships. The study concluded by recommending that procurement practices that provide value be aligned with government policies and sustainability regulations to promote job creation, improve sustainability and competitiveness, and promote the socio-economic objectives of the industry.

Key words: Procurement practice, socio-economic objectives, support, finance, resources, technology, policy compliance.

SETSOPOLWA

Maikemišetšo a dinyakišišo ke go hlama melawana ya borekedi ya intasteri ya diaparo ya Afrika Borwa. Tiro ya borekedi ka intastering ya diaparo ya Afrika Borwa e ile la itemogela tšhalelonthago ye kgolo ge bareki ba diaparo ba ile ba kgetha go reka diaparo go baabi ba diaparo go tšwa dinageng tša moše sebakeng sa go thekga batšweletši ba diaparo ba ka mo nageng. Tlhokego ya didirišwa, go e šomiša go ya go ile le mabokgoni, gammogo le ditefelo tše di fokoditšwego ya go tliša diaparo ka mo nageng, go ile gwa feletša ka go tswalelwa ga mabenkele a mantši a batšweletši ba diaparo. Le ge e le gore dinyakišišo tše di fetilego di ile tša nyakišiša go šomišega go ya go ile le bokgoni bja intasteri ya diaparo, dinyakišišo tša tlaleletšo di a nyakega go lekodišiša ditiro tša borekedi bja diaparo tšeo di beilego pele tlhabollo ya ekonomi ya ka mo nageng ka intastering ya diaparo ya Afrika Boewa yeo e gwahlafalago ka lebaka la phadišano ya lefaseng ka bophara. Dinyakišišo di dirile diphatišišo go balaodi, beng ba dikgwebo le go ditsebi tša borekedi bja diaparo bao ba šomago ka intastering ya diaparo ya Afrika Borwa ka go šomiša mokgwa wa go dira sampole fao banyakišišwa ba goketšago banyakišišwa ba bangwe. Dipotšišo tša diphatišišo di ile tša hlangwa le go sekasekwa ka go šomiša dipalopalo tša tlhalošo le tša tšhupetšo. Softewere ya R-, JASP 0.16.3, e ile ya šomišwa go sekaseka tshedimošo ya tlhalošo. Dipalopalo tša tšhupetšo di ile tša dirišwa ka go šomiša mokgwa wa tshekatsheko ya dipalopalo tše ntši (SEM) ka nepo ya go hwetša nepagalo ya mokgwa wa dinyakišišo le haephothesese ka go šomiša softewere ya SAS 9.4.

Dinyakišišo di utollotše gore ditiro tša borekedi bja diaparo ka intastering ya diaparo ya Afrika Borwa di itemogetše mathata ka lebaka la gore diphapano tša borekedi, tša go swana le peakanyo ya nyakego, go hwetša methopo ka togamaano, go tsenela dikonteraka, tlhabollo ya baabi ba dikgwebo le ditirišano tša togamaano, ga se tša beakanyetšwa gore di sepelelane le mehuta ya borekedi bjo bo dirago boleng. Gape, mehuta ye e swanetše go sepelelana le melawana ya mmušo le melaotshepetšo ya ditiro tša go ya go ile. Dinyakišišo di utollotše gape gore intasteri ya diaparo ka Afrika Borwa e hloka didirišwa tše ntši le thekgo ya ka nageng. Dinyakišišo di akantše melawana yeo e kgokaganyago metheo ye e fapanego ya tiro ya borekedi bja diaparo, go akaretšwa peakanyo ya nyakego, go hwetša methopo ka togamaano, go tsenela dikonteraka, tlhabollo ya baabi ba dikgwebo le ditirišano tša togamaano. Dinyakišišo

di feditše ka go šišinya gore ditiro tša borekedi tšeo di abago boleng di dirwe gore di sepelelane le melawana ya mmušo le melawana ya go ya go ile ka nepo ya go tšwetša pele tlhomo ya mešomo, go kaonafatša tiro ya go ya go ile le bokgoni, le go tšwetša pele maikemišetšo a ekonomi ya setšhaba a intasteri ye.

Mantšu a bohlokwa: Tiro ya borekedi, maikemišetšo a ekonomi ya setšhaba, thekgo, ditšhelete, didirišwa, theknolotši, go obamela melawana.

ISIFINGQO SOCWANINGO

Inhloso yocwaningo ukuthuthukisa uhlaka lokuthengwa kwezimpahla zemboni yezingubo zaseNingizimu Afrika. Inqubo yokuthengwa kwempahla embonini yezingubo zaseNingizimu Afrika ibhekane nezinkinga ezinkulu lapho abathengi bekhetha ukuthenga kubahlinzeki bempahla baphesheya esikhundleni sokuxhasa abakhiqizi bezingubo bakuleli. Ukuntuleka kwezinsiza, ukusimama kanye namakhono, kanye nokunciphisa intela yokungenisa impahla kwamanye amazwe, kwaholela ekuvaleni abakhiqizi abaningi bezingubo. Nakuba ucwaningo lwangaphambilini luye lwaphenya ukusimama nokuncintisana embonini yezingubo, ucwaningo olwengeziwe luyadingeka ukuze kuhlolwe izinqubo zokuthenga ezibeka phambili ukuthuthukiswa komnotho wendawo embonini yezingubo zaseNingizimu Afrika, ehluphekayo ngenxa yokuncintisana komhlaba wonke. Lolu cwaningo lwenze ucwaningo kubaphathi, abanikazi kanye nongoti bokuthengwa kwempahla abasebenza embonini yezingubo zaseNingizimu Afrika ngokusebenzisa indlela yokusampula ye-snowball. Imibuzo yocwaningo yahlelwa futhi yahlaziywa kusetshenziswa izibalo ezichazayo ne-inferential. I-R-software, i-JASP 0.16.3, yasetshenziswa ukuze kuhlaziywe idatha echazayo. Izibalo ze-inferential zisetshenziswe kusetshenziswa imodeli ye-structural equation (SEM) ukuze kuqinisekiswe imodeli yocwaningo kanye nemibono kusetshenziswa isofthiwe ye-SAS 9.4.

Ucwaningo luveze ukuthi izindlela zokuthengwa kwezimpahla embonini yezimpahla zokugqoka zaseNingizimu Afrika zisengcupheni ngenxa yokuthi izinto eziguquguqukayo zokuthengwa kwempahla, njengokuhlelwa kwezidingo, ukutholakala kwamasu, izinkontileka, ukuthuthukiswa kwabahlinzeki bebhizinisi kanye nobudlelwano obunesu, akuhambisani nezinhlobo zokuthengwa kwempahla ezidala ukubaluleka. Futhi, lezi zinto eziguquguqukayo zidinga ukuthobela izinqubomgomo zikahulumeni kanye nemithethonqubo yokuzijwayeza esimeme. Ucwaningo luphinde lwathola ukuthi imboni yezimpahla zokugqoka eNingizimu Afrika idinga izinsiza ezengeziwe kanye nokwesekwa kwendawo. Ucwaningo luhlongoze uhlaka oluxhumanisa izingxenye ezehlukene zenqubo yokuthengwa kwempahla, okuhlanganisa ukuhlelwa kwesidingo, ukutholakala kwamasu, izinkontileka, ukuthuthukiswa kwabahlinzeki kanye nokusebenzisana kwamasu. Ucwaningo luphethe ngokuncoma ukuthi izindlela zokuthengwa kwempahla ezihlinzeka

ngokubaluleka zihambisane nezinqubomgomo zikahulumeni kanye nemithethonqubo yokusimama ukuze kuthuthukiswe ukwakhiwa kwamathuba emisebenzi, ukuthuthukisa ukusimama nokuncintisana, kanye nokukhuthaza izinjongo zezenhlalo-mnotho zale mboni.

Amagama angukhiye: Umkhuba wokuthenga, izinjongo zenhlalo-mnotho, ukwesekwa, ezezimali, izinsiza, ubuchwepheshe, ukuhambisana nenqubomgomo.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

ABBREVIATIONS AND ACRONYMS

The following abbreviations and acronyms are used throughout the study.

AHP	Analytical hierarchy process
ATASA	Apparel and Textile Association of South Africa
B-BBEE	Broad-based black economic empowerment
CMA	Contracting mutual agreement
CMT	Cut Make Trim
CN	Contract negotiation
CPS	Contracting policy and standards
DP	Demand planning
ESD	Enterprise supplier development
ETI	Ethical Trade Initiative
IPAP	Industrial Policy Action Plan
NEMA	National environmental management act
R-CTFL	Retail-Clothing, Textile, Footwear and Leather
SA	South Africa
SAAA	South African Apparel Association
SAC	Sustainable Apparel Coalition
SC	Supply chain
SSRC	Strategic planning: resource capabilities
SSC	Strategic sourcing compliance
TCO	Total cost of ownership

CHAPTER 1:
INTRODUCTION AND BACKGROUND

1.1   INTRODUCTION

Procurement is a vital organisational function as it contributes to cost reduction and profit elevation. Furthermore, the procurement function assists organisations to buy much-needed resources from suppliers at reasonable costs (Bowersox, Closs, Cooper & Bowersox, 2020:123). Procurement addresses the organisation's operational requirements to procure quality goods and services, minimise costs and increase the bottom line (Jin & Cendrola, 2019:5). Ramphoma (2020:57) advocated that 50% to 60% of the total expenditures should be met through procurement. As such, procurement plays a significant role in all organisations, including the clothing industry. To this end, the clothing industry has adopted a range of procurement practices, such as need identification, supplier selection, design specification, sampling, contracting, follow-up, expediting and evaluation (Yue, 2022:143). The importance of procurement has been widely recognised in South Africa (SA), and as such, SA authors have found that procurement assists in ensuring sustainability, and in promoting the socio-economic objectives of previously underprivileged societies (Badenhorst-Weiss *et al.,* 2022:204). However, the promotion of socio-economic objectives through procurement in the South African clothing industry faces some challenges due to the significant presence of clothing imports from Asian countries, particularly from China that has a strong market hold (Jenkin & Hattingh, 2022:40; Bag *et al.*, 2023:3; Gornostaeva, 2023:15). For example, Arrigo (2020:14) indicated that most of the fabrics used in the SA clothing industry are sourced from Asian countries. Similarly, a study by Whitfield and Mkabela (2023:16) and Worku (2019:98) confirmed that 74% of the entire clothing and textile sector, including footwear, is imported.

It is also discouraging to discover that clothing retail shops prioritise global sourcing over local sourcing in their procurement practices to cut costs and enhance quality (CottonSA, 2019:1). According to Netshishivhe (2021:3), retail clothing shops do not order from local manufacturers because there is the perception that local manufacturers lack the required skills, technical capabilities and resources. Netshishivhe (2021:3) and Veitch (2021:2) also maintained that foreign manufacturers and clothing shops dominate the industry due to the low import tariffs that are posed

on international trade regulations. In addition, when local clothing manufacturers are contracted, they are subjected to bargaining powers, as retailers dominate the negotiation process by setting price points which manufacturers are expected to meet (Nabee & Swanepoel, 2021:4; Veitch, 2021:6; Jenkin & Hattingh, 2022:40). This results in SA clothing manufacturers finding themselves in a vulnerable position during negotiation and contracting (Moloi, 2019:89; Perry & Wood, 2019:8). It is evident that issues such as the lack of resources, finance and technology, and support from SA retail shops and the government are crippling the industry (Arrigo, 2020:7; Jack, 2020:24). In addition, poor working conditions, fast fashion production and low salaries are pervasive in the clothing industry. This compromises the sustainability of procurement that complies with social and environmental regulations (Fung, Choi & Lui, 2019:1). Therefore, the study aimed to investigate the procurement practices in the SA clothing industry that support the government and socio-economic objectives. The study contributes to the body of knowledge in procurement, especially as applicable to the SA clothing industry.

1.2   CONCEPTUALISATION OF THE STUDY

This section discusses the background to the study by exploring procurement practices in the clothing industry, the key benefits of procurement, the policies and regulations in the clothing industry, the sustainability of the procurement value chain, and procurement challenges experienced in the clothing industry.

1.2.1   Understanding procurement practices in the clothing industry

According to Yue (2022:143), clothing retailers initiate various procurement practices that include need generation, sourcing, pricing, contracting, supplier development, and management. These procurement practices are deemed vital, and will be discussed to support the conceptualisation of the study's problem.

- **Demand planning (DP)**

    Demand planning in the clothing industry involves trend analysis and forecasting, product concept development, the planning and design of clothing lines, cost analysis, sample approval, and specification design (Jacobs & Karpova, 2020:6; Senapati, Chattopadhyay & Chakrabarty, 2022:3; Teke, 2022:15). Accurate forecasting of clothing demand is essential. However, various issues related to

specification errors have been noted in this industry (Braglia, Marrazzini, Padellini & Rinaldi, 2020:189; Senapati *et al.*, 2022:3; Swaminathan & Venkitasubramony, 2023:3). In addition, Jenkin and Hattingh (2022:5) noted that clothing manufacturers are subjected to sudden order changes from retail shops, which further complicates the demand planning and manufacturing processes in the industry.

- **Strategic sourcing**

According to Jacobs and Karpova (2020:6) and Arrigo (2020:7), sourcing is a strategic process determining how and where garments or components will be produced or procured. Three key variables of strategic sourcing include resource capability and compliance and ordering that have been noted as key aspects in strategic sourcing practices. Jenkin and Hattingh (2022:15) indicated that retailers pay more attention to global sourcing. Dos Santos (2020:40), supported by CottonSA (2019:1) and Jack (2020:23), stated that there is a concern about suppliers in developing countries, such as South Africa, having inadequate resources and capabilities. These shortages can result in global threats to retail clothing shops and may result in them reverting back to global sourcing (Mejías, Bellas, Pardo & Paz*,* 2019:145).

Mai and Phong (2020:1229) posited that strategic sourcing is linked to social and environmental standards and supplier compliance, as environmental and social responsibilities and the examination of supplier compliance are some of the variables that may be used to evaluate qualifying suppliers in the clothing industry. There are compliance and quality issues that may lead to legal disputes and questionable actions (Mavela, 2020:50; Yao, Fan, Zhao & Cheng, 2023:2). As a result, the industry is compelled to rate and authenticate suppliers, as non-compliance affects all the parties involved, and it may lead to excessive fines and even the closure of businesses. The industry needs to be resourceful to be able to operate and compete. Strategic sourcing is negatively affected when suppliers do not have resources as this affects the competitiveness and profit of both parties. Lack of skills is a pervasive issue in the SA clothing industry (Jack, 2020:24; Netshishivhe, 2021:3). However, this is due to a lack of resources and technological capabilities, because as explained by Netshishivhe (2021:3), the lack

of resources and the limited capacity of domestic suppliers pose global threats to the industry.

- **Contracting**

The key aspects of contracting are negotiation, mutual agreement, and agreement to adhere to policies and standards. Hossain (2019:21) found that clothing buyers negotiate and establish a formal contract with a capable supplier. Various authors, including Perry and Wood (2019:8), Veitch (2021:6), and Nabee and Swanepoel (2021:1) stated that clothing retailer buyers have the upper hand over suppliers, and that this is costly to clothing suppliers. Some authors even noted that local clothing manufacturers that are contracted by retail shops are being underpaid (Moloi, 2019:89; Perry & Wood, 2019:8). This compromises fair negotiation during the contract negotiations in the procurement process. Hence, there is a need to reach mutual agreement when designing a contract. Zhang *et al.* (2023:2), Chen and Hall (2022:354) and Zhao *et al.* (2022:89) cautioned that there are issues, such as supplier bargaining power, that may crop up during contract negotiations.

However, Khan and Yu (2019:77) alleged that ensuring and measuring the compliance of supply partners enhances the appropriateness of contracts in procurement. In negotiations, according to Zsidisin and Henke (2019:414), the procuring organisation already knows the expected price to pay, the product description and specifications, and their aim is to negotiate for better deals. Various scholars, such as Joshi (2023:107), Norheim-Hansen (2023:104), Mamun and Hoque (2022:2), Buchel, Hebinck, Lavanga and Loorbach (2022:243), and Fung *et al.* (2019:1), have found that non-compliance with the procurement policies and regulations in clothing organisations occurs because most buyers in the industry lack fabric knowledge, and the quality of garment fabrics from global suppliers surpasses the quality of fabrics available from local suppliers.

- **Enterprise supplier development (ESD)**

Enterprise supplier development (ESD) is a key concept in SA that is used to build capacity and develop local suppliers to enhance their skills and competitiveness regarding technical, quality and cost factors (DTIC, 2021:38). The variables of ESD include local support and managing TCO. According to Joorst (2021:22), TCO is the direct cost obtained, and also the cost of holding and disposing of machinery

and equipment. Also, Khan and Yu (2019:6) argued that it is essential to manage TCO in manufacturing organisations as it reduces surplus. Netshishivhe (2021:39) further revealed that the industry faces high costs related to labour and production, tax, finance, and electricity. As previously noted, lack of finance is a big issue affecting the cost of doing business and productivity in the industry. Clothing manufacturers have expenses to consider when doing business and managing the entire organisation. Dos Santos (2020:40) stated that local manufacturers should be contracted, and retail shops should build relationships with these small organisations.

However, it is surprising to learn that most clothing garments procured in SA have been imported (Worku, 2019:98; Arrigo, 2020:14; Netshishivhe, 2021:3; Jenkin & Hattingh, 2022:15). According to CottonSA (2019:1) and Jack (2020:23), all these aspects have negatively affected job losses, sustainability and competitiveness, and the authors have found that the lack of local support and the influx of imports has resulted in job losses and the closure of most clothing manufacturers. Procurement practices that lead to the attainment of the socio-economic objectives of the clothing industry should focus on localisation. Therefore, there is a need to support local manufacturers in the industry in terms of capital, resources, and technological advancements, and this may be achieved through a strategic partnership (Netshishivhe, 2021:39), as discussed below.

- **Strategic partnership**

Strategic sourcing considers variables such as planning, selecting, and contracting suppliers who will fulfil the organisation's procurement needs at reasonable costs (Jacobs & Karpova, 2020:366). Netshishivhe (2021:39) explained that clothing retailers are quick to change to other complying suppliers if the suppliers do not honour their agreement. However, Chen, Shan, Yang and Xu (2023:1236) and Perry and Wood (2019:7) contended that clothing retailers should advance partnerships with suppliers, as this will result in quick responses to customer demands. However, according to Dos Santos (2020:40), the retail clothing industry has moved away from collaborating with clothing manufacturers in South Africa. Instead, they have chosen to import more affordable clothes from China. This has

compromised localisation in the industry, as partnering with local suppliers has been neglected.

1.2.2 Government policies and regulations in clothing organisations

This section discusses the policies and regulations that affect procurement practice in the SA clothing industry. The section focuses on policies and regulations, such as the National Environmental Management Act (NEMA), the industrial policy action plan (IPAP) and the Broad-Based Black Economic Empowerment Act (B-BBEE).

1.2.2.1 Procurement policies in clothing organisations

This sub-section presents a brief discussion of the government's Industrial Policy Action Plan (IPAP) and the Broad-Based Black Economic Empowerment (B-BBEE) legislation.

- **Industrial policy action plan (IPAP)**

  Barnes and Higginson (2019:8) stated that the regulation of procurement processes within the SA clothing industry falls under the jurisdiction of the SA Department of Trade, Industry and Competition (DTIC). The IPAP is one of the policies within the National Development Plan of the SA government, which provides financial support to and aims to upgrade the clothing industry and encourages clothing organisations to support local suppliers (Jenkin & Hattingh, 2022:17). Jenkin and Hattingh (2022:17) asserted that according to the Retail-Clothing, Textile, Footwear and Leather (R-CTFL) master plan, the SA government plans to achieve 65% local clothing manufacturing in 2030. The sub-section below discusses B-BBEE.

- **Broad-Based Black Economic Empowerment (B-BBEE)**

  According to Barnes and Higginson (2019:14), the R-CTFL master plan for 2030 is also aligned with the DTIC principles related to B-BBEE. It aims to increase the demographic structure of the industry to include the black South African society, particularly women, and includes the supply of funding and support. The social principle is exemplified by Section 217(2) of the Constitution, the Preferential Procurement Policy Framework (PPPF) Act 5 of 2000 and its regulations, and the B-BBEE Act 53 of 2003 and its parliamentary framework (CottonSA, 2019:1; Jack,

2020:23; Kaplan, 2020:71). However, non-compliance issues continue to affect the clothing industry, despite the various policies aimed at regulating procurement practices (Kaplan, 2020:55). As a result, it is crucial for all stakeholders to recognise the significance of sustainable procurement in the industry. NEMA is discussed in the next sub-section.

1.2.2.2   National Environmental Management Act (NEMA)

According to the South African National Environmental Management Act (NEMA) 107 of 1998, SA organisations are forced to protect the environment and the community in the areas surrounding operations (Badenhorst *et al.*, 2018:221). The clothing industry should note that sustainable sourcing emphasises a low-carbon economy to protect the environment from harm (Huttunen, 2022:9). To this end, manufacturing organisations in the clothing industry are expected to be ISO14001 compliant and to be certified (Singh & Chan, 2022:1).

1.2.3   Value of procurement in the clothing industry

Procurement adds value when it benefits the society and economy and promotes local support and job creation (Dos Santos, 2020:104). The value of procurement is also achieved through competitiveness, improved forecasting, enhanced quality fabrics and creativity, and improved collaboration and infrastructure administration and finance. In addition, the clothing industry promotes long-standing relationships with supply chain (SC) partners, which improves the processes and compliance of these SC partners (Jin & Cendrola, 2019:5; Shen, Gu & Yan, 2019:76; Braglia *et al.*, 2020:187; Jenkin & Hattingh, 2022:17). Legal and clear contracts that prevent biasness add value to procurement (Perry & Wood, 2019:8; Moloi, 2019:71). Also, the value of procurement improves when procurement addresses the environmental and social aspects relevant to organisations (Mejìas *et al.*, 2019:150). The value of procurement in the SA clothing industry is compromised due to the lack of local support, and the lack of compliance to social and environmental standards (CottonSA, 2019:1; Fung *et al.*, 2019:2; Dos Santos, 2020:40). To compound the issues, the lack of resources and funding in the industry affects the competitiveness of the industry (InvestSA, 2020:4; Veitch, 2021:54). Moreover, the issues related to poor working conditions and low wages are a concern in the industry, and this compromises the value of procurement (Mokwana, 2021:16; Netshishivhe, 2021:32).

1.2.4   Sustainability of procurement in the clothing value chain

Sustainability refers to the capability to satisfy the requirements of supply chain parties without compromising the necessities of forthcoming generations in terms of economic, environmental, and social challenges (Wisner, Tan & Leong, 2019:117). Sustainable procurement implies that an organisation's products and services achieve value and benefit to the organisation, and that it combines social and environmental ethics into the procurement process (Němcová & Tučková, 2019:1193), as briefly explained below:

1.2.4.1   Social sustainability

Social sustainability implies that an organisation's products and services achieve value and supply benefits to the organisation. It also combines social and environmental ethics into the procurement process (Němcová & Tučková, 2019:1193). Fung *et al.* (2019:2) reported that the clothing industry's non-compliance to social sustainability requirements affects the organisations' reputations and future dealings. According to Fung *et al.* (2019:2), the clothing industry needs to strive to treat workers well and ensure the environmental safety of the clothing supply chain. The clothing industry engages in fast fashion and causes harm to workers in the industry (Statista, 2021:38). For example, the clothing industry has been known to have working contracts that are detrimental to the well-being and security of workers (Jack, 2020:20).

1.2.4.2   Environmental sustainability

It is key for organisations to consider that sustainable sourcing emphasises a low-carbon economy to protect the environment from harm (Huttunen, 2022:9). Shukla and Gupta (2019:5) asserted that textile industries use harmful resources and dispose of unprocessed waste in neighbouring locations and the environment. Arrigo (2020:3) also recommended that clothing organisations should subscribe to the Sustainable Apparel Coalition (SAC) which aims to enhance environmental sustainability. Adamkiewicz, Kochasnska, Adamkiewicz and Lukasik (2022:5) stated that there is a high demand for fast fashionable clothing, and that this compromises the environment. Also, globalisation has resulted in fast fashion manufacturing, as there are currently 10 to 24 collections of fashion garments being presented yearly. Unfortunately, this has resulted in high levels of pollution (Šajn, 2019:10). This act compromises

sustainable practices in this industry, and the industry needs to apply social and environmental ethics. Environmental compliance is a significant concern (Adamkiewicz *et al.,* 2022:5), as more than 8000 chemicals are used in textiles. Furthermore, fast fashion promotes the high consumption of clothes, which contributes to waste in production (Reis, 2019:15). Hence, the industry is expected to adopt green technology in their manufacturing systems. Corporate Social Responsibility (CSR) advocates that organisations should promote a good working and social environment, and take care of the environment (Wisner *et al.*, 2019:114).

1.2.5 Procurement challenges facing the SA clothing industry

A challenge being experienced by procurement practices in SA clothing organisations is that some buying organisations prefer to source globally. There is a perception that the SA clothing industry cannot compete globally in terms of cost (Hossain, 2019:23), and therefore, SA retail organisations prefer to source globally. In addition, there is a perception that the local clothing industry lacks resources and experience (DTIC, 2021:38; Vietch, 2021:5; Jenkin & Hattingh, 2022:54). Moreover, when local clothing manufacturers are contracted, they are subjected to bargaining powers, as retailers dominate the negotiation process by setting price points which manufacturers are expected to meet (Nabee & Swanepoel, 2021:4; Veitch, 2021:6; Jenkin & Hattingh, 2022:40). There appears to be some dissatisfaction among South African clothing manufacturers regarding the government's decision to reduce import tariffs (Dos Santos, 2020:92; Netshishivhe, 2021:21). This has led to a surge in imported clothing that has had an adverse effect on the growth of the local industry, resulting in the closure of several clothing organisations. Furthermore, lack of compliance with social and environmental standards also poses challenges in this industry (Fung *et al.*, 2019:2; Khan & Yu, 2019:65). Furthermore, the lack of support and complexity in manufacturing and fashion seem to be the prominent challenges in this industry (Van Tilburg, Krikke & Lambrechts, 2022:2; Jacobs & Karpova, 2020:364; Pooe & Pillay, 2019:35).

1.3   PROBLEM STATEMENT

The strategic importance of procurement in clothing organisations lies in creating value by benefiting society and the economy. It can promote job creation, localisation and competitiveness, while improving socio-economic objectives (Badenhorst-Weiss *et al.*, 2018:101; Badenhorst-Weiss *et al.*, 2022:204). By procuring products and materials locally, the organisation can oversee the whole procurement process, and this can assist organisations in improving their quality standards (CottonSA, 2019:1; Khan & Yu, 2019:70; Tsolakis, Zissis & Tjahjono, 2021:164, Netshishivhe, 2021:3, Mejías *et al.*, 2019:145; Gornostaeva, 2023:15; Bag *et al.,* 2023:16). However, according to Jenkin and Hattingh (2022:11), the procurement practices of the South African clothing industry have been negatively affected by retail clothing buyers purchasing garments from international clothing suppliers instead of supporting local suppliers. Whitfield and Mkabela (2023:16) and Worku (2019:98) confirmed that 74% of the entire clothing and textile sector, including footwear, is imported. This has reduced local clothing suppliers' margins and resulted in job losses (Dos Santos, 2020:104). In addition, Perry and Wood (2019:8) noted that organisations do not adhere to contracts, which has affected productivity in the industry. Various scholars, such as Joshi (2023:107), Norheim-Hansen (2023:104), Mamun and Hoque (2022:2), Buchel *et al.* (2022:243) and Fung *et al.* (2019:1) have found that the non-compliance with procurement policies and regulations in clothing organisations occurs because most buyers in the industry lack fabric knowledge, and the quality of garment fabrics from global suppliers surpasses the quality of fabrics available from local suppliers.

Extensive research has been conducted on the topic of procurement in the clothing industry. For example, a study by Yuen and Cheng (2013) investigated the design of a research framework for strategic procurement in the textile and apparel sourcing companies in Hong Kong. The study by Turker and Altuntas (2014) focused on the development of a sustainable supply chain management map in the textile and apparel sector. Also, Su (2013) designed and developed a SEM using a multi-theoretical perspective to evaluate the connection or relationship between strategic sourcing, the buyer-supplier relationship, supplier evaluation and sourcing performance. The theoretical model developed by Koprulu and Albayrakoglu (2007) appears to be an extension of the model developed by Lasch and Janker (2005). The procurement practice framework by Koprulu and Albayrakoglu (2007) recognised that the analytical

hierarchy process (AHP) model assists in improving procurement practices in the clothing industry. The aforementioned authors affirmed that the clothing industry may adopt the AHP model when choosing suppliers and building a relationship-management strategy.

The procurement practice framework developed by Early (2017) designed a theoretical model that concentrates on analysing the following six stages of the procurement practice, namely, sourcing, forecasting, negotiation, contract, ordering, and lead time, as related to social compliance. However, the models designed by the authors mentioned above, specifically focused on the international clothing industry and did not consider the clothing industry in developing countries that face unique challenges due to global competition and its dominance, and the varying policies that apply to the domestic industry. Based on the discussion above, it is evident that there is a need for more studies on procurement in the clothing industry, particularly in South Africa, to support the development of the industry and to contribute to the socio-economic objectives, job creation, localisation, sustainability, and competitiveness of the industry. Some of the research on the clothing industry in SA include the studies by Staritz, Morris and Plank (2016), Ramdass and Kruger (2011), and Godfrey (2015) which focused on dynamic shifting in the apparel export industry in sub-Saharan Africa to combat apparel exports, globalisation in the clothing industry and global, regional and domestic apparel value chains.

While the research mentioned above added to the body of knowledge, there is still a lack of studies that address local sourcing that promotes the socio-economic objectives, and which may contribute to advancements in the welfare of individuals through local job creation and local economic upliftment. This study aims to explore procurement practices in the clothing industry to develop a framework to promote the socio-economic objectives and improve the competitive performance of the industry. Therefore, the question that defines the problem examined in the study can be stated as follows:

What kind of procurement framework can the SA clothing industry use to promote socio-economic objectives?

The specific research questions that were formulated for the study are as follows:

1. How is procurement conducted in the SA clothing industry?
2. What are the relevant policies and regulations governing procurement in the SA clothing industry?
3. What is the value of procurement in the SA clothing industry?
4. How sustainable is procurement in the clothing value chain?
5. What are the procurement challenges faced by the SA clothing industry?
6. Are there differences in the application of procurement practices by the clothing industry stakeholders?

1.4   RESEARCH OBJECTIVES

The primary research objective of the study can be stated as:

To develop a procurement framework in the South African clothing industry to enhance socio-economic objectives.

To achieve the primary research objective, as stated above, the following secondary research objectives were formulated:

1. To determine how procurement is conducted in the SA clothing industry.
2. To determine the procurement policies and regulations governing the SA clothing industry.
3. To investigate the value of procurement in the SA clothing industry.
4. To investigate the extent of sustainability in the procurement clothing value chain.
5. To determine procurement challenges faced by the SA clothing industry.
6. To determine the differences in the application of procurement practices by clothing industry stakeholders.

To address Research sub-objective 6, the study formulated hypotheses, as indicated in Table 1.1 below.

Table 1.1:   Research hypotheses to address Research sub-objective 6

	Null hypothesis		Positive hypothesis
H01a	Procurement practices are not affected by NEMA.	**H1a**	Procurement practices are affected by NEMA.
H01b	Procurement practices are not affected by procurement policies and regulations.	**H1b**	Procurement practices are affected by procurement policies and regulations.
H02	Procurement practices do not affect the value of procurement.	**H2**	Procurement practices affect the value of procurement.
H03	Procurement practices do not affect environmental sustainability.	**H3**	Procurement practices affect environmental sustainability.
H04	Procurement practices do not affect social sustainability.	**H4**	Procurement practices affect social sustainability.
H05	Procurement practices are not affected by lack of support.	**H5**	Procurement practices are affected by lack of support.
H06	Procurement practices are not affected by complexity.	**H6**	Procurement practices are affected by complexity.

Source: Researcher's own compilation

1.5   RESEARCH DESIGN AND METHODOLOGY

This section presents a brief discussion of the research design and methodology used in the current study. The section presents a discussion of the research design and strategy, population and sampling, data collection and research instrument.

1.5.1   Research design

The current study employed a quantitative research method. According to Saunders, Lewis and Thornhill (2019:173), the research philosophy of positivism is quantitative. A quantitative research design was deemed suitable for the current study because the procurement practice processes relevant to the industry were measured by analysing the variables to determine the extent of application among stakeholders.

1.5.2   Research strategy

A research strategy indicates how a study will address the study's research questions (Saunders *et al.*, 2019:153). As part of the research methodology, the current study made use of a survey approach. Surveys have long been an established and respected tool in the field of organisational and management research. It is a tool

which assists in answering the research questions and objectives of the study through the use of statistical data-collection methods (Mukherjee, 2020:10). For the purposes of the current study, standard information was obtained from a sizeable population of Cut-Make-Trim (CMT) clothing manufacturers in KwaZulu-Natal, the Western Cape and Gauteng.

1.5.3   Population and sampling

This section deliberates on the population and sample as applied to the current study.

1.5.3.1   Targeted population

The clothing industry in South Africa is spread across different provinces, but most manufacturers are located in the Western Cape, KwaZulu-Natal (KZN), Free State, and Gauteng (Veitch, 2021:10). Veitch reported there are only 800 registered clothing manufacturers in SA, and that they are spread across SA. The current study focused on the whole population in Western Cape, KwaZulu-Natal (KZN) and Gauteng. Therefore, all the clothing manufacturers had an opportunity to participate in the study.

1.5.3.2   Sampling and sample size

Acharyya and Bhattacharya (2020:169) explained that when conducting research or analysis, it is often impractical or impossible to study an entire population. Therefore, a sample is selected from the larger population to represent it. Due to the closure of many clothing manufacturers, as well as the effect of Covid-19, the researcher was unable to access many of the manufacturers. Therefore, the study adopted a snowball sampling approach (Dos Santos, 2020:40; Mokwana, 2021:12), which meant that respondents who completed the survey made referrals to other clothing manufacturers still in operation (Creswell & Creswell, 2018:212; Bairagi & Munot, 2019:94; Acharyya & Bhattacharya, 2020:169). The current study received a total of 621 responses which form the sampling size of the study.

1.5.4   Data collection and research instrument

Both primary and secondary research methods were used to collect data. The research instrument was validated using a pilot test that was tested on 15 clothing managers and procurement specialists (Maree & Pietersen, 2020:262). Additionally, exploratory factor analysis and reliability tests were employed to statistically validate the research instrument (Adams & Lawrence, 2019:193; Eisend & Kuss, 2019:144).

14

1.5.5 Data analysis

A study by Carter, Andersen, Stagg and Gaunt (2023:6) found that the success of any research project depends largely on the quality of data collected and the rigour with which it is analysed and presented. The methodology employed in the current study involved the collection of data through the use of a comprehensive and structured survey. The responses obtained were subjected to rigorous analysis, and both descriptive and inferential statistical methods were utilised to gain deeper insights into the research questions. This approach ensured that the results were accurate and reliable, enabling the study to draw valid conclusions. The R-software JASP 0.16.3 (2022) was used to perform descriptive data, and SAS 9.4 (2020) software was employed to perform SEM. The coding of the information was crucial to allow for accurate interpretation and analysis.

1.5.6 Descriptive data analysis

The current study utilised a four-point Likert scale in the instrument to gauge each item. The study analysed all the variables quantitatively, compared means and standard deviations, and presented the distribution of scores in percentages. All sections of the measuring instrument were descriptively analysed.

The instrument consisted of the following:

- Section A of the instrument consisted of the demographic information of the respondents. The sub-sections of Section A consisted of the type of organisation, the size of the organisation, the number of years in business, the number of permanent employees and the number of years in operation.

- Section B dealt with the procurement practices used in the clothing industry, including variables such as demand planning (DP), strategic sourcing, contracting, enterprise supplier development (ESD), and strategic partnerships.

- Section C included the government policies and regulations.

- Section D included the value of procurement.

- Section E dealt with the sustainability of procurement in the clothing value chain, and

- Section F examined the challenges of procurement practice.

1.5.7   Structural equation modelling (SEM)

SEM is a statistical method that incorporates regression and factor analysis to evaluate research hypotheses involving multiple variables. The current study utilised SEM to examine the relationship between the variables and to test the model fit and hypotheses. To analyse these intricate connections accurately, it is necessary to use multivariate statistical techniques that can forecast one or more results through various potential routes (Hair, Page & Brunsveld, 2020:458).

1.6   SCOPE OF THE STUDY

The study examined procurement in the SA clothing industry. It also focused on procurement practices that lead to the attainment of socio-economic objectives. The current study investigated the following variables of procurement practice: demand planning (DP), strategic sourcing, contracting, enterprise supplier development (ESD), strategic partnerships, policies and regulations, the value of procurement, sustainability of procurement, and challenges in procurement.

1.7   CHAPTER OUTLINE

The outline of the study is as follows:

Chapter 1: outlined the title of the study. It provided the introduction and conceptualisation of the study, and presents the problem statement, research design and methodology, the scope of the study and the outline of chapters in the study.

Chapter 2: provides an overview of the study, gives definitions and terminologies according to various authors and discusses the evolution of procurement over the years. This is followed by a broad literature review of the importance of procurement, theories on procurement, and a detailed discussion of general procurement practices in organisations. The third section outlines procurement challenges, establishes the future of procurement in organisations, and summarises the conclusions of the discussions in this chapter.

Chapter 3: provides an overview of the clothing industry globally and in South Africa, explores procurement practices, the value of procurement, and government regulations governing the clothing industry as related to procurement practices. Procurement theories relevant to the clothing industry are discussed, and attempts are

made to ascertain the level of sustainable procurement in the clothing industry, and the procurement challenges that affect the clothing industry.

Chapter 4: discusses contextualised theories relating to procurement practices and the instruments used by Su (2013) and Koprulu and Albayrakoglu (2007), adopted from Lasch and Janker (2005) and Early (2017) to address procurement practices in the clothing industry. These conceptual frameworks/ models were identified and recognised and led this study to develop the hypothesised model of an instrument for developing procurement practices in the SA clothing industry. It identifies the relationship between the variables concerning procurement practices in the clothing industry and previous empirical evidence relating to these variables.

Chapter 5: outlines the research design and methodology, explaining the chosen methods and their relevance to the research problem. It discusses the research design, philosophies, approach, methodological research choice, research strategy, demarcation of the population, sampling procedure, and data collection and analysis. The chapter concludes with some ethical considerations concerning the research study.

Chapter 6: reports on how the validity and reliability of the measuring instrument were validated and discusses the descriptive data analysis. The demographics of the respondents' descriptive statistics is discussed. Key variables in this study, namely, demand planning (DP), strategic sourcing compliance (SSC), strategic planning: resource capabilities (SSRC), contracting mutual agreement (CMA), contract negotiation (CN), contracting policy and standards (CPS), enterprise supplier development (ESD) (local support and TCO), strategic partnership, government policies and regulations, the National Environmental Management Act (NEMA), the value of procurement, social sustainability, environmental sustainability, lack of support and complexity of procurement are deliberated.

Chapter 7: presents the results and discussions of the SEM. They validate the model and hypotheses. The is chapter also presents the structural relationships of the variables in the hypothesised and final SEM models linking procurement practices with NEMA, government policies, procurement value, environmental sustainability, social sustainability, lack of support and complexity.

Chapter 8: links the research objectives with the results. The research questions are revised, and the results of the study are discussed. The chapter also presents a summary and conclusion drawn from the findings to inform the framework for improving procurement practices in the clothing industry of SA. The chapter concludes with a discussion of the study's contribution and limitations that were drawn from the study and provides a scope for future research.

CHAPTER 2:
EXPLORING PROCUREMENT PRACTICES

2.1   INTRODUCTION

Chapter 1 discussed the conceptualisation and background of the study. In this chapter (Chapter 2), there are six main sections, beginning with an overview of the procurement, which provides definitions and terminologies according to various authors and includes historical development of procurement. This is followed by a broad literature review on the importance of procurement, models supporting procurement practices are also outlined with a detailed discussion of general procurement practices in organisations. The third section outlines procurement challenges, establishes the future of procurement in organisations, and summarises the conclusions of the discussions in this chapter.

2.2   OVERVIEW OF PROCUREMENT

This section presents an overview of procurement in terms of its definitions, terminologies, historical development, and the importance of procurement.

2.2.1   Definitions of procurement

According to various authors, there are a range of debates surrounding the definition of procurement. For example, Makinde, Selepe, Munyai, Ramdass and Nesamvuni (2022:13), Wisner *et al.* (2019:39) and the CSCP (Certified Supply Chain Professionals) (2020:20) defined procurement as the action of obtaining goods, services, raw materials, equipment, and supplies to meet the demand. For their part, Zsidisin and Henke (2019:272) view procurement as a strategic position concentrating on sourcing and acquiring products and services. Similarly, Sachiele (2019:45) defined procurement as a strategic sourcing practice that focuses on supply scheduling, choosing, and contracting suppliers. According to Hosseini and Khaled (2019:207), procurement involves obtaining products with the "five rights" in mind. This includes obtaining the right number of products, in the right quantity, at the right time, at the right cost, and with the right quality to ensure a reliable supply. Lau*,* Ng and Alarid (2019:44) regard procurement as an organisational function certifying the classification, sourcing, and administrating of external materials needed to achieve its

strategic plan, and they echoed that there is a unity between procurement and supply chain as both functions aim to achieve advancements and enlarge the purchasing area. Several authors noted that procurement contributes to the sustainable and socio-economic objectives of underprivileged societies (DTIC, 2019; Jacobs & Karpova, 2020:366; Dos Santos, 2020:40; Altenburg, Chen, Lütkenhorst, Staritz & Whitfield, 2020:35).

Table 2.1 below summarises the various definitions of procurement, as formulated by different authors.

Table 2.1:   Summary of definitions according to various scholars

Definitions	Authors
Procurement is the action of obtaining goods, services, raw materials, equipment, and supplies to meet the demand.	Makinde *et al.* (2022:13), CSCP (2020:20), Wisner *et al.* (2019:39)
A strategic position that concentrates on sourcing and acquiring products and services.	Zsidisin and Henke (2019:272)
Strategic sourcing practice that focuses on supply scheduling, choosing, and contracting suppliers.	Schiele (2019:45)
Acquisition of the "five rights" obtaining the right number of products, at the right quantity, at the right time, at the right cost and right quality to determine the possible supply.	Hosseini and Khaled (2019:207)
An organisational function certifying the classification, sourcing, and administering of external materials needed to achieve its strategic plan.	Lau *et al.* (2019:44)
Procurement is a unity phase between procurement and supply chain to achieve advancements and enlarge purchasing.	Lau *et al.* (2019:44)
Procurement assists in ensuring sustainability and in promoting the socio-economic objectives of underprivileged societies.	Jacobs & Karpova (2020:366); Dos Santos (2020:40); Altenburg *et al.* (2020:35); DTIC (2019)

Source: Researcher's own compilation

As seen in the table above, procurement has many definitions. For the purpose of the present study, the definitions formulated by Jacobs and Karpova (2020:366), Dos Santos (2020:40), Altenburg *et al.* (2020:35)and DTIC (2019) were be adopted, as these definitions present procurement as a tool that may be used to promote socio-economic objectives.

The current study also aimed to determine the value of procurement in supporting localisation. According to the DTIC (2019), local support forms one of the government programmes supporting local production in SA. The current study examined the procurement practice that promotes the socio-economic objectives of the SA clothing industry through job creation, sustainability, and local economic infrastructure upliftment. Various scholars, such as Wisner *et al.* (2019:39), Dlamini (2016:4), Johnson and Flynn (2015:4), and Mbanje and Lunga (2015:14), noted that the term 'procurement' is used interchangeably with purchasing, while Lysons and Farrington (2016:12) posited that procurement is centred around the correct usage of terminologies.

2.2.2   Terminologies associated with procurement

The scope of procurement is wide, and includes terminologies such as purchasing management, strategic sourcing, supply management, supply chain management, procurement best practice, supplier development, supplier partnership, supplier relationship management, and sustainable procurement. These terminologies are discussed in Table 2.2 below.

Table 2.2:   Procurement terminologies and descriptions according to various authors

Terminologies	Description	Sources
Purchasing management	Relates to the administration of all activities that organisations are involved in when buying goods and services.	CSCP (2020:37)
Strategic sourcing	Consists of procedures relating to planning, choosing, and contracting suppliers to determine the possible supply.	Zijm *et al.* (2019:47)
Supplier management	An act of administering suppliers, and the main contracts to ensure that they honour business agreements at the set value.	Joshi (2023:107); Norheim-Hansen (2023:104)
Supply chain	Includes all stakeholders involved in transforming fabrics, materials, and incomplete products to finished products.	Badenhorst-Weiss (2019:323)
Supply chain management	Management of aligned value-adding activities and network associations for a long period of value chain welfare.	Boateng (2016:534)
Supplier development	Includes the initiative of the organisation to highlight supplier shortcomings and proficiency, and to assist in enhancing supplier performance.	Joshi (2023:107); Norheim-Hansen (2023:104)
Supplier partnership	This term is referred to as a strategic alliance, which is a formal association amongst organisations involved in the joint allocation of data, perils and benefits.	Yin *et al.* (2023:4)
Supplier relationship management	It is an interface between the organisation and its supplier, and involves supplier partnership administration through a structured process.	Joshi (2023:107); Badenhorst-Weiss (2019:322-323)
Sustainable procurement	Sustainable procurement emphasises a low carbon economy to protect the environment from harm.	Norheim-Hansen (2023:104); Saussay and Zugravu-Soilita (2023:3); Wisner *et al.* (2019:424)

As indicated in Table 2.2, terminologies in procurement were discussed according to various authors. The discussion about historical development of procurement is presented below.

2.2.3 Historical development of procurement

In the past, procurement focused on the traditional processes that focused on cost reduction, in contrast to the recent procurement requirements that focus on the planned approaches to gain a competitive edge (Tukuta & Saruchera, 2015:3). Bowersox *et al.* (2020:122) and Mbanje and Lunga (2015:13) confirmed that procurement was not given special attention as it was regarded as administrative work. However, Tukuta and Saruchera (2015:1) indicated that procurement practice started gaining recognition in the years from 2400 to 2800 BC, with the order requisition of 50 containers of smooth fragrant lubricant weighing 17.01 kilograms. Lysons and Farrington (2016:9) commented that the awareness of and advances in procurement started in the American railroads after the 1850s, but procurement was not viewed as a key contributor to the organisation's success or achievement. In the 1900s procurement gained recognition due to the critical role it played in acquiring war supplies (Lysons & Farrington, 2016:9). In the 1930s, procurement was perceived as a management activity (De Villiers, 2017:3). The situation changed in the 1940s, when the procurement department functions recognised the duty of the procurement agent in searching for suppliers (Monczka *et al.*, 2016:27). In the 1960s, procurement actions were notable, as competitive prices were a key concern in establishing a partnership with suppliers (Lysons & Farrington, 2016:10).

In the 1970s, Monczka *et al.* (2016:7) proclaimed that procurement was seen as part of the design for a comprehensive market approach. Moreover, in the 1970s, international competition started as local organisations in the United States (US) started gaining international market share (Lysons & Farrington, 2016:10). In the 1980s, Monczka *et al.* (2016:7) indicated that, in procurement, organisations focus more on new product design and on improving their current product offering, procedures and services. The focus on procurement cost and surplus reduction emerged in 1980 (Khan & Yu, 2019:6). In the 1990s, Monczka *et al.* (2016:7) stated that procurement started to focus more on technical developments and innovations and supplier product offerings. In 2000, Lysons and Farrington (2016:10) attested that procurement and supply chain underlined the building of extended supplier partnerships, the establishment of contracts, early supplier involvement in product design establishments, supplier growth, and pricing. In 2016, various authors, such as Dlamini (2016:6) investigated strategic procurement and the establishment of

strategies to achieve procurement goals. In 2018, Badenhorst *et al.* (2018:88) theorised procurement as a practice that should promote industrialisation and socio-economic objectives. From 2019 onwards, procurement that supports local content and B-BBEE has been intensively deliberated (Badenhorst-Weiss *et al.,* 2022:204; Altenburg *et al.*, 2020:35; DTIC, 2021). Table 2.3 below presents a summary of the history of procurement.

Table 2.3:   The history of procurement as presented by various authors

Procurement developments	Authors	Years
Recognition of procurement.	Tukuta and Saruchera (2015:1)	2400 - 2800 BC
Awareness of procurement advances.	Lysons and Farrington (2016:9)	1850s
Procurement was seen as the contributor to organisational success and was used to buy war supplies.	Lysons and Farrington (2016:9).	1900s
Procurement was recognised as a management activity.	De Villiers (2017:3)	1930s
The procurement department functions recognised the duty of procurement agent in searching for suppliers	Monczka *et al.* (2016:27)	1940s
Competitive prices were key to establishing a supplier partnership. Procurement was seen as a design for comprehensive market approach.	Lysons and Farrington (2016:10); Monczka *et al.* (2016:7)	1960s
International competition started.	Lysons and Farrington (2016:10)	1970s
Procurement focuses on new product design, procurement cost, and surplus reduction.	Monczka *et al.* (2016:7); Khan and Yu (2019: 6)	1980s
Procurement started to focus on technical developments and innovations and supplier product offerings.	Monczka *et al.* (2016:7)	1990s
The procurement focus increased to extended supplier partnerships, contract establishments, early supplier involvement in product design establishment, supplier growth and pricing.	Lysons and Farrington (2016:10) Badenhorst-Weiss *et al.* (2015:39)	2000s
Establishing strategies to adopt in achieving procurement goals.	Dlamini (2016:6)	2016

Procurement developments	Authors	Years
Procurement promotes industrialisation and socio-economic objectives.	Badenhorst *et al.* (2018: 101)	2018
Local content.	Badenhorst-Weiss *et al. (2022:204)* Altenburg *et al.* (2020:35); DTIC (2019)	2022

As presented in Table 2.3, the history of procurement has been summarised by various authors. The table indicates the years in which procurement was recognised, the advancements in procurement up to the modern times when procurement was finally recognised as a contributor to organisational success, competitiveness, cost reduction, supplier partnership, industrialisation, and socio-economic objectives. The next section discusses the importance of procurement.

2.2.4   Importance of procurement

Several scholars have declared that procurement adds growth to organisations (Mavela, 2020:69; Wisner *et al.*, 2019:38; Pooe & Pillay, 2019:36). Since the 1980s, the importance of procurement practices has been noted in academia as a primary contributor to cost and waste reduction, supplier relationship management and supplier development (Norheim-Hansen, 2023:101; Khan & Yu, 2019:6). Koc, Ekmekcioˇglu and Isık (2023:1), Bowersox *et al.* (2020:123), and Pooe and Pillay (2019:36) concurred that procurement results in cost competency. According to Lau *et al.* (2019:38), one of the procurement objectives is to save organisations' costs. For example, Bowersox *et al.* (2020:12) asserted that in North America, the procurement of products and services in a typical production organisation amounts to roughly 55% of every dollar sale. Pooe and Pillay (2019:36) confirmed that in the construction industry material amounts to 55% to 60% of the cost, and these are accumulated through procurement. Chen *et al.* (2023:1) stated that in 2020 online procurement reached 1.4 trillion US dollars in China. For their part, Bai *et al.* (2022:3) and Wisner *et al.* (2019:38) agreed that procurement should be taken seriously to lower the cost of materials that are normally high to help contribute to the reduction of the bottom line for organisations.

Procurement assists organisations in improving new product designs, building partnerships, and building due diligence with suppliers before giving them an extensive

contract (Saputro, Figueira & Almada-Lobo, 2022:4; Josh, 2023:111; CSCP, 2020:37). In the beer industry procurement assists in improving the quality of beer supplier selection and certification and reduces cost through competitive prices and negotiation with multiple sources of suppliers (Bowersox *et al.*, 2020:124; Lau *et al.*, 2019:38). Nolan (2019:12) asserted that procurement assists in improving due diligence, which is a technique that assists in ensuring that the suppliers enter into the type of partnership that meets standard practices. Therefore, procurement assists in assessing the due diligence on procurement practices, handling supply chain threats, administering partnerships, ensuring the ongoing enhancement of supplier performance, investing in supplier's assets and supplier's procurement processes. Mavela (2020:69) argued that competition and technological support have conditioned customers to require standardised quality, quick deliveries, and customised products. Structured procurement may reduce inventory cost(s), improve production processes, and improve product-marketing channels (Hosseini, Flapper & Pirayesh, 2023:1; CSCP, 2020:68). In addition, Tsolakis *et al.* (2021:164) and Van Tilburg *et al.* (2022:1) explained that the intentional objectives of procurement are to promote collaboration within departments and develop the organisation through supply involvements.

Zhang, Jiang and Zheng (2023:3), Ahmad, Firouz and Mondal (2022:11), Bowersox *et al.* (2020:124), and Collier and Evans (2021:378) agreed and mentioned that procurement aims to promote a continuous product, parts, and material supply, invest in reduced stock-keeping, enhance quality, enhance technical systems invention through innovative suppliers, and achieve the TCO. Investing in suppliers' assets improves product delivery pipelines and promotes fast deliveries. Madzimure, Mafini and Dhurup (2020:3) and Lau *et al.* (2019:39) noted that supplier involvement in product development might achieve investment in suppliers' assets and procurement ability. Norheim-Hansen (2023:1) asserted that supplier development will also assist in enforcing suppliers to practice green manufacturing. Siqueira *et al.* (2023:2) and Altenburg *et al.* (2020:35) summarised that improved procurement leads to job creation and promotes socio-economic objectives.

Table 2.4 summarises the importance of procurement as explained by various authors.

Table 2.4:   Summary of the importance of procurement according to various authors

Importance	Authors
Procurement constitutes a high percentage of organisational spending.	Pooe and Pillay (2019:36); Wisner *et al.* (2019:38); Bowersox *et al.* (2020:12)
Procurement results in cost competency.	Koc *et al.* (2023:1); Bowersox *et al.* (2020:123); Khan and Yu, 2019:6); Pooe and Pillay (2019:36)
Promotes organisational growth.	Chen *et al.* (2023:1); Mavela (2020:69); Wisner *et al.* (2019:38); Pooe and Pillay (2019:36)
Reduces the bottom line.	Chen *et al.* (2023:1); Wisner *et al.* (2019:38)
Improves ethics and compliance.	Norheim-Hansen (2023:1); Lysons and Farrington (2016:5); Nolan (2019:12)
Reduces inventory, improves quality and technology.	Saputro *et al.* (2022:4); Bowersox *et al.* (2020:124); Lau *et al.* (2019:38)
Results in improved production, value, and services.	Hosseini *et al.* (2023:1); CSCP (2020:68)
Promotes partnerships, product design and innovation.	Zhang *et al.* (2023:3), Saputro *et al.* (2022:4); Collier and Evans (2021:378); Bowersox *et al.* (2020:124); Nolan (2019:12)
Reduces the TCO.	Zhang *et al.* (2023:3); Collier and Evans (2021:378); Bowersox *et al.* (2020:124)
Improves supplier performance.	Madzimure *et al.* (2020:3); Lau *et al.* (2019:39)
Administers supplier risk.	Lau et al. (2019:38)
Promotes job creation, socio-economic objectives, and industrialisation.	Siqueira *et al.* (2023:2); Altenburg *et al.* (2020:35)

Source: Researcher's own compilation

Table 2.4 indicates the critical role played by procurement as discussed by various scholars. The authors broadly deliberated on aspects such as supplier performance, job creation, industrialisation, value, and socio-economic objectives, which are improved through procurement. Furthermore, profound decision-making in line with relevant procurement theories should support good procurement practices.

The next section discusses how procurement is practiced in the SA clothing industry.

2.3 PROCUREMENT PRACTICES

This section presents a discussion of procurement practices in organisations. According to the scholars, Makinde *et al.* (2022:13) and Zsidisin and Henke (2019:428), effective procurement practices include the following: need identification, supplier selection, negotiation, ordering, expediting, receiving, inspection and payment. Van Tilburg *et al.* (2022:2) and Mavela (2020:30) indicated that this includes supplier development and partnership establishments. All these procurement practices, according to Wisner *et al.* (2019:38) and Pooe and Pillay (2019:36) promote efficiency in procurement and in operations. For their part, Wang (2022:165) and Mavela (2020:69) viewed procurement practices as the processes that support an organisation's movement of goods and services to enhance their current and future demands. The industry body, Certified Supply Chain Professionals (CSCP) (2020:55) asserted that procurement processes should be guided by the principles of improving the moral practices and sustainability of procurement in organisations. Tsolakis *et al.* (2021:164) and Zsidisin and Henke (2019:408) agreed that procurement practices should be directed by principles, relevant jurisdiction and law. The various theories supporting procurement practices in organisations are discussed in Chapter 3 (Section 3.3).

2.3.1 Models supporting procurement practices in organisations

The procurement practices in organisations are discussed in a variety of ways by various scholars as there are no generic procurement processes. A study by Muhwati and Salisbury (2017:866) found that the SA clothing industry's procurement practices involve design review, supplier negotiation, contracting, production and transportation of clothing garments. Hugo and Badenhorst-Weiss (2011:12) outlined a generic procurement practice by indicating the various steps of procurement as illustrated in Figure 2.1 below.
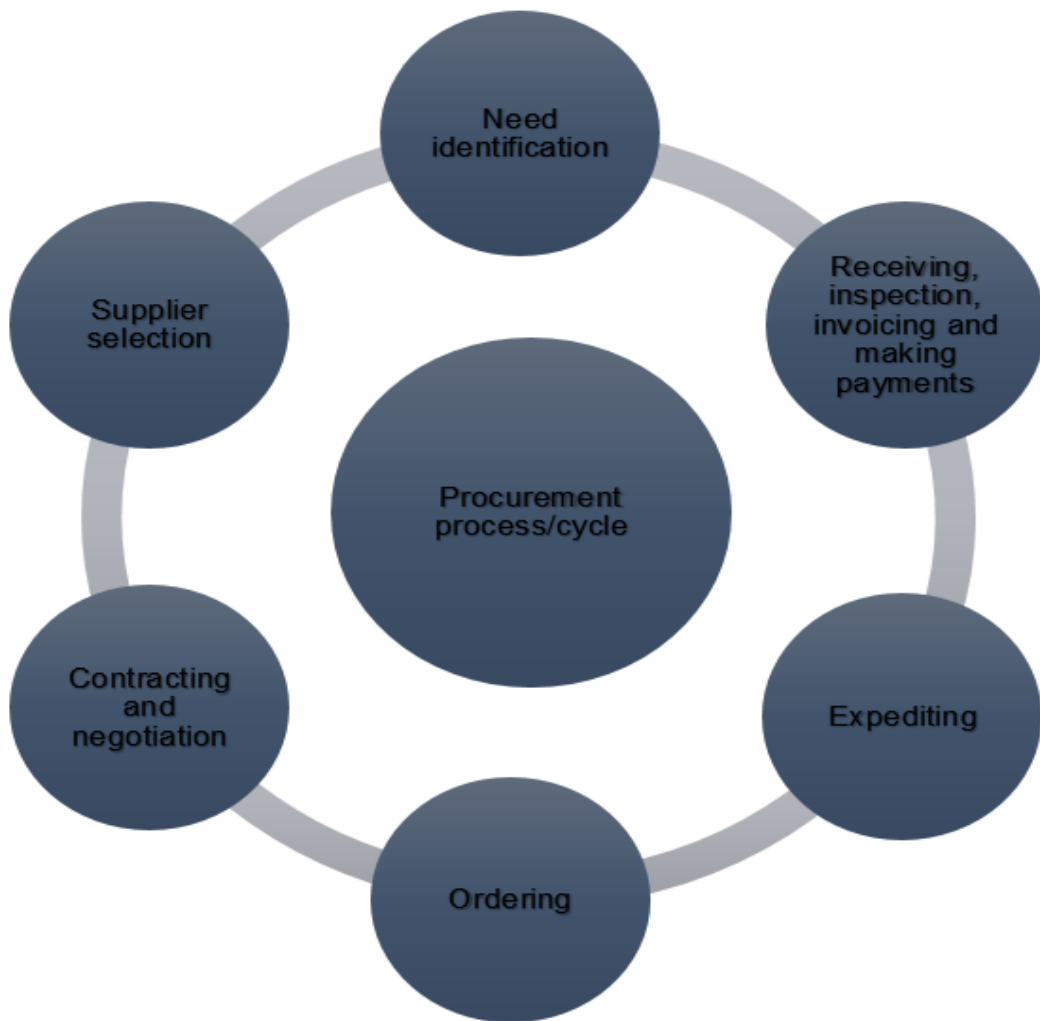
Figure 2.1:   Steps in the purchasing/ supply cycle

Source: Adapted from Hugo & Badenhorst-Weiss (2011:12).

As indicated in Figure 2.1, the procurement process constitutes various steps or activities. These processes start with need identification, supplier selection, contracting and negotiation, ordering, expediting, receiving, invoicing, and payment. However, Monczka, Handfield, Guinipero and Petterson (2016:50) developed a range of different procurement practices, as indicated in Figure 2.2.
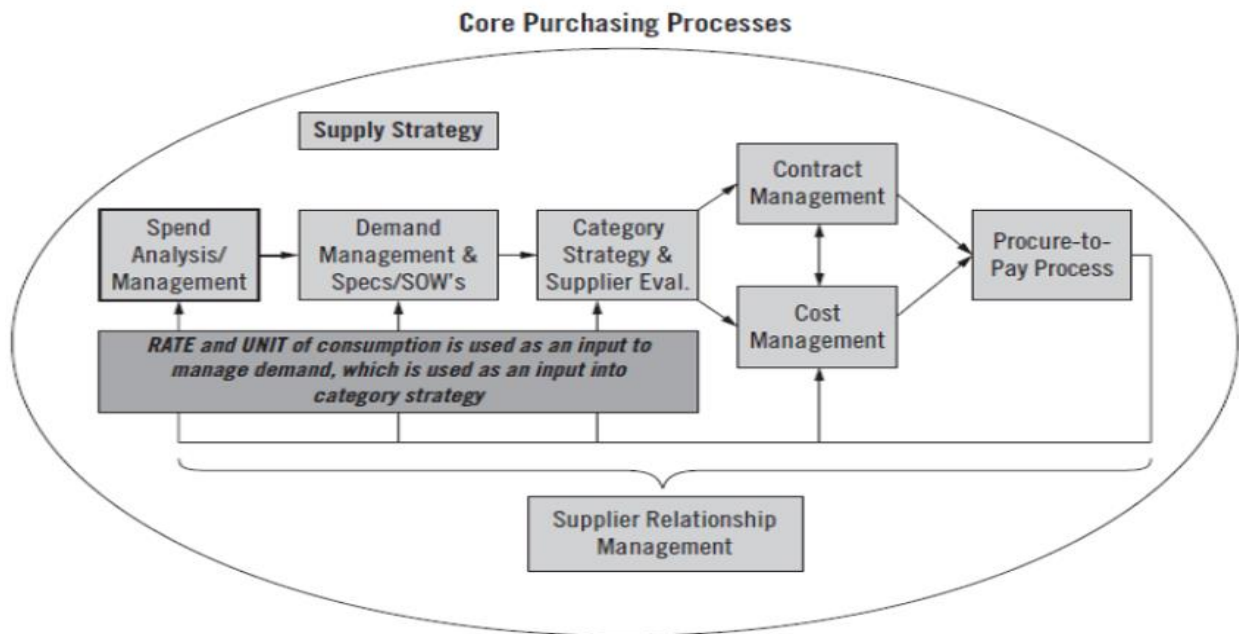
Figure 2.2:   Strategic Supply Management Processes

Source: Monczka *et al.* (2016:50).

Figure 2.2 takes us through the strategic supply management process of Monczka *et al.* (2016:50) which adopted the following core procurement processes: Spend analysis management (analysis of customer spending) and demand management, followed by category strategy and supplier evaluation to determine supplier capabilities, operational risk, and external risk. Monczka *et al.*'s (2016:50) procurement practice also adopted processes such as contact and costing management, and the procure-to-pay process. All these processes are deemed to assist in managing the supplier relationship.

Figure 2.3 shows how the procurement practices applied by Bäckstrand, Suurmond, Van Raaijc and Chen (2019:5) replicated the procurement practice by Van Weele (2018:9).
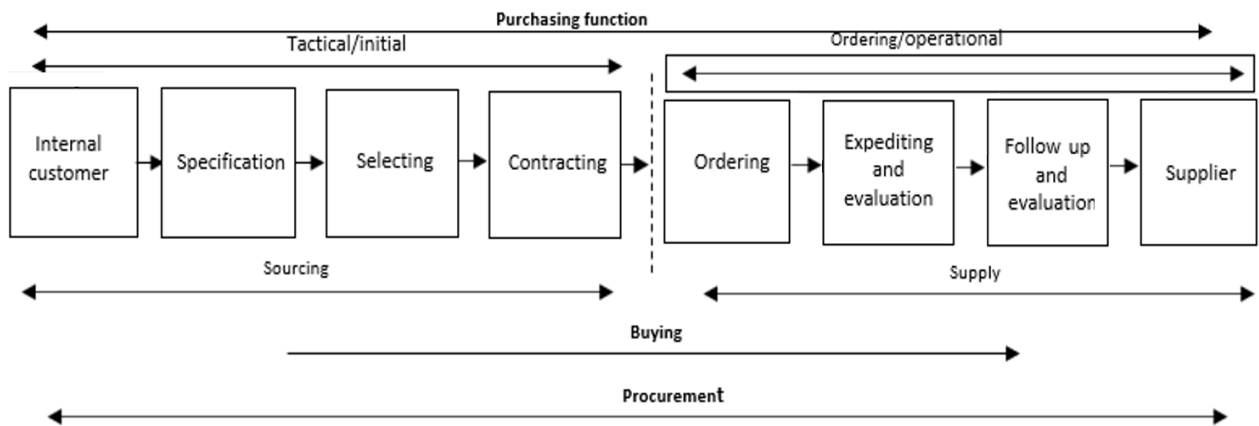
Figure 2.3: A linear process model

Source: Bäckstrand *et al.* (2019:5) (Reproduced with the permission of Arjan van Weele from Van Weele, 2018:9)

The procurement process, as presented in Figure 2.3, was developed by Van Weele (2018:9) and it was referred to as a linear process model. The figure explains the procurement process from the tactical and operational level. The tactical level in this regard is referred to as the initial stage of procurement, while the operational level is called the ordering stage. Bäckstrand *et al.* (2019:5) noted that the model (Figure 2.3) proposes a procurement practice divided into six linear steps, split into a tactical section (specification, selection, and contracting) and an operational section (ordering, monitoring, and evaluation). Van Raaij (2016:14) designed a framework for procurement practice that was named the Purchasing and Supply Management (PSM) Wheel. Van Raaj's PSM Process Wheel, as presented in Figure 2.4, illustrates the tactical, operational, and strategic level of procurement practices.

Figure 2.4:   The Purchasing and Supply Management (PSM) Process Wheel

Source: Van Raaij (2016:14)

The PSM Process Wheel illustrated in Figure 2.4 may be seen as an extension of the procurement practice designed by Hugo and Badenhorst-Weiss (2011:12), and also that of Van Weele (2018:9) and Bäckstrand *et al.* (2019:5). The procurement practice developed by Van Raaij (2016) indicates the strategic level of procurement practice which involves practices such as sourcing analysis, specification of need and sourcing strategy development. Also, it includes aspects such as supplier development, supplier relationship management and performance evaluation, which are important post-transactional elements in managing supplier relationships in procurement. The PSM Process Wheel clarifies that with regard to new suppliers, suppliers go through the pre-evaluation phase, which is the selection process before approval. This is the procurement practice of searching, selecting and managing suppliers. According to Van Raaij's (2016:14) procurement practice, finding new suppliers is a one-time, linear process, while maintaining relationships with current suppliers is an ongoing effort with long-term goals.

The current study adopted the procurement practice developed by Van Raaij (2016); however, the study summarised the practice into five processes, namely, demand planning, strategic sourcing, contracting, ordering, supplier development and partnership. The procurement practice adopted by the current study is presented in Figure 2.5 below.
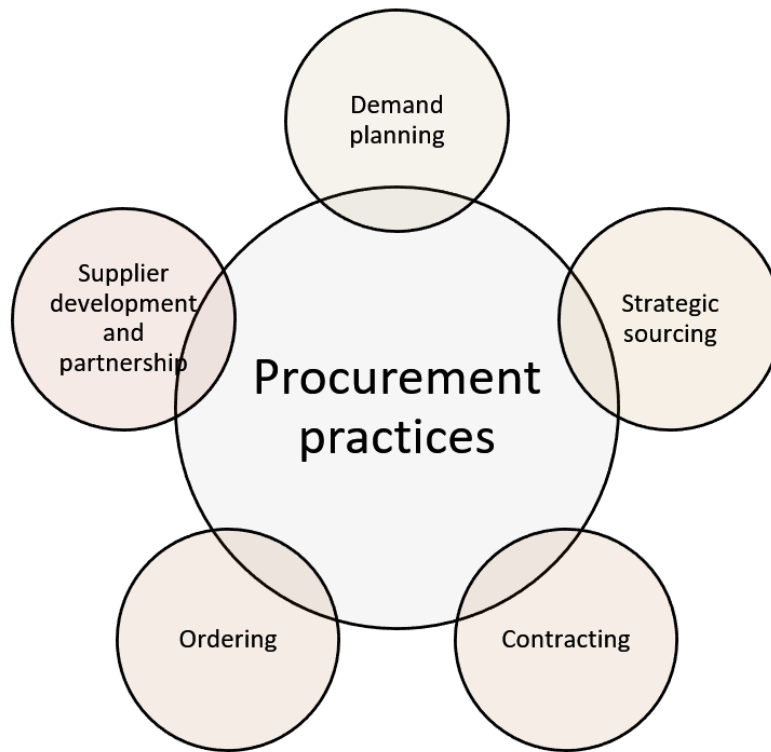
Figure 2.5:   Procurement practices adopted by the current study

Source: Adapted from Van Raaij (2016:14)

The proposed procurement processes are outlined below with consideration of the views from various scholars in the field of procurement.

2.3.1.1   Need identification

Tsolakis *et al.* (2023:164), and Khan and Yu (2019:53) commented that there is a need to clearly outline the product requirements to suppliers and the services procured from suppliers. Organisations might need to procure raw supplies, products to resell, and maintain products or services, and machinery or services (Lau, Ng & Alarid, 2019:39; Makinde *et al.*, 2022:21; Joshi, 2023:107). According to Khan and Yu (2019:53), procurement is there to fulfil the various needs of organisations; the procuring department is requested to procure the required products, and the procuring department needs to submit a specification indicating the exact requirement. Tsolakis

et al. (2021:164) and Kamau, Van Biljon and Arnolds (2020:219) confirmed that the supplier's potential is evaluated by their capability to deliver the correct products on time. According to the Certified Supply Chain Professionals (CSCP) (2020:11), procurement organisations should research product prices, and as part of this process, a list of prices and quotes may be requested telephonically from various suppliers before suppliers are chosen. The CSCP (2020:20) indicated that in determining procurement needs, the focus should be on the strategic, traditional, and added standards to benefit the procurement processes. Van Tilburg *et al.* (2022:3) elaborated that added standards such as assets, risk, environment, modernisation, regulatory acquiescence, transparency, and societal and political issues must be considered in product development and when building partnerships.

2.3.1.2 Supplier selection

Pertinent suppliers are identified when there is a need to procure a particular product, and this step is known as source selection (Bai, Zhu & Sarkis, 2022:3; CSCP, 2020:34). According to Khan and Yu (2019:54), buyers should create a list of suppliers to be shortlisted and quoted. The abovementioned authors indicated that suppliers are sourced from trade journals, yellow pages, magazines, tender documents, internet searches, second parties and trade expositions. Schiele (2019:45) and Zsidisin and Henke (2019:428) noted that supplier selection is aligned with strategic sourcing practices, as it focuses on supply scheduling, and choosing and contracting a supplier. The supplier with a preferred or reasonable offer should be selected (Cole & Aitken, 2019:2). Karabay (2022:1) and Wisner *et al.* (2019:53) contended that the procuring organisation may make or buy the product in demand. According to the CSCP (2020:20), assigning an external party to supply what the organisation cannot produce is often called outsourcing. Kamau *et al.* (2020:219) and Khan and Yu (2019:59) stressed that an assessment of the supplier's financial performance is necessary to mitigate the risks associated with product supply. Koc *et al.* (2023:11), Khan and Yu (2019:63) and Zsidisin and Henke (2019:432) also maintained that it is necessary to assess the workers' skills, labour relations, and the stability of the supplier's work environment to assist in preventing delivery disappointments.

Various scholars, such as Ivanov (2021:33), Kamau *et al.* (2020:219) and Jain and Salhi (2019:44), stated that suppliers should be assessed on their capacity to react to

demand instabilities and their ability to meet urgent orders. Similarly, Josh (2023:111), Mateo-Fornés *et al*. (2021:2), the CSCP (2020:69), Wisner *et al.* (2019:53), and Khan and Yu (2019:62) mentioned that the choice of a supplier should be guided by their technical and product capabilities, quality offering, achieving the TCO, reliance, efficient ordering system, information sharing, geographical location and service offering. Lelala (2019:xi) and Nolan (2019:13) added that the decision to choose a supplier should also be guided by their B-BBEE score. For example, the aforementioned authors indicated that the B-BBEE and domestic economic growth focus on "Preferential Procurement, Supplier Development, Enterprise Development, Skills Transfer and Socio-economic upliftment". Khan and Yu (2019:46) indicated that there are challenges relating to supplier selection that relate to the overall cost variation amongst local and global suppliers, and the continuous tolerance of price variations by global suppliers. In addition, the effects of long lead times on average stock holding, the value and skills level of the supplier, supplier capability in meeting recent design or development, and supplier value performance should be considered (Khan & Yu, 2019:46).

Therefore, procurement organisations often opt for international suppliers with the hope of obtaining low costs, quality, improved products, improved services, quick processes, and advanced technology (CSCP, 2020:61; Wisner *et al.*, 2019:66). However, at the same time, organisations that deal with suppliers situated abroad experience higher costs resulting from tariffs, import duties, currency exchange, customs clearance, as well as communication barricades, labour issues, cultural differences, politics, and legal issues (Tsolakis *et al.,* 2021:169; Wisner *et al.*, 2019:66). Zhang *et al*. (2023:4); Van Tilburg *et al*. (2022:4), Mavela (2020:64), and Lau *et al.* (2019:42) noted that suppliers should be chosen based on their adherence to social and environmental standards and their efforts to support green technologies. Lau *et al.* (2019:42) emphasised that suppliers should be rated in terms of their ISO Certification. Khan and Yu (2019:65) confirmed that ISO 14000 certification is a criterion used to check supplier compliance towards the environment. To aid negotiations, the suppliers being considered may be asked to provide supporting documents, such as request for information (RFI), request for bidding (RFB), request for proposal (RFP), and request for quotations (RFQ) (Byaruhanga, Muzaale & Jarbandhan, 2020:233).

2.3.1.3   *Negotiation and contracting*

Various authors, such as Yin *et al*. (2023:2), Van Tilburg *et al.* (2022:4), and Kamau *et al.* (2020:221) pointed out that procurement organisations need to conduct negotiations when establishing transactions with SC partners to reach a mutual agreement. Zijm *et al.* (2019:57) and Zsidisin and Henke (2019:414) explained that negotiation is an official way of sharing data in direct or indirect contact and involves organising and interacting to arrive at joint agreements on some issues. Zijm *et al.* (2019:57) and Zsidisin and Henke (2019:414) also stated that in negotiations, procurement organisations need to understand their goals and restrictions as well as the supplier's situation and anticipation, The above authors further commented that as soon as consensus is reached in negotiations, the deal is sealed, and the contract is endorsed. Cetemen *et al.* (2023:2), Zhao, Gu and Wang (2022:102) and Mateo-Fornés *et al.* (2021:3) agreed that a deal is sealed between partners when a contract is established, and they emphasised that the agreement terms should be stipulated in the contract.

Bag *et al.* (2023:3), Mai and Phong (2020:1229), and Zhao *et al.* (2022:89) indicated that reasonable cost and negotiation morals need to be considered when establishing the contract. Nabee and Swanepoel (2021:1) noted that late payments happen when manufacturers get paid late, affecting the organisation's total cost and cash flow. Hence, some manufacturing organisations need more resources to run the business, and therefore, lose contracts. These challenges should be deliberated on during contract establishment. The contract should contain clauses stipulating how late payments should be administered. Madzimure *et al.* (2020:2) stated that some organisations use advanced negotiation tools, such as E-negotiations systems, to negotiate specific contracts instead of phase-to-phase negotiations. Zsidisin and Henke (2019:408) asserted that some organisations use ERP systems to manage the contracts they have with suppliers. Lumineau, Jin, Sheng and Zhou (2022:85) and Byaruhanga *et al.* (2020:233) noted that standard stipulations are often implemented in a contract owing to the expenses involved in negotiating the phase, and they stressed that official power decision-making and judgements may assist in enhancing the appropriateness of the contract stipulations in procurement.

Zhang *et al.* (2023:2), Chen and Hall (2022:354), and Zhao *et al.* (2022:89) cautioned that issues such as supplier bargaining power may crop up during contract

negotiations. However, Khan and Yu (2019:77) alleged that ensuring and measuring the compliance of supply partners enhances the appropriateness of contracts in procurement. According to Zsidisin and Henke (2019:414), in negotiations, the procuring organisation already knows the expected price to pay, the product description and specifications, and the ultimate aim is to negotiate for better deals. The CSCP (2020:34) stated that procurement organisations normally have a team to negotiate for the whole organisation. Byaruhang *et al.* (2020:239) recapped that negotiating is important in procurement as it is a way to communicate the requirements and description of the procuring organisation to suppliers. The aforementioned authors also confirmed that a contract should only be established after the sourcing organisation has conducted accurate supplier evaluation and negotiations. In terms of global trade, Zijm *et al.* (2019:57) noted that commerce (incoterms) may be of assistance while negotiating in situations where the price of transportation is covered by the contract agreement. Furthermore, Zijm *et al.* (2019:57) stressed that the contract should clearly state the incoterms. There should be an agreement as to how the cost of transportation will be covered by each partner to avoid confusion. It is essential that both SC partners ensure that the signed contract is understood, and the contract may be either fixed-term, short-term, long-term or a partnership arrangement (Mateo-Fornés *et al.*, 2021:12).

2.3.1.4 *Ordering*

According to Kamau *et al.* (2020:222), the ordering of products and services may happen once or continuously from the previous procurement order raised. De Villiers *et al.* (2019:27) quoted that it is crucial to state the order description, required quantities, delivery date and place and to verify the costs involved carefully. Lately, organisations have utilised electronic procurement systems to send orders to suppliers (Makinde *et al.,* 2022:21), and suppliers will acknowledge the order by sending an electronic confirmation (De Villiers *et al.,* 2019:27). Omuruyi and Nwele (2020:503) echoed that organisations should note that placing an order with suppliers is a lawful commitment. The CSCP (2020:61) cautioned that only the procurement department should be assigned to place orders with suppliers, not any other department, since this is a lawful commitment that may have legal implications. Khan and Yu (2019:8) declared that ordering ensures that customers obtain products ordered at the right time and place.

2.3.1.5 Expediting

De Villiers *et al.* (2019:27) mentioned that it is the responsibility of the procurement unit to inquire with suppliers to confirm if orders will be shipped on time. According to Shabangu (2020:107), it is essential that suppliers confirm the receipt of orders and the delivery date. The organisations are also expected to follow up regarding the delivery of orders. Suppliers that fail to meet the delivery date must be regularly monitored and reminded about the outstanding delivery. Bowersox *et al.* (2020:27) maintained that organisation should follow up on their orders because some suppliers may not be able to deliver on time and progressive organisations see this as a sign of poor supply service. Shabangu (2020:107) debated that modern technological system inventions, such as the enterprise resource planning (ERP) system, have made the expediting process automatically visible to suppliers. According to Bowersox *et al.* (2020:27), the ERP system helps with coordinating different tasks and generating reports to manage important activities like order processing and restocking. It is important to note that the ERP system can only become effective in expediting orders provided it is linked with systems of partners in SC.

According to Shabangu (2020:37), organisations utilise an electronic data interchange (EDI) system to streamline and expedite the process of purchasing goods by communicating data among supply chain partners. Similarly, Kamau *et al.* (2020:219), Madzimure *et al.* (2020:2), and Lau *et al.* (2019:80) maintained that some organisations connect their planning system with the ERP system of partners (suppliers and customers), which assists them in generating, receiving, and replenishing orders.

2.3.1.6 Receiving, inspection and invoicing and making payments

Payment is made upon receipt of the order in good condition (Makinde *et al.* (2022:21). De Villiers *et al.* (2019:27), Khan and Yu (2019:87) and Zsidisin and Henke (2019:428) agreed that orders delivered should be checked, during which the delivery invoice should be confirmed against the order form to confirm if the right orders were received. Lau *et al.* (2019:59) explained that orders are received in stacks of boxes from suppliers and are scanned into the system at the receiving bay. They also agreed that documents such as material packing slip, bill of landing and delivery notes must be verified with what has been ordered, and order inspection is also necessary at this

stage. Kamau *et al.* (2020:219) warned that there should be an automated system to capture received goods to ensure accuracy and avoid imbalances in inventory. The system should be able to activate orders that need replenishment automatically. Deep, Jain and Salhi (2019:2) also advised that the procuring organisation should initiate payment on non-defective products that meet the required specifications. At the same time, products that do not meet the specification should be rejected. Additionally, the supplier invoice should match what is on the order form or quotation in terms of quantities ordered with what was delivered, terms and conditions met, and discounts agreed upon before payment (Lau *et al.*, 2019:59).

2.3.1.7 *Supplier development and partnership*

Buyers engage in supplier development to enhance the performance and abilities of their suppliers, ultimately attaining short and long-term supply goals (Wisner *et al.*, 2019:95). This means that organisations should be willing to support the supplier financially in terms of training needs, and also assess the supplier's operations and performance (Joshi, 2023:106; Wisner *et al.*, 2019:95; Shabangu, 2020:54). Khan and Yu (2019:60) asserted that assessing suppliers should take place in the form of plant visits, and that the appreciation and acknowledgement of suppliers assist to enhance performance. Makinde *et al.* (2022:21) agreed that on-time deliveries and having the correct data help make important decisions relating to suppliers and procurers and enable performance enhancement. Norheim-Hansen (2023:101) asserted that suppliers need to be developed to meet green procurement standards. It is important to have projects that will assist organisations in developing their suppliers (Kaplan, 2020:71). The DTIC (2019) commented that supplier development also seeks to develop local suppliers and improve their skills to supply components of the required standard, using the necessary machinery, at economical cost and timeous deliveries. Van Tilburg *et al.* (2022:4) affirmed that supplier and partnership development may involve technical know-how, enhanced manufacturing technologies, recent product manufacturing and recent skills. The CSCP (2020:37) agreed that the buying and supplying partners are to develop a joint connection; partners may either form a partnership, or a transactional or collaborative relationship.

Table 2.5 below presents a summary of the procurement process as indicated by various authors in the literature.

Table 2.5: Summary of procurement process as indicated by various authors

Procurement practices	Sources
Need identification	Khan and Yu (2019:53); Makinde, *et al.* (2022:21); Lau *et al.* (2019:39), Khan and Yu (2019:53); Kamau *et al.* (2020:219); CSCP (2020:20); Van Tilburg *et al.* (2022:3).
Supplier selection	CSCP (2020:34). Khan and Yu (2019:54); Schiele (2019:45). Zsidisin and Henke (2019:428); Cole and Aitken, 2019:2). Wisner *et al.* (2019:53); Lelala (2019: xi); Nolan (2019:13).
Negotiation and contracting	Van Tilburg *et al.* (2022:4) Kamau *et al.* (2020:221); Zijm *et al.* (2019:57); Zsidisin and Henke (2019:414); Mateo-Fornés *et al.* (2021:3, 12); Madzimure *et al.* (2020:2); Byaruhanga *et al.* (2020:233, 239); Chen and Hall (2022:354); Khan and Yu (2019:77); CSCP (2020:34).
Ordering	Kamau *et al.* (2020:222); De Villiers *et al.* (2019:27); Makinde *et al.* (2022:21); Omuruyi and Nwele (2020:503).
Expediting	De Villiers *et al.* (2019:27); Shabangu (2020:107) Bowersox *et al.* (2020:27); Kamau *et al.* (2020:37, 219); Madzimure *et al.* (2020:2); Lau *et al.* (2019:80).
Receiving, inspection, invoicing, and payment	Makinde *et al.* (2022:21). De Villiers *et al.* (2019:27); Khan and Yu (2019:87); Zsidisin and Henke, (2019:428); Kamau *et al.* (2020:219); Deep *et al.* (2019:2); Lau *et al.* (2019:59).
Supplier development and partnership	Wisner *et al.* (2019: 95); Shabangu, 2020:54). Khan and Yu (2019:60); Makinde *et al.* (2022:21); Kaplan (2020:71); DTIC (2019); Van Tilburg *et al.* (2022:4); CSCP (2020:37).

Source: Researcher's own compilation

The current study's literature review on procurement practices found that there are no generic procurement practices. Therefore, it was decided that the current study will focus on the procurement practices presented in Table 2.6 below.

Table 2.6: Procurement practices adopted by the current study

Procurement practices adopted by the current study
Demand planning
Strategic sourcing
Contracting
Enterprise supplier development
Strategic partnership

The challenges of procurement are discussed in the next section.

2.4   CHALLENGES OF PROCUREMENT

Procurement has to deal with a range of challenges, such as that an increase in procurement prices on products and services becomes a challenge in procurement practices (Mavela, 2020:69). It is essential to take note of the power of procurement as suppliers are perceived as having control over the procuring organisation's prices (Chen & Hall, 2022:354). In addition, there are compliance and quality issues related to the suppliers that may lead to legal disputes and questionable actions (Yao *et al*., 2023:2; Mavela, 2020:50). The researchers, Obeng, Boadu and Owusie (2023:3), Ntingi (2020:7), and Jachi, Makumbe and Mandongwe (2019:44) argued that such unethical procurement practices may emanate from corruption and deceitful activities. Josh (2023:111) and Dos Santos (2020:40) contended that procurement practice has other threats relating to resource capabilities and contractual partnerships. The CSCP (2020:68) also argued that there are costs associated with innovations in technical systems that challenge the competency of procurement practices. Ntingi (2020:7) maintained that strategic sourcing may not be aligned with supplier development in organisations, and as a result, there may be a decrease in the compliance with B-BBEE and PPPFA. The website InvestSA (2020:4) stated that these challenges are also caused by complicated procurement policies and the nonexistence of supplementary rules that create a barrier for the import and export of products and facilities, compromising the proficiency of procurement practices.

Ethical procurement practice becomes compromised when there are bargaining power issues, non-compliance, lack of resources and complicated policies. Van Tilburg *et al.* (2022:2) and Pooe and Pillay (2019:35), also noted that procurement is more complex in organisations with more products and materials. According to Dos Santos (2020:40) and Bushe (2019:10), a challenge is that procurement focuses more on globalisation, and that local suppliers do not have the skills to supply the products and services needed. Bushe (2019:10) maintained that this is because the governments in certain countries lack support structures for local suppliers. This leads to the perception that local suppliers are risky and untrustworthy, lack financial power, and that there are few benefits from conducting business with local suppliers. However, Tsolakis *et al.* (2021:164) and Khan and Yu (2019:70) stated that global sourcing is more

complicated than local sourcing due to cultural differences, currency values and fluctuation, customs, standard costs, and counter trade. Mamun and Hoque (2022:2) contended that there are also issues of non-compliance to social standards when procurement is practised. Norheim-Hansen (2023:11) noted that environmental sustainability compliance is still an issue in procurement practice that results in wastage and high costs and indicated that globalisation has caused many local suppliers and businesses to collapse. The DTIC (2019) contested that there is minimal support from private industries for local suppliers. Hence, there is a need to develop projects in the private entities which will support and develop local suppliers. Table 2.7 provides a summary of the procurement challenges, as identified by various authors.

Table 2.7: **Summary of procurement challenges identified by various authors**

Procurement challenges	Brief description	Authors
Price challenges	Supplier has control over price determinations.	Chen and Hall (2022:354)
Unethical tender practices	Legal disputes. Corruption and deceitful activities in procurement practices.	Yao *et al.* (2023:2); Mavela (2020:50); Jachi *et al.* (2019:44)
Resource capabilities	Lack or limited resources.	Josh (2023:111); Dos Santos (2020:40)
High cost of resources	The cost associated with technological innovation.	CSCP (2020:68)
Strategic sourcing	Strategic sourcing not aligned with supplier development resulting in a compromise in terms of compliance with B-BBEE and PPPFA.	Ntingi (2020:7)
The complexity of processes and product offerings	Complex organisational processes and products.	Van Tilburg *et al.* (2022:2); Pooe and Pillay (2019:35)
Complicated practices/ policies	Complicated policies and the nonexistence of supplementary rules that are barriers to the import and export of products, and facilities compromise the proficiency of procurement practices.	InvestSA (2020:4)
Local support	Little support for local suppliers from private organisations. Hence, there is a need to develop projects in the private entities that will support and develop local suppliers.	Dos Santos (2020:40); Bushe (2019:10)
Global sourcing	Global sourcing compromises the competency of local suppliers.	Khan and Yu (2019:70)

The future of procurement is discussed in the next section.

2.5   FUTURE OF PROCUREMENT

According to De Villiers *et al.* (2017:28), procurement must be synchronised with the organisation's idea, undertaking and standards, and that of the SC partners. The section below discusses the kind of procurement practice organisations could expect in the future.

- **Global sourcing:** Increased competition in procurement practices has resulted in products being procured at reduced cost in global countries (Saussay & Zugravu-Soilita, 2023:11; Karabay, 2022:2; Zijm *et al.,* 2019:151). Khan and Yu (2019:46) contended that as organisations continue to purchase products and services globally, they aim to gain the TCO. Yao *et al.* (2023:1) and Van Tilburg *et al.* (2022:2) added that the intentional objective of procurement is to promote collaboration within departments and develop the organisation through supply involvement.

- **Inventory cost reduction**: Norheim-Hansen (2023:101) and CSCP (2020:68) confirmed that a structured procurement may reduce inventory costs, improve production processes, and improve the marketing channels for the product.

- **Improved technical systems**: Joshi (2023:108) and De Villiers *et al.* (2019:29) mentioned that technical systems assist organisations in facilitating procurement processes and allow organisations to advance product and material planning, enhance productivity, and improve partnerships amongst SC partners. Zijm *et al.* (2019:580) vested that partnership in SC and data sharing is crucial to eliminate doubts, improve product offerings, and track products and activities between partners.

- **Promoting total quality management (TQM**): According to Joshi (2023:111), Zijm *et al.* (2019: 580), and Khan and Yu (2019:62), organisations should move towards a practice of promoting the elimination of uncertainties or doubts and adopt the approach of total quality management (TQM). The authors noted that the TQM approach guarantees that every product or good has the desired quality level.

- **Economic value**: Bowersox *et al.* (2020:4) reaffirmed that organisations have been striving to generate value through the efficient use of fixed assets to achieve

reduced actual cost (economic value). Obeng *et al.* (2023:4) also noted that economic value may be achieved through global competitiveness and trading.

- **Market value**: Organisations are moving towards the production of products that appeal to customers at the correct time and place (market value) (CSCP, 2020:7).

- **Relevancy value**: Bowersox *et al.* (2020:4) stated that organisations are moving towards achieving relevance value. Bowersox *et al.* (2020:4) and CSCP (2020:8) explained relevancy value as the value achieved from having the required product and services in terms of price, quality and design as required by the market. Bowersox *et al.* (2020:4) regarded all these as integrative management value propositions.

- **Integration and partnership**: Bowersox *et al.* (2020:5), CSCP (2020:115), and Lau *et al.* (2019:40) stated that collaborative partnerships can achieve integration. According to Collier and Evans (2021:379), procurement improves the integration of different groups, functions, or organisations, both internally and externally. Collier and Evans (2021:379) attested that large organisations could combine procurement needs and orders. Madzimure *et al.* (2020:3) and Pooe and Pillay (2019:39) noted that a lack of technological integration does affect the partnership. Madzimure *et al.* (2020:3) emphasised the importance of utilising technical advancements like e-procurement, ERP, e-sourcing, e-evaluation, e-informing, e-payment, e-catalogue, e-tendering, e-tailing, e-transportation, E-MRO, e-reverse auctioning, e-informing, and e-marketplaces to establish a strong strategic partnership and integration.

- **Curbing SC uncertainties:** Agrwal *et al.* (2023:5), Lau *et al.* (2019:42), and Zijm *et al.* (2019:580) argued that SC and procurement should move towards establishing strong structures to address the SC uncertainties, namely, reliance, environmental uncertainties, and global crises, through multi-supplier collaboration. Also, other tragedies may occur, such as natural, political, and economic-related tragedies (Zsidisin & Henke, 2019:414).

- **Lead-time reduction**: Koc *et al.* (2023:11), Ahmad *et al.* (2022:5), Lau *et al.* (2019:41) and Zsidisin and Henke (2019:428) agreed and urged that procurement may assist organisations to assess the various types of supplier risks not only related to extensive lead times.

- **Localisation**: Altenburg *et al.* (2020:35), Bowersox *et al.* (2020:4) and the DTIC (2019) concurred that procurement should benefit society, the economy, local job creation, and infrastructure development. Siqueira *et al.* (2023:2) asserted that the ideal is that local enterprises should benefit from procurement.

- **Support code of good practice**: Tsolakis *et al.* (2021:164) and Bainbridge (2020:6), and the BEE Advisory Team (2020:13) insisted that in the future, procurement organisations and specialists, in efforts to remain relevant, have to register with a professional body of specialists that support the value of procurement, the code of procurement ethics, and support the code of specialist bodies globally.

- **Belong to the procurement body**: Lau *et al.* (2019:149) suggested that procurement organisations should register with specialist bodies or associations.

Table 2.8 presents a summary of the future of procurement as discussed by various authors.

Table 2.8: **Summary of the future of procurement as discussed by various authors**

Future of procurement	Authors
Global sourcing	Saussay and Zugravu-Soilita (2023:11); Yao *et al.* (2023:1); Van Tilburg *et al.* (2022:2); Zijm *et al.* (2019:151); Khan and Yu (2019:46)
Inventory cost reduction	Norheim-Hansen (2023:101); CSCP (2020:68)
Improve technical system	Joshi (2023:108); De Villiers *et al.* (2019:29); Zijm *et al.* (2019:580)
Promoting total quality management (TQM)	Joshi (2023:111) Zijm *et al.* (2019:580); Khan and Yu (2019:62)
Economic value	Obeng *et al.* (2023:4); Bowersox *et al.* (2020:4)
Market value	CSCP (2020: 8); Bowersox *et al.* (2020:4)
Relevancy value	Bowersox *et al.* (2020:4); CSCP (2020:8)
Partnership	Collier and Evans (2021:379); Bowersox *et al.* (2020:5); CSCP (2020:115); Lau *et al.* (2019:40)
Technical integration	Pooe and Pillay (2019:39); Madzimure *et al.* (2020:3)
Industrialisation	Bowersox *et al.* (2020:4)
Curbing SC uncertainties	Mavela (2020:64); Lau *et al.* (2019:42); Zijm *et al.* (2019:580)

Future of procurement	Authors
Lead time reduction	Koc *et al.* (2023:11); Ahmad *et al.* (2022:5); Lau *et al.* (2019:41); Zsidisin and Henke (2019:428)
Support code of good practice	Tsolakis *et al.* (2023:164); Bainbridge (2020:6); BEE Advisory Team (2020:13)
Belonging to the procurement body	Lau *et al.* (2019:149)

Source: Researcher's own compilation

Table 2.8 presents a compilation of the future of procurement as summarised by various authors. Some of these authors maintained that procurement should bring about supplier collaboration, improve trade, support code of good conduct, improve quality and assess supplier risk.

2.6   CHAPTER SUMMARY

This chapter provided in-depth information on the following components of the study: definitions related to procurement, an overview of procurement in general and procurement terminologies. General procurement practices and the importance of procurement were deliberated in this chapter. Procurement challenges and the future of procurement were discussed in detail. Cost competency, reduced bottom line, assessment of monetary status of suppliers, handling SC threats, administering partnerships, enhancing supplier performance, investing in supplier assets, assistance to functional needs, reduced inventory, improved productivity, improved marketing channels, continuous quality products, enhanced technical systems, inventions and innovations, supplier development and partnership, promotion of localisation and job creation were seen as the variables which justify the importance of procurement practice. Need identification, supplier selection, negotiation and contracting, ordering, expediting and follow-ups, receiving and payments, supplier development and partnership were noted by various scholars as the variables for procurement practice.

The variables related to procurement challenges are supplier bargaining power, unethical tender practices, low employee reward rate, complicated practices/ policies, innovation costs, technological costs, unskilled labour, lack of proper approach to global sourcing, stolen goods resulting from global sourcing, lack of financial power, unreliable local suppliers, and the slow pace of localisation in the local market. The

future of procurement that was discussed in Section 2.6, included items such as global trading, collaboration and supplier involvement, inventory reduction, improved production processes, advanced product and material planning, enhanced productivity, enhanced data sharing amongst SC partners, improved trading, TQM adoption, achieving relevancy value, economic and market value, integrative value proposition, assessing SC risk, supporting the code of good practice, supporting the specialisation of procurement registration and the industrial revolution.

Chapter 3 presents the constructs of procurement practices in the SA clothing industry.

CHAPTER 3:
PROCUREMENT PRACTICES IN THE CLOTHING INDUSTRY

3.1   INTRODUCTION

This chapter provides a discussion of procurement practices in the clothing industry. The chapter presents an overview of the clothing industry globally and in South Africa. The chapter reviews procurement practice theories. It explores general procurement practices in the clothing industry, regulations governing the clothing industry in terms of procurement practices and the value of procurement. Also, attempts are made to ascertain how sustainable procurement in the clothing industry is, and the procurement challenges that affect the clothing industry.

3.2   AN OVERVIEW OF THE CLOTHING INDUSTRY

This section discusses the history of the clothing industry, the industry's key characteristics, the contribution of the industry in a global context, selected cases in the clothing industry, and trends and developments in the clothing industry.

3.2.1   History of the global clothing industry

Šajn (2019:10) indicated that the clothing industry is critical to the economy and confirmed that 5% of customer spending in the European Union is spent on the household. Of that 5%, 80% is spent on clothing garments. Edmonds, Cunha, Kemp and Lindström (2019:iv) mentioned that the clothing industry was the first industry to adopt a modern manufacturing system using mass production in the 18th century. According to Shen (2014:6236), annual global fabric consumption is projected to surpass 30 million tons. Edmonds *et al.* (2019:iv) indicated that this industry capitalises on advanced systems like the web, cotton gin, stitching, and robotic manufacturing of textiles, garments, leather, and shoes. This improves processes in manufacturing and labour in the industry. (Nordås, 2004:7). However, Edmonds *et al.* (2019:iv) noted that this occurs mostly in developed countries.

3.2.1.1 Key characteristics of the clothing industry

Mai and Phong (2020:1229) and Corbishley, Biyase and Mason (2021:66) agreed that the clothing industry is characterised by a short production process and agility in product scheduling. According to Jestratijevic, Rudd and Uanhoro (2020:3) and Nattrass and Seekings (2012:10), industrial production is mostly labour-intensive. According to Hossain (2019:18), the industry's production process begins with the farmers who provide the raw materials. Then, the materials go to fabric suppliers, clothing manufacturers, and eventually to the customers. Swaminathan and Venkitasubramony (2023:3) and Peters, Li and Lenzen (2021:2) agreed that this industry is complex, with multiple manufacturing stages. Shen *et al.* (2019:2) concurred that the industry has multiple manufacturing stages and has to cater for complex fashion trends. Jin, Cedrola and Kim (2019:6) maintained that the industry is associated with high market uncertainty due to the constant seasonal fashion variations. Jestratijevic *et al.* (2020:3) and Arrigo (2020:3) argued that in other countries, the industry primarily employs women, and some clothing organisations use child labour, have low wages and long working hours, factors that are prohibited by law.

Figure 3.1 shows the manufacturing stages in the clothing industry adapted from the Jenkin and Hattingh (2020).
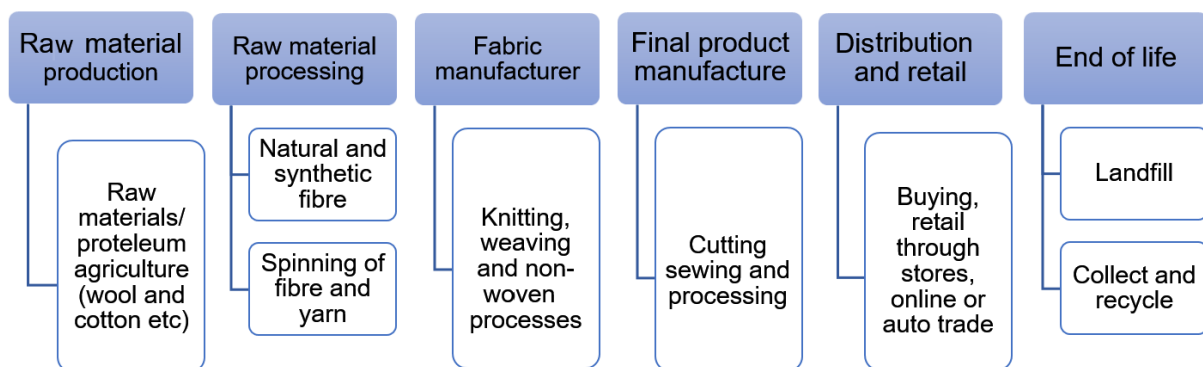
Figure 3.1:   Manufacturing stages involved in the clothing industry

Source: Adapted from Jenkin & Hattingh (2020)

Figure 3.1 illustrates the manufacturing stages of garments from raw material production to the end of life. As indicated in the figure, the clothing value chain begins where raw materials production (such as cotton and wool) are produced, raw material processing (processes into natural and synthetic fibres and spinning of fibre into yarn),

fabric manufacturing (knitting, weaving and non-woven processing), the final product manufacture (cutting and sewing, processing), distribution and retail (buying through retail stores) and end of life (clothing recycling).

3.2.1.2   Contribution of the industry in a global context

Jestratijevic *et al.* (2020:2) indicated that the clothing industry plays a crucial role in the global context and contributes to economic wealth. This makes the industry essential to the global market. According to Hileman *et al.* (2020:4), this industry is a major global player which is worth around $2.4 trillion and that employs millions of workers worldwide. Conversely, Fung *et al.* (2019:1) alluded to the fact that the global clothing industry is worth $3000 billion. Šajn (2019:2) affirmed that clothing consumption per individual rose to 40% between 1996 and 2012. Hileman *et al.* (2020:4) noted that in 2017, 150 billion garments were manufactured globally. Šajn (2019:2) confirmed that in 2017 sales increased to €181 billion in the 176 400 small and medium enterprises employing 1.7 million staff. However, Šajn (2019:2) indicated that in 1998 and 2009, there were job losses of 50% and sales losses of 28%. The industry is the primary financial provider and social change for most of the growing state, and is a gateway to the international supply chain and export business (Edmonds *et al.*, 2019:iv).

Table 3.1 presents a summary of the contribution of the global clothing industry from 2019 to 2021.

Table 3.1:   **Summary of contribution of the global clothing industry per year**

Year	Revenue in billion dollars
2019	$1.664
2020	$1.497
2021	$1.636

Source: Statista (2021:7)

3.2.1.3   Trends and developments in the clothing industry

The Asian clothing industry is primarily led by China, while other suppliers in the region face challenges related to material sourcing and garment production. As per Peters *et al.* (2121:4), the US, European Union, and Japan also hold a significant position in the industry, contributing substantially towards clothing sales. The clothing industry was

not previously recognised as an industry that assumed advanced technical equipment speedily and was capable of customisation (Pereira *et al*., 2022:2; Chen, Zhong & Cheng, 2023:1236).

The latest trends and development in the clothing industry are briefly listed below:

- Gornostaeva (2023:1) commented that mass customisation is practised in the production of fashionable clothes. Edmonds *et al.* (2019:iv) agreed that the industry is known for employing mass production.

- Gornostaeva (2023:15) and Bag *et al.* (2023:16) indicated that this industry is also affected by global economic factors, advanced technology, and trading and production policies.

- The latest technical systems have been established to enhance the global clothing industry to improve the productivity of bulk manufacturing, environmental measures, extravagant customer attraction and new product designs (Pereira *et al.*, 2022:2).

- Pereira *et al.* (2022:1), Edmonds *et al.* (2019:3), and Zijm *et al.* (2019:36) confirmed that technology is expected to have a tremendous effect on the industry and technical systems. Examples of technological systems such as radio-frequency ID (RFID), blockchain, augmented virtual reality (AVR), and artificial intelligence (AI), and some of these technologies that will assist in manufacturing design.

- Zijm *et al.* (2019:36) added that the industry is adopting technological inventions such as 3D printing in the production space. Jin *et al.* (2019:3) argued that it should strive for process improvement instead of product improvement to remain competitive and innovative.

- Gornostaeva (2023:1) highlighted that customisation is expected to be the key topic in the industry, as international consumers expect customised clothing brands to be available for online purchases. The abovementioned author stated that the industry is shifting towards customised clothing brands that express customer likeness, cultures and fashion tastes. It is noted that younger generations communicate fashion statements on media platforms, voice their fashion taste, and seem to be pickier and fussier. For example, Bag *et al.* (2023:16), Statista (2021:38) and Šajn (2019:10) revealed that one of the leading global organisations in fast fashion named, Zara, is transcending in designing fashion themes. Some

organisations employ skilled workers who can design and produce new fashion styles hourly. Hence, Zara can create 24 fashion themes annually to meet customers' tastes (Šajn, 2019:10).

- The future of the clothing industry is looking into entering the technological world intensively (Pereira *et al.*, 2022:1).

- Gornostaeva (2023:1) and Bag *et al.* (2023:16) maintained that, on the other hand, the industry is advancing in improving expensive fashion brands that bring fashion statements and uniqueness to the established and emerging fashion market.

- Chen *et al.* (2023:1236) agreed that the industry is aggressively transforming to technological connectivity, allowing the constant flow of information to all SC networks and partners.

- Chen *et al.* (2023:1236) noted that in terms of technological fast-tracking, Chinese clothing organisations are more advanced than Western organisations, and also in terms of electronic commerce and multimedia utilisation in the operational processing of clothes.

- According to Chen *et al.* (2023:1236), the Asian online fashion market was estimated be at $1.4 trillion in 2020.

- Statista (2021:38) noted that most clothing organisations that source suppliers in Asian countries take advantage of low costs; however, they have to contend with the longer lead times.

- Also, most African countries source from Asian suppliers, such as China, to establish recent fashion centres and benefit from reduced labour costs (Arrigo, 2020:14).

- Jack (2020:23) contended that the industry is also facing erratic economic transformation and competition, which may lead to the closure of some operations, as 20% of the clothing retail shops are expected to experience an operational shutdown.

- Euratex (2020:1) confirmed that one out of four clothing manufacturers had to close their operations. Khurana (2022:2) also confirmed that most clothing organisations in India shut down their operations due to the COVID-19 pandemic.

- CottonSA (2019:1) noted that the same situation is observed in African countries; for instance, some clothing organisations had to stop operating in SA clothing as they faced severe global competition and trends.

- Gornostaeva (2023:1) and Yeo, Tan, Kumar, Tan and Wong (2022:3) indicated that the clothing industry has the following market parts linked to the plan for competition: price, quality, competition, flexibility and design.

- Investment. The industry is able to adopt quick production and delivery to meet the needs of other parts of the market (Šajn, 2019:10).

- Netshishivhe (2021:4) and Moloi (2019:74) declared that most organisations in the clothing industry changed from offering complete manufacturing packages to becoming CMT manufacturers due to global competition.

- Riazi and Saraeian (2023:1) contended that the industry is affected by technological advancement, labour cost jurisdiction, resource scarcity, varying customer needs, difficulties building associations with SC partners, and environmental turmoil.

3.2.2 The South African clothing industry

According to Veitch (2021:2), the clothing industry is classified as one of the Small and Medium Enterprises (SMEs) by the DTIC. InvestSA (2020:2) reported that recently the South African Revenue Service (SARS) has about 4500 CTFL tax-paying organisations and small organisations. As per the findings of Veitch (2021:10), Netshishivhe (2021:4), Moloi (2019:74), and Vlok (2006:227), it has been observed that CMT organisations represent the largest segment of the clothing industry in South Africa. Most clothing manufacturers are situated in the Western Cape, KwaZulu-Natal (KZN), the Free State and Gauteng (InvestSA, 2020:2). The report obtained from the national bargaining council for the clothing manufacturing industry shows that there are 834 registered clothing manufacturers in SA (Prade, 2020). Veitch (2021:2) also reported that there are only 800 registered clothing manufacturers in SA. Gauteng province falls among the clothing industry in the northern areas. The summary of the clothing industry demographics, according to regions is presented in Figure 3.2 below:
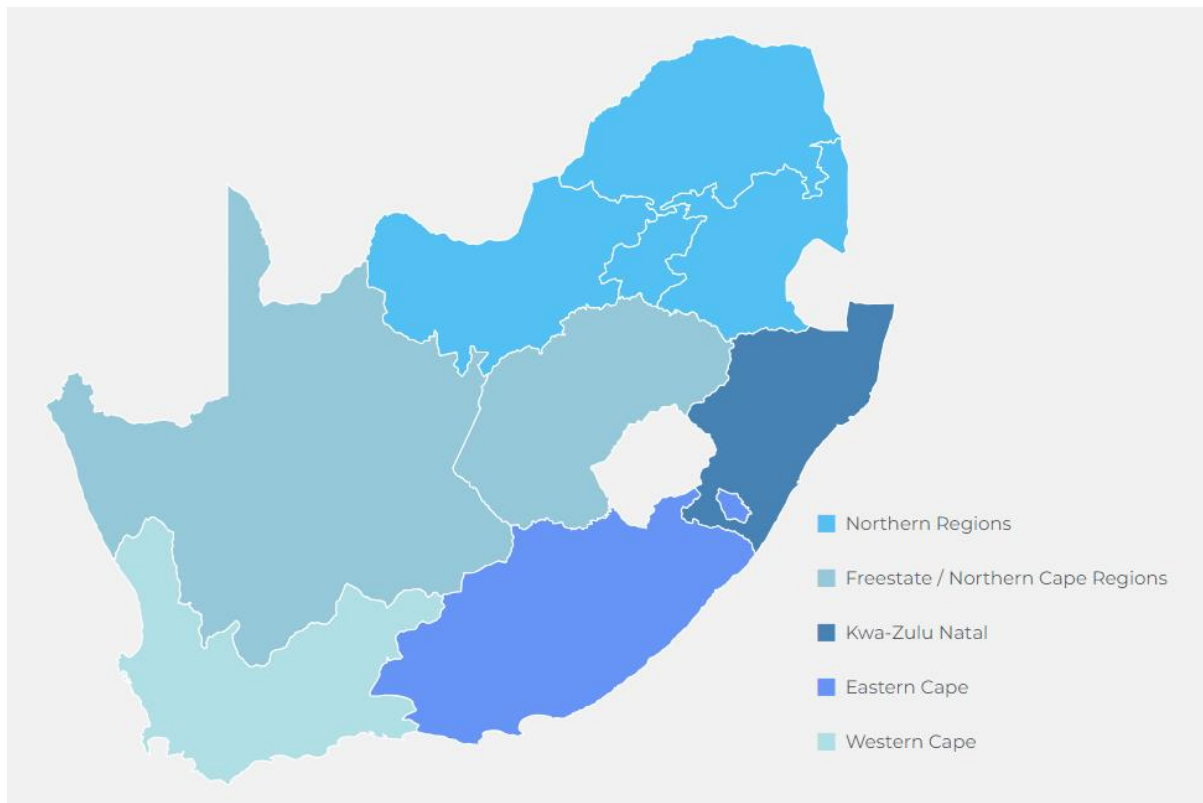
Figure 3.2:   Key manufacturing regions for clothing manufacturing factories

Source: Prade (2023)

Most garment producing organisations in South Africa are in the Western Cape and KwaZulu-Natal. Several other clothing manufacturers operate outside Gauteng and Johannesburg, an emergent hub for extraordinary clothing design (Prade, 2023). According to Veitch's (2021:10) report and InvestSA (2020:2), the clothing industry plays a significant role in generating employment and contributing to the country's gross domestic product (GDP). The authors argued that the industry offers the same manufacturing activities as the global industry, such as cutting, sewing, weaving, knitting, spinning, and dyeing. While there are 800 clothing manufacturing companies in the formal sector, a large number of clothing manufacturers operate informally in South Africa. These are mainly micro- or small enterprises operating primarily in the township economy and rural areas (Veitch, 2021:10).

3.2.2.1   *Overview of developments in the South African clothing industry*

Various changes and developments in the clothing industry impact its operation. According to Statista (2021:38), the utilisation of recent technology in the SA clothing manufacturing line has led to reduced lead times. Dos Santos (2020:40) also

maintained that the SA clothing industry suffers from raw material shortages, causing the industry to rely on imported fabrics to conclude production. Surprisingly, as InvestSA (2020:6) stated, the industry is the top global producer and supplier of mohair, contributing 54% to global manufacturing outputs. Veitch (2021:2) noted that even though SA is rich in raw materials, materials are exported for production and imported back to the country as completed fabrics or textiles. Another concern, according to the author, is that there are no textile mills in SA; textile production happens in countries such as Zimbabwe, Zambia and Mauritius. To add, Netshishivhe (2021:iv) argued around employment and noted that the clothing industry was still recovering from high employment losses in 2002. Kaplan (2020:116) reiterated that 95 000 jobs were lost from 2006 to 2016 in the SA clothing, textile, leather, and footwear (SACTLF) industry.

Veitch (2021:2) affirmed that the South African (SA) clothing industry is associated with high input costs and makes the industry vulnerable to international competition and excessive import taxes. Veitch (2021:2) also noted that most clothing products enter the country illegally, and foreigners own many clothing factories. Veitch (2021:2) also warned that the industry was previously safeguarded by costly tariffs. However, Dos Santos (2020:39), Jenkin and Hattingh (2022:11) and Corbishley *et al.* (2021:67) argued that industries that receive protection through tariffs become inefficient over time. However, since 2015 when tariff costs were reduced, the global competition has caused the industry to suffer financial and employment losses. Whitfield and Mkabela (2023:16) and Worku (2019:98) and Reis (2019:14) contended that the greatest threat to the SA clothing industry is Chinese imports which amount to 74% of the entire clothing and textile sector, including footwear. Netshishivhe (2021:21) stated that the industry needs to work on competing globally, or else it will continue to lose significant capital.

Corbishley *et al.* (2021:66) and Worku (2019:97) warned that the SA industry suffers high competition because of the high labour cost when compared to China. Furthermore, Veitch (2021:2) and Williams (2022:19) reiterated that the industry continues to suffer as clothing retailers procure imports from China instead of locally produced garments. South Africa is seen as an investment destination as it offers low import rates to products from other countries. Dos Santos (2020:40) declared that investment in capital and advanced equipment is still needed in the SA clothing

industry as global competition intensifies. Corbishley *et al.* (2021:66) maintained that international organisations continue to take over the market in other countries, including developing countries such as South Africa, Arrigo (2020:3) asserted that the SA clothing industry suffers from global rivals concerning cost, quality and supply chain administration. Apart from imports from China, which is a threat to the SA clothing industry, the Chinese have opened other clothing businesses in SA (Worku, 2019:98).

The other concerning issue that was affecting the SA clothing industry at that time, according to minister Patel (DTIC, 2021), was the COVID-19 pandemic as the SA country faced lockdowns, which prevented the industry from producing and selling clothes in during the earlier lockdown levels. This limited the industry from selling all clothing categories in level 4 which resulted in unfavourable growth and unemployment in the industry. This pandemic affected the clothing industry in SA and globally. Knappe (2020) stated that sales in the industry had declined by over 30% in March 2020, if compared to 2019. In Europe, internet sales dropped by 20%, and, in the US, clothing sales declined up to 40%. Knappe (2020) reiterated that the International Textile Manufacturers Federation indicated an average 31% sales drop throughout the different states. According to Kaplan (2020:35, SA has the most prominent clothing market in Sub-Saharan Africa. However, amid a booming business in online retail clothing, the SA industry still needs to pay more attention to online shopping.

3.2.2.2 *Contribution of the SA clothing industry*

The SA clothing industry contributes to the economy of the country. According to Kaplan (2020:35), the CTFL industry in SA generates 8% of manufacturing and 2.9% of the GDP. According to Jenkin and Hattingh (2022:5), SA is recognised worldwide for the production of top-quality wool, mohair, and cotton raw materials that are exported for processing. The authors indicated that in the second quarter of 2022, the clothing manufacturing sector contributed an estimated R6.6 billion to the economy. InvestSA (2020:6) validated that SA is the biggest manufacturer and supplier of mohair globally, contributing 54% of universal manufacturing, which accounts for 1.5 billion rands in foreign currencies annually. InvestSA (2020:2) indicated that about 130 085 tons of fibre were used in SA in 2017, of which about two-thirds were synthetic fibre. Jenkin and Hattingh (2022:5) noted that in 2020 the industry employed 246 000

employees, while in the first quarter of 2022, there were 216 000 employees in the industry. While there has been a significant decrease in employment, the SA clothing industry is one of the industries that adds to employment in the country. According to InvestSA (2020:6), it is discouraging to see the CTFL industry, which has the potential to be a global leader, relying heavily on foreign imports. In fact, imports for CTFL totalled $4 billion, and 60 to 70% of CTFL in South Africa is sourced from other countries.

Table 3.2 presents a summary of the contribution of the SA clothing industry from 2017 to 2020 in rand value (InvestSA, 2020:2).

Table 3.2:   Contribution of the SA clothing industry from 2017 to 2020 in rand

Rand value	Year
22.4 billion	2017
22.7 billion	2018
23 billion	2019
23.4 billion	2020

Source: InvestSA (2020:2)

As indicated in Table 3.2, the clothing industry, including non-apparel manufacturing, contributed R22.4 billion in 2017. In 2020 the industry contributed R23.4 billion. The next section discusses theories governing procurement.

3.3   REVIEW OF PROCUREMENT PRACTICE THEORIES

This section discusses the procurement theories relevant to the clothing industry and how they influence the variables relating to procurement practices in the clothing industry. The first section below discusses the transaction cost theory.

3.3.1   Transaction cost (TC) theory

The transaction cost theory was developed in 1991 by Williamson. The transaction cost (TC) theory by Williamson (1979, 1985) claims that economic productivity may be achieved by cutting organisational exchange costs, and also the environmental, political, social or economic threats surrounding them. According to Garfamy (2012:139) and Boateng (2016:562), transactional costs exist immediately when parties agree to do business with one another. Zijm *et al.* (2019:64) confirmed that this

theory also assists organisations in contracting with suppliers by underlining the purposes of the contract and protecting parties against unnecessary costs. Contractors have a legal right to fair compensation for any changes made to project plans and specifications in a fixed-price contract, according to Bajari and Tadelis (2001:390) who applied TC theory in the construction industry. Zijm *et al.* (2019:62) indicated that TC theory directs organisations concerning which procurement decision to make about the make-to-buy decision. McIvor (2009) noted that the theory helps managers to understand sourcing and to predict supply chain efficiency in theory and practice.

McIvor (2009:45) suggested that managers can enhance their comprehension of sourcing, and accurately anticipate the efficiency of supply chain arrangements in both theoretical and practical situations by applying this theory. Zajac and Olsen (1993:133) contended that the theory focuses on cost reduction for one partner to exchange and leaves the linkage between exchange partners. According to the current study's literature review, the industry's demand planning is impacted by costs that arise from unexpected changes or mistakes in the specifications provided by retail buyers. The theory is relevant to the current study. It lays a foundation for partners to share uncertainties about design changes during manufacturing after the contract has been signed. The TC theory also emphasises that trading partners may share costs associated with the changes in the design specification. Also, the theory lays the foundation for trading partners in the industry in that managing total cost manufacturing improves the return on investment. Also, that lack of finance may lead to non-compliance with social and environmental standards and policies.

The TC theory informed Secondary research objective 1: To determine how procurement is practised in the SA clothing industry; Secondary research objective 3: To determine the procurement policies and regulations governing the SA clothing industry, and Secondary research objective 4: To investigate the extent of sustainability in the procurement clothing value chain. The next section discusses the resource based (RB) theory.

3.3.2   Resource based (RB) theory

Theorising about the resource-based view (RBV) began in the mid-1980s, starting with Wernerfelt in 1984. Later, Barney in 1991, and Barney, Hesterly and Rosemberg in

2007 became the prominent leaders in RBV implementation and are considered the eminent authorities on this approach. Williamson (1999) recognised a range of elements related to investigation involving resources, separating methods, central competencies, and sequences. Truijens (2008:5) highlighted that the RB theory emphasises the importance of how an organisation manages and utilises its resources and capabilities in determining its overall performance. In other words, the RB theory suggests that a company's success is heavily reliant on how efficiently it allocates and leverages its available resources and competencies. Bailey *et al.* (2015) mentioned resources and abilities in fiver factors, namely, monetary, substantial, individual, assets and organisational. Williamson (1999) and Truijens (2008:5) noted that there is an apparent differentiation between abilities/knowledge and assets/resources.

Priem *et al.* (2001) argued that knowledge assets are the most potent tool to attain a long-lasting competitive edge. Barney (1991) used related terms but did not formally mention the original primary terms. Barney (1991) suggested that the RBV can be used in various parts of organisations, especially for resources that are difficult to measure and manage, and that the theory should centre on the assessment of resources and their potential to provide a sustainable competitive edge. Since the SA clothing industry is known to be less competitive due to a lack of resources, funding and capital equipment, the RB theory lays a foundation for how resources may be utilised to revitalise the industry. The theory noted the impact of government policies and support needed to improve performance in the industry. The theory is based on Secondary research objective 2: To determine the procurement policies and regulations governing the SA clothing industry. The next section discusses the resource dependency (RD) theory.

3.3.3   Resource dependency theory (RD)

Resource dependency theory, developed by Pfeffer and Salancik in 1978, explains how external factors affect organisational behaviour. It notes that managers can act to reduce reliance on the environment, dependence and uncertainty. The theory builds on the work of earlier researchers, including Emerson (1962), Blau (1964) and Jacobs (1974), and emphasises resource interrelationships, social limitations, and organisational adjustment. It clarifies organisational behaviour and is a foundation for incorporating RD into various theoretical perspectives (Hillman, Withers & Collins,

2009:1405). The theory aims to reduce the supplier's power over the buyer through partnership agreements (Peterson, Handfield, Lawson & Cousins, 2008:53). The degree of power is assessed within the partnership agreement. However, the theory has faced criticism for its inability to distinguish between power imbalances, trust, conflicting instructions, and assumptions.

Empirical research has mainly focused on one player's dependence instead of shared linkage (Delke, 2015:7). Studies suggest that reducing doubts and reliance can be achieved by acquiring resources, forming collaborative relationships, and setting boundaries. An uneven dependence can result in a negative relationship because the more independent party may try to exploit their power (Zijm *et al.*, 2019:63; Hillman *et al.*, 2009:1406; Petersen *et al.*, 2008:53). Katila, Rosenberger and Eisenhardt (2008) posited that it is crucial to address the needs and security of smaller partners in collaborations between organisations to reduce the risk of resource misuse. The literature review conducted in the current study highlighted that clothing manufacturers need more resources to stay competitive and secure contracts. The government should provide more support in terms of capital and funding. Strategic sourcing and partnerships can improve procurement practices and encourage localisation for a sustainable competitive advantage (Dos Santos, 2020:40). Trading partners can agree on resource reliance for fair contracts, and retail shops can partner with influential resources for strategic control.

To manage issues related to bargaining powers, the degree of power may be assessed during contract negotiation. The theory informed the following research objectives of the study: Secondary research objective 1: To determine how procurement is practised in the SA clothing industry; Secondary research objective 3: To investigate the value of procurement in the SA clothing industry; Secondary research objective 2: To determine the procurement policies and regulations governing the SA clothing industry; and Secondary research objective 5: To determine the challenges faced by the SA clothing industry.

The next section discusses the game theory, as relevant to the fashion clothing industry.

3.3.4   Game theory

Rosenthal (1981) developed game theory based on Selten's (1978) work, and it has since been expanded with various variations by Megiddo (1986), Aumann (1988), and McKelvey and Palfrey (1992) (Kelly, 2009:5). According to Bhuiyan (2016:117), John Nash made significant contributions to the development of game theory in 1950 by creating tools and concepts for both non-obliging and obliging bargaining theory. Game theory became popular in the 1950s and 1960s for addressing political science and philosophy challenges (Bhuiyan, 2016:117). Players aim to maximise gains and minimise losses over several rounds. "Irrational" players often perform better than selfish and logical ones (Bhuiyan, 2016:117; Schmidt, 2015:49). Game theory is useful in procurement and decision-making interactions (Mediavilla, Bernardos & Martínez, 2015:3), but may not always result in a single solution due to game asymmetry (Kelly, 2009:175). According to Zijm *et al.* (2019:64) and Krzeminska (2008:22), game theory can be useful in procurement decision-making, including supplier selection and contract establishment. Crowther and Seifi (2018:2) asserted that game theory may be adopted to improve sustainability in organisations, especially in relation to the ecosystem.

For example, the harmful resources and unprocessed waste that are often disposed of in neighbouring locations negatively impact the textile industry's environment (Abbate, Centobelli & Cerchione, 2023:11; Chen *et al.*, 2023:1237). South African clothing organisations often lack legally binding contracts (Twyg, 2020:50), and this hinders fair negotiations. To address this, the study used game theory to encourage compliance with ethical and social standards. Using this theory, partners can share relevant data to reduce risk and certify compliance with ISO 14000 and SAC standards. This theory also promotes social sustainability and allows partners to discuss improving the work environment, providing employee benefits, and promoting local community and economic development during negotiations. The secondary objectives of the study are based on the theory, as follows: Secondary research objective 1: To determine how procurement is conducted in the SA clothing industry, and Secondary research objective 4: To investigate the extent of sustainability in the procurement clothing value chain. The next section discusses the stakeholder theory.

3.3.5 Stakeholder Theory

The term 'stakeholder' was first introduced by the long-range planning service of the Stanford Research Institute in 1963. Its purpose was to shift the focus from 'stockholders' and bring attention to other parties involved (Freeman, 1999:234). According to Freeman (1984:46), stakeholders are groups or individuals who can impact or be impacted by an organisation's goals. At a minimum, this encompasses stakeholders, workers, customers, suppliers, and society. The study by Harrison, Freeman and Abreu (2015:861) used the stakeholder theory (ST) in Brazilian organisations to study recognised financial agents because they viewed them as having rightful powers and qualities to impact corporate policy adoption. The above studies emphasised the need to consider all relevant stakeholders when acquiring a company, including employees, customers, and investors. To engage stakeholders effectively, managers must allocate resources that genuinely fulfil their requirements instead of only providing the bare minimum needed to keep them involved in the organisation's activities.

Harrison, Bosse and Phillips (2010:58) highlighted the importance of such an approach. Argandoña (1988:1093) noted that while ST may focus on ethics, it lacks a solid philosophical, sociological and economic foundation. This theory emphasises the importance of engaging with stakeholders in the procurement process. Stakeholders may include suppliers, customers, employees, local communities, and the environment (Johnson & Klassen, 2022:5; Harrison *et al.,* 2015:863). Thus, the stakeholder theory lays a foundation for the clothing industry in building sustainable procurement with socially responsible and environmentally sustainable partners. The stakeholder theory informed Secondary research objective 1: To determine procurement practice in the SA clothing industry, and Secondary research objective 4: To investigate the extent of sustainability in the procurement clothing value chain. The next section discusses lean production (LP) theory.

3.3.6 Lean Production (LP) Theory

Åhlström *et al.* (2021:3) fall under the group of authors who have stated that the concept of lean manufacturing originated in the late 1980s and has undergone significant development since then. Åhlström *et al.* (2021:3) argued that it is important to consider the various paths that can lead to lean practices, because if the definition

of lean is just the elimination of waste, other valuable options may be missed. They reiterated that it essential to have definitions that are flexible and that can be challenged if necessary. Kholopane and Vandayar (2014:988), and Levitt (1972) introduced the idea of lean production in the service industry through two articles: "Production line approach to service" and "The industrialisation of service". According to Hajmohammad, Vachon, Klassen and Gavronski (2013:87), the idea of lean production is associated with the Toyota Production System. Kholopane and Vandayar (2014:988) highlighted the importance of efficiency in resource utilisation. To enhance delivery time and quality, one can eliminate non-essential tasks, reduce order completion time, improve order accuracy, and ensure timely delivery to the correct location. Just-in-time techniques can complement these strategies.

Hajmohammad *et al.* (2013:88) noted that purchasing organisations can enhance their environmental performance by helping their suppliers to improve their production competences through supply administration. Hajmohammad *et al.* (2013:88) also indicated that the approach could potentially bolster the environmental performance of a purchasing organisation by offering guidance and support to suppliers in improving their manufacturing capabilities, as well as working towards obtaining ISO certification. This may help to promote more sustainable practices throughout the supply chain. As previously mentioned, the fashion industry is widely acknowledged as a highly polluting sector, with a large amount of production waste. The problem is compounded by the various chemicals that are used when garments are manufactured that pollute the sea, air and the ecosystem (Jenkin & Hattingh, 2022:17; Mai & Phong, 2020:1229). Lean production lays a foundation in the industry, as the theory emphasises the importance of waste reduction and efficiency maximisation in the procurement process. The theory may assist the industry to emphasise the importance of sustainable procurement and technology to reduce the use of resources, such as electricity and water, and reducing waste to create a more sustainable and efficient procurement process.

The theory informed Secondary research objective 4: To investigate the extent of sustainability in the procurement clothing value chain. The procurement theories adopted by the current study are summarised in Table 3.3 below.

Table 3.3:   **Summary of procurement theories the study adopted**

Theories	Alignment to the study
Transaction cost theory	▪ Cost-associated strategic sourcing and ordering. ▪ Cost shared amongst partners. ▪ Assess opportunistic behaviour.
Resource-based theory	▪ Integrate resources, skills and technology between industry partners. ▪ Government policies to support the industry.
Resource dependency	▪ Determine strategic sourcing influence supplier resources and capabilities. ▪ Consideration of local resources.
Game theory	▪ Sustainable sourcing. ▪ Examine the effective functioning of sustainability, negotiation and contractual agreements.
Stakeholder theory	▪ Building on local capital and promoting growth in the clothing industry of developing countries.
Lean Production theory	▪ Sustainable sourcing of suppliers. ▪ Examine the effective functioning of sustainability, negotiation and contractual agreements.

Source: Researcher's own compilation

The next section discusses procurement practice in the clothing industry.

3.4   EXPLORING PROCUREMENT PRACTICES IN THE CLOTHING INDUSTRY

According to Swaminathan and Venkitasubramony (2023:3) and Peters *et al.* (2021:2), manufacturing and procurement practice in the clothing industry involves numerous processes that start with order receiving and conclude with the delivery of complete clothing garments. The above authors stated that this practice may be classified as pre-manufacturing, manufacturing and post-manufacturing. Shukla (2016:70) declared that choosing suitable sources of suppliers is crucial when procuring garments. However, this should align with customers' changing needs and maintain a sustainable relationship with suppliers. According to Hossain (2019:22), the clothing industry's procurement process should involve strategic planning, sourcing, establishing payment terms, vetting, selection, negotiation and contracting, and ordering. Shukla (2016:71) and Koprulu and Albayrakoglu (2007) claimed that procurement involves selecting and evaluating suppliers, and that this involves searching and determining, negotiating, supplier assessing and contracting, and

64

performing an environmental assessment. This practice is challenging in the clothing industry as it requires ranking suppliers and assessing their capabilities and limitations. Shukla (2016:72) and Koprulu and Albayrakoglu (2007) summarised the process in Figure 3.3 below.
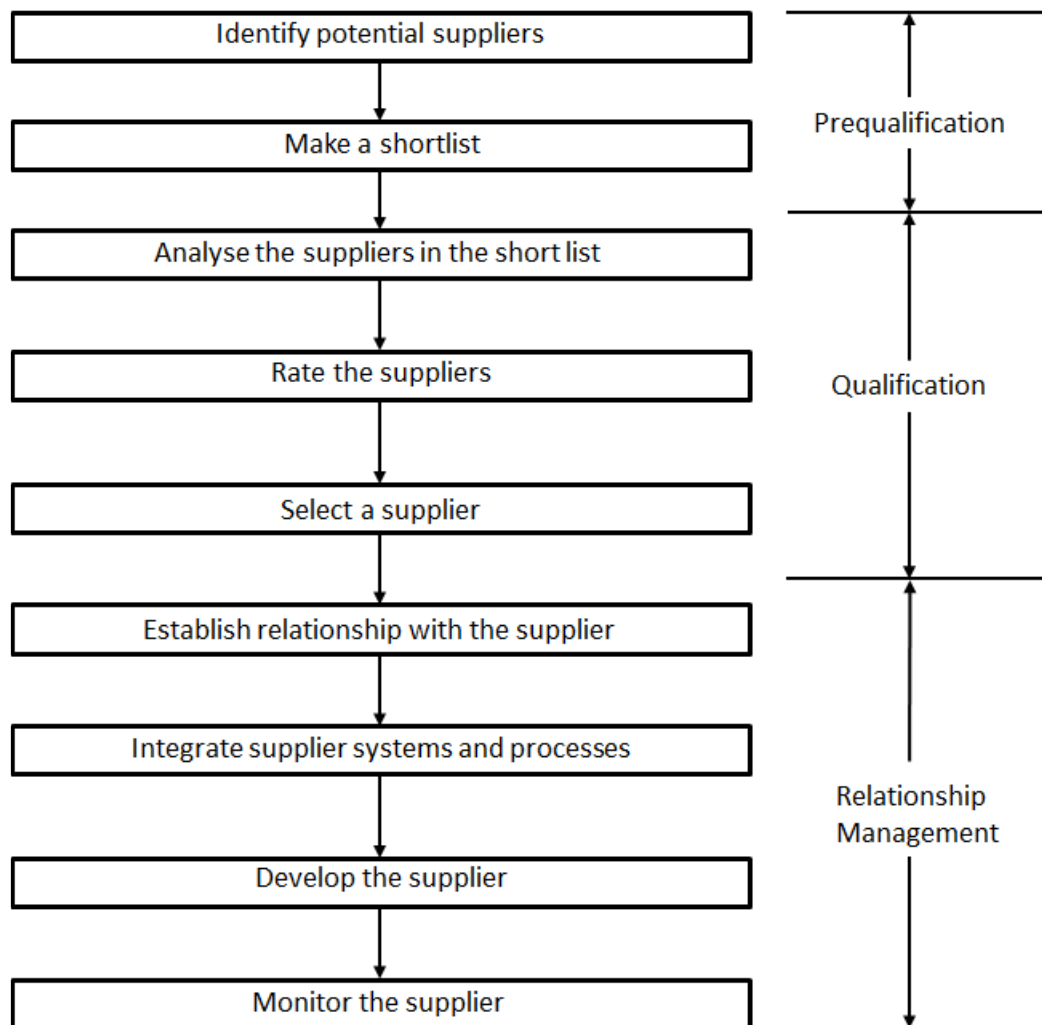
Figure 3.3:   Supplier relationship model by Lasch and Janker (2005)

Source: Adopted from Shukla (2016:72) and Koprulu & Albayrakoglu (2007)

As indicated in Figure 3.3, Shukla (2016:72) and Koprulu and Albayrakoglu (2007) adopted the procurement practice developed by Lasch and Janker (2005), who analysed procurement practices in a supplier relationship model. However, Saricam and Yimlaz (2022:2948) disputed that not only supplier selection forms part of the procurement practice, and the procurement practice does not end with supplier selection. The procurement practice continues with issuing and signing the contract, ordering, expediting, inspecting, and order payments. Procurement practice in the

clothing industry is discussed broadly by various authors below according to multiple steps.

3.4.1 Demand planning

Pereira *et al.* (2022:3) and Braglia *et al.* (2020:189) maintained that need identification adds value to the clothing industry's procurement process by identifying the optimal fabric, garment design, and description and supplier services needed. In the South African clothing industry, demand planning includes predicting clothing demand, seasonal and market trends, and participating in trade exhibitions (Jacobs & Karpova, 2020:366; Mitterfellner, 2020:131). It is essential that the forecasting of clothing demand should be accurate (Swaminathan & Venkitasubramony, 2023:3; Senapati *et al.*, 2022:3). However, issues relating to specification errors are noted in this industry (Braglia *et al.*, 2020:189). Studies by Swaminathan and Venkitasubramony (2023:12), and Shen *et al.* (2019:2) found that there are multiple manufacturing stages and complex fashion trends in the industry, which result in a complex garment planning process. This is alarming, as Singh and Chan (2022:4) and Saricam and Yimlaz (2022:2946) indicated that this is the stage where computer-aided design becomes applicable, and retail buyers are fully involved in constructing clothing design as it is a critical stage.

It is the nature of the fashion industry to describe in detail the design of the garment, and when and where it is needed. There are four aspects of need identification that need to be studied on new fashion brands, namely, design, fabric, colours and shape. According to Jacobs and Karpova (2020:365), the primary concern in demand planning for the South African clothing industry is that procurement practices are driven by retail buyers. InvestSA (2020:4) agreed that clothing retailer shops benchmark European clothing lines and suggest new suppliers before questioning the volume offering, delivery, and price. Morris, Plank and Staritz (2021:4) noted that product needs are determined by the large retail clothing groups listed on the Johannesburg Stock Exchange (JSE). Clothing retail shops must also procure garments and search for suitable suppliers who meet their requirements (Saricam & Yimlaz, 2022:2948). Swaminathan and Venkitasubramony (2023:3) and Teke (2022:15) noted that for forecasting to be accurate, it should be based on recognised fashion trends, order information, and POS system data.

Mai and Phong (2020:1229) contended that need identification can improve if there is some form of relationship between supply chain partners. Hossain (2019:19) added that customers' needs and ideas should be adopted to satisfy the demand. Similarly, Jin and Cedrola (2019:5) posited that it is imperative for the clothing industry to foster identification among its customers as their needs and wants are closely intertwined with their social and cultural wants. Hossain (2019:19) argued that the need for identification in the clothing industry should be aligned with the decisions about the number of clothes to procure in volumes each season. Hossain (2019:19) agreed that customer orders need to be planned before the industry's fashion sale season begins. Although these studies showed vital contextual elements, they need to capture how need identification is stipulated in global sourcing in the clothing industry. There are cultural and language barriers; however, localisation may be presented as a solution to such challenges. Senapati *et al.* (2022:3) noted that obtaining the correct information on material is crucial in the stage of planning for customer needs.

The buying organisation needs to send drafts of the design idea to the manufacturer on time. Jacobs and Karpova (2020:366) critiqued that the underlying issue is that procurement practice in the clothing industry influences new fashion trends motivated by other brands and style collections emanating from trade exhibitions in cities such as London, Paris and New York. Senapati *et al.* (2022:7) claimed that the problem is that fashion trend changes affect market structure conditions, increases in disposable income, rapid urbanisation rate and rapid change in lifestyles. In this instance, the relationship between retailers and the manufacturer is crucial so that clothing retailer shops may have the correct clothing requirements. It may be prudent to conduct a thorough review of the underlying principles and practical evidence supporting the procurement dynamic between buyers and suppliers within the clothing industry of emerging economies. Arrigo (2020:7) alleged that clothing retail shops prefer building relationships with global suppliers.

Figure 3.4 below summarises the variables influencing need identification in the clothing industry as discussed in the literature by various authors:

Figure 3.4:   Variables influencing demand planning

Source: Researcher's own compilation

As reflected in Figure 3.4, the variables that influence demand planning in the clothing industry include: need identification, forecasting, trade exhibitions, POS, social and cultural needs, season, accurate data and specifications, and fashion trends. Strategic sourcing is discussed in the next section.

3.4.2   Strategic sourcing

Hossain (2019:20) and Jacobs and Karpova (2020:366) noted that sourcing is a strategic process determining how and where apparel products or components will be produced or procured. Singh and Chan (2022:19) noted that strategic sourcing in the clothing industry also involves a formalised team approach to control procurement spending throughout organisation activities by choosing suitable suppliers to add information and value to customers and supplier interactions. Hossain (2019:20) maintained that sourcing begins once the clothing design is complete. Arrigo (2020:3) stated that strategic sourcing improves procurement practice and performance. The study conducted by Zijm *et al.* (2019:47) found that procurement practices in the clothing industry consider strategic sourcing variables that involve processes such as planning, selecting and contracting suppliers that will fulfil the procurement needs of organisations. Suppliers are selected based on resources and capabilities to deliver social and environmental compliance (Utama, Maharani & Amallynda, 2021:119).

With regard to strategic sourcing, Jenkin and Hattingh (2022:15), Statista (2021:38) and Šajn (2019:10) noted that the ideal suppliers of fashion garments are the clothing

organisations that are able to meet recurring orders. Jacobs and Karpova (2020:370) agreed that clothing retail shops will choose various clothing styles and select suppliers to deliver the required products in volumes and build strong relations with preferred suppliers. However, non-compliance to social and environmental issues affects strategic sourcing in this industry. It is noted that strategic sourcing depends on collaboration between retailers and suppliers (Mavela, 2020:33). Also, strategic sourcing in the industry does not support local content, as the industry prefers to place orders with global suppliers and neglects local suppliers (Jacobs & Karpova, 2020:366; Statista, 2021:38; Šajn, 2019:10). Corbishley *et al.* (2021:66) noted that in SA, fast fashion compels clothing retail shops to source suppliers locally, and that the lead times associated with global sourcing becomes an issue.

Mejías *et al.* (2019:145) hypothesised that strategic sourcing is linked to social and environmental standards and supplier compliance. Environmental and social responsibilities and examination of supplier compliance are some of the variables that may be used to evaluate qualifying suppliers in the clothing industry. Jacobs and Karpova (2020:366) argued that the clothing industry aligns supplier compliance with their strategic sourcing plan. They plan for the lowest needs before making ordering decisions to improve sustainable responsibilities and compliance between SC partners. Mai and Phong. (2020:1229) cautioned that suppliers should be rated to promote good procurement practices and that supplier authentication in terms of their social and environmental compliance is recommended in the clothing industry. Interestingly, some authors emphasised the connection between sourcing and localisation, as needed. Arrigo (2020:3) maintained that clothing organisations can establish strong links with domestic suppliers and source products from domestic suppliers. Jacobs and Karpova (2020:366) also mentioned that retail shops use global sourcing and neglect local sourcing to reduce costs and improve quality.

Hossain (2019:22) maintained that the clothing industry practices global and local sourcing because most textile suppliers are globally located. However, Hossain (2019:22) noted that global sourcing still results in long lead times. Jenkin and Hattingh (2022:54) and Khan and Yu (2019:39) debated that there are high costs associated with international procurement and global sourcing. Hence, they would discourage the procurement of clothing lines or brands from other countries.

Lack of skills is still an issue in the SA clothing industry (Jack, 2020:24; Netshishivhe, 2021:3). However, this is due to a lack of resources and technological capabilities, as Netshishivhe (2021:3) contended that lack of resources and capacity of domestic suppliers poses global threats in the industry. For example, the lack of resources in the industry may compromise the procurement practices aimed at job creation and economic stability. While some clothing suppliers lack resources (Arrigo, 2020:7), other global clothing suppliers are financially stable, have moved to industrial upgrading, and have invested in advanced machinery, technical systems, and staff skills improvements. Some international clothing organisations have staff that can recognise fashion trends from social networks and the surrounding areas (Gornostaeva, 2023:3; Jack, 2020:23; CottonSA, 2019:1). In addition, this indicates that most clothing suppliers come from abroad, and the industry is paying an immense amount for international procurement.

Based on the discussion from various authors above, there needs to be more focus in the procurement process that promotes job creation, local sourcing, sustainability and competitiveness to achieve the socio-economic objectives in the clothing industry. Gornostaeva (2023:1) and Jacobs and Karpova (2020:366) argued that fashion trade exhibitions and technology also influence the procurement practices of the clothing industry. The aforementioned authors noted that specialist buyers attend fashion exhibitions to choose fashion styles and fabrics and approach suppliers to produce samples based on their specifications. Jacobs and Karpova (2020:366) explained that the entire clothing industry has settled its dealings around the timing of fashion exhibitions. Reis (2019:20) mentioned that supply chain partners are authenticated and rated on aspects such as green supplier rating and supplier partner suitability. The industry is associated with fast-changing fashion trends, as quick responses to customer needs are crucial. Fung *et al.* (2019:1) also testified that the fashion industry is changing rapidly. It is important to note that the industry has a document that guides procurement practices and has to adhere to this guidance in its sourcing practice.

From the theory, it is critical to examine how decisions relating to social, economic and political behaviour, pricing and production, supplier partnership, and market entries are concluded in the clothing industry subjected to global rivals. The attributes of strategic sourcing in the clothing industry are summarised in Table 3.4 below according to various authors:

Table 3.4: Attributes of strategic sourcing in the clothing industry as reported by various authors

Attributes of strategic sourcing in the clothing industry	Authors
Team approach.	Singh and Chan (2022:19)
Begins once the specification design is complete.	Arrigo (2020:3)
Fashion shows.	Jacobs and Karpova (2020:366)
Planning, selecting and contracting.	Zijm *et al.* (2019:47)
Social and environmental compliance.	Utama *et al.* (2021:119).
Build strong partnerships with capable suppliers and engage in bulk ordering.	Jacobs and Karpova (2020:370) Jenkin and Hattingh (2022:54)
Strategic sourcing is linked with social and environmental compliance.	Mejías *et al.* (2019:145)
Supplier rating and authentication.	Reis (2019:20)
Fast fashion influences strategic sourcing.	Fung *et al.* (2019:10); Statista (2021:38); Šajn (2019:10)
Strategic sourcing should be linked to global sourcing.	Jenkin and Hattingh (2022:15); Statista (2021:38); Šajn (2019:10)
Resource, skills and technical capabilities.	Arrigo (2020:7), CottonSA (2019:1); Jack (2020:23).
High imports.	CottonSA (2019:1); Jack (2020:23)

Source: Researcher's own compilation

As discussed in the literature, there is a link between need identification and strategy in procurement practices of the clothing industry. The current study aimed to determine how strategic sourcing is applied in the procurement practice of the SA clothing industry. The current study examined need identification and strategic sourcing as the variables that should promote localisation in the clothing industry and would be able to fulfil organisational requirements such as low cost, quality, advanced technology and improved financial stability. Negotiation and contracting are discussed in the next section.

3.4.3   Negotiation and contracting

This section describes how negotiation and contracting are conducted in the clothing industry, starting with a discussion of the negotiation process in the clothing industry.

3.4.3.1 Negotiation

Before negotiation takes place, retail clothing shops will evaluate offers and choose the most favourable manufacturer to negotiate with (Hossain, 2019:22). Nabee and Swanepoel (2021:8) and Fung *et al.* (2019:1) noted that local manufacturers face financial limitations that make it difficult for them to acquire the necessary resources to meet customer requirements. As a result, they often struggle to maintain contracts. The above authors argued that in most cases, large retail shops are the ones that compromise manufacturers during negotiations. According to Khouja and Hammami (2023:309), negotiations and contracts initiated in the clothing industry should be regularly revised. Veitch (2021:6) shared the same sentiment that retail clothing buyers are the ones who control the prices during contract establishments and make late payments which place suppliers in a financial predicament resulting in the loss of a secured contract. Veitch (2021:6), Nabee and Swanepoel (2021:4), and Jenkin and Hattingh (2022:40) noticed that manufacturers in the clothing industry are vulnerable and at a disadvantage during the negotiation process as retailers dominate the negotiation process by setting price points which manufacturers are expected to meet.

Moloi (2019:89) and Perry and Wood (2019:8) also attested that clothing retail shops dominate the negotiation process and underpay local clothing suppliers/manufacturers when doing business. Nabee and Swanepoel (2021:1) and Fung *et al.* (2019:1) reiterated that the negotiation process in the clothing industry seemed like a one-way process. Clothing retailers who dominate the industry and initiate procurement, dominate the negotiation process, while clothing manufacturers are at a disadvantage. Hossain (2019:19) asserted that it is crucial to establish formal contracts with suppliers. From the literature, it can be assumed that establishing legally binding agreements is challenging as issues of power domination during negotiation might be compromised, and procurement practices may be violated and abused. There is a need to address the negotiation process to achieve mutual gains between supply chain partners in the clothing industry. Based on the literature, there is a barrier to negotiation in this industry, especially when there is the dominating power of one party (retailers), as negotiation must be based on mutual gain.

This discussion highlights a need for a theoretical and empirical framework that will advise how relevant procurement theories will prevent opportunistic behaviour in the negotiation process in the clothing industry. This framework also needs to advise how

domestic suppliers may protect themselves from clothing retailers who seem to have the upper hand in the negotiation process. One of the aims of the current study is to assist the clothing industry to prevent opportunistic behaviour when partners design contracts. Table 3.5 presents a summary of the variables that influence negotiation in the clothing industry.

Table 3.5: **Variables influencing negotiation in the clothing industry.**

Variables influencing negotiation	Authors
The value of an offer	Hossain (2019:22)
Resource capabilities	Nabee and Swanepoel (2021:8).
Dominant power	Veitch (2021:6); Moloi (2019:89); Perry and Wood (2019:8).
Retailers setting price points	Nabee and Swanepoel (2021:4)
Decision on contract establishment	Hossain (2019:19)

Source: Researcher's own compilation

3.4.3.2 *Contract establishment*

Hossain (2019:22) confirmed that contract design is another variable of procurement practice in the clothing industry that is still used as an authoritative administration between SC partners in the clothing industry. According to Lumineau *et al.* (2022:85) and Zhao *et al.* (2022:102), partners should enter into lawful agreements when designing solid contracts. Bag *et al.* (2023:3) maintained that terms and conditions should be established and deliberated when establishing contracts in the clothing industry. Based on the fashion sector research report compiled by Twyg (2020:49, 50), and InvestSA (2020:2), it seems that the fashion industry in South Africa is yet to fully grasp the intricacies of fashion law, and legal involvement during contract establishment. Hence, there is very little legal involvement required during the process of establishing a contract. Logically, good procurement practice only works with a solid contract agreement (Tsolakis *et al.*, 2021:164; Norheim-Hansen, 2023:103).

Nabee and Swanepoel (2021:1) also noted that there is unfair practice when contracts are designed in this industry. Clothing retailer shops have multiple suppliers, putting pressure on suppliers regarding lead time reduction, order cancellations, relative power in the negotiation process, and design of the unjustifiable contract (Jenkin & Hattingh, 2022:40). Bag *et al.* (2023:3) and Jacobs and Karpova (2020:370) insisted

that it is the clothing industry's responsibility to inform suppliers if there is non-compliance in terms of standard policies and regulations, and that future orders and contracts with non-complying suppliers should be cancelled. Arrigo (2020:3) affirmed that the problem is that the clothing industry prefers to establish contracts with global suppliers. Similarly, Jenkin and Hattingh (2022:54) noted that clothing buyers in retail organisations are influenced by global fashion, which drives procurement practices, and they award contracts to global suppliers. This practice compromises the value of procurement practices that promote localisation and social upliftment in the industry. Perry and Wood (2019:8) concurred that clothing retailers have the upper hand over suppliers as they dominate the industry, which is costly to clothing suppliers. Where there is high demand, the supply is compromised.

The current study built upon academic literature discussions and explored the management of contracts among supply chain partners in the clothing industry. The study analysed negotiation and contracts as aspects that must be addressed in the clothing industry when entering into a partnership agreement. Also, the current study focused on the issues of bargaining powers that endanger good procurement practices. It also examined contract regulations that may enhance the negotiation process in the clothing industry. The current study used game theory to determine how bias may be prevented in negotiations and contracts, and how partners may design legal agreements, policy compliance, and social compliance that are legally binding to improve procurement practice. The variables influencing contracting are presented in Table 3.6 below.

Table 3.6:   Variables influencing contracting

Variables influencing contracting	Authors
Reasonable cost	Mai and Phong (2020:1229)
Policies and standards	Arrigo (2020:3)
Unjustifiable contract	Twyg (2020:50); Jenkin and Hattingh (2022:54)
Biasness and non-compliance	Nabee and Swanepoel (2021:1)
Late payments	Nabee and Swanepoel (2021:1)

Source: Researcher's own compilation

3.4.3.3 Ordering

Hossain (2019:18) indicated that there are differences in the ordering processes of various organisation in the clothing industry. Some organisations practise in-sourcing by procuring fabrics from suppliers and manufacturing garments delivered per volume ordered by the customers. Hossain (2019:18) indicated that some clothing organisations outsource certain business functions to other manufacturers, such as Cut Make and Trim (CMT) manufacturers, who cut and sew the final products. However, Dos Santos (2020:40) asserted that these CMT need to be skilled in cutting, sewing and finishing products. Also, clothing manufacturers are subjected to sudden order changes from retail shops (Jenkin & Hattingh, 2022:5). The study by Singh and Chan (2022:2) suggested technological tools that may improve procurement processes in the clothing industry. However, the studies should have contextualised the technical systems to the situation in developing countries that lack resources such as advanced technological tools (Dos Santos, 2020:40; Netshishivhe, 2021:21; Utama *et al.*, 2021:125).

Braglia *et al.* (2020:189) noted that errors in order specification should be prevented, as suppliers are ranked on the accuracy in meeting customer orders. Yue (2022:147) concurred that specification errors and sudden orders are still challenging issues in the industry, and they emanate mostly from the fact that retail buyers dominate the industry. Hence, Yue (2022:147) insisted that business partners should share the costs arising from errors when ordering clothes. Various scholars, such as Swaminathan and Venkitasubramony (2023:11), Singh and Chan (2022:8), Teke (2022:15), Mitterfellner (2020:131), CSCP (2020:112), theorised the range of ordering processes adopted in the clothing industry. For example, there is a need for regularity in the industry's procurement process to prevent barriers to procurement. Also, Singh and Chan (2022:8) noted that the technological system also influences ordering in the clothing industry. Suppliers will use the sales information of clothing retail shops to generate orders. The information should be linked to the supplier system, and once the order is generated, retailers should be allowed to keep the order.

Point of sale (POS) systems are highly associated with the ordering systems used by suppliers in the clothing industry. Swaminathan and Venkitasubramony (2023:11), Teke (2022:15), and Mitterfellner (2020:131) agreed that the clothing industry uses the POS system to generate orders. Singh and Chan (2022:8) explained further that

ordering technologies such as e-procurement, the internet of things (IoT), EDI, digital procurement, RFID, and blockchain communication data are speedy ways to reduce inventory turnaround times. Teke (2022:15) claimed that the retailer's POS data should be examined to detect demand changes in clothes. Swaminathan and Venkitasubramony (2023:11) and CSCP (2020:112) suggested that sharing POS and other transactions between supply chain partners improves order accuracy and assists with real-time information. Hossain (2019:18) emphasised that it is crucial to order ahead of the fashion season, as the late ordering of fashion style leads to overstocking and results in markdowns, lower sales margins, and ultimately, affects the bottom line. Fung *et al.* (2019:3) and Majumdar, Sinha, Shaw and Mathiyazhagan (2020:2) indicated that fashion clothes constantly change, complicating the industry. According to Perry and Wood (2019:10), the global clothing industry will order basic seasonal fashion clothes from international suppliers and develop a solid relationship with those suppliers. However, a fast-fashion organisation will prefer to order from local suppliers to reduce delivery time.

Fast fashion organisation has changed the fashion landscape, for example, Reis (2019:15) asserted that fashion retailer, Zara could design, produce and showcase their newest fashion in 14 to 21 days. Šajn (2019:10) also confirmed that Zara designs and produces 24 garment assortments, and H&M has up to 16 assortments annually. This affects the ordering processes, especially from the manufacturing site, as they might have to deal quickly with multiple order specifications. Perry and Wood (2019:10) agreed that fashion procurement is challenging, specifically in comparison to the procurement of basic clothing brands, as is easy to plan and forecast the demand for basic clothes. According to Perry and Wood (2019:10), fashion clothes suppliers should be located locally as the demand is volatile and requires quick procurement and production. In contrast, the organisation may engage in global sourcing regarding basic products as the demand uncertainty is moderate. According to InvestSA (2020:4), many organisations in the clothing industry in South Africa import some of their clothing products and have agreements with foreign suppliers. Procurement practices in the clothing industry are driven by fashion. Hence, samples presented to retail buyers should be of the most recent styles (Teke, 2022:15).

The variables influencing ordering in the clothing industry are summarised in Table 3.7 below.

Table 3.7:   Variables influencing ordering

Variables influencing ordering	Authors
Lack of seasonality due to fast fashion	Perry and Wood (2019:10)
Ethical buying	Utama *et al.* (2021:119)
Specification errors and sudden changes	Braglia *et al.* (2020:189)
Sharing costs associated with specification errors or sudden changes when ordering	Yue (2022:147)
Global sourcing	Perry and Wood (2019:10)
Few local ordering	Dos Santos (2020:40)
System Integration	Singh and Chan (2022:8); Teke (2022:15)
Lack of resources, skills and technology	Dos Santos (2020:40)
Fashion changes	Fung *et al.* (2019:3); Majumdar *et al.* (2020:2)

Source: Researcher's own compilation

3.4.4   Enterprise supplier development

The DTIC (2021:40) commented that supplier development must build capacity to enhance their capabilities and competitiveness regarding technical, quality and cost. Dos Santos (2020:40) argued that local manufacturers should be contracted, and retail shops should build relationships with these small organisations. Netshishivhe (2021:4) and Moloi (2019:74) noted that full manufacturers have lost their grip on the industry because of the influx of Chinese imports, which resulted in job losses, and stated that most full manufacturers converted to CMT manufacturers. Mercer (2020:100) and Arrigo (2020:14) asserted that clothing retail shops source from Asian suppliers such as China to take advantage of recent fashion at a reduced cost. According to Jenkin and Hattingh (2022:15), most clothing garments procured in SA are imported. According to CottonSA (2019:1) and Jack (2020:23), all this has caused job losses, and has negatively affected the sustainability and competitiveness of the industry. In addition, the lack of local support due to the influx of imports has resulted in job losses and the closure of most clothing manufacturing. There are many foreign retail shops and manufacturers in African countries (Altenburg *et al.,* 2020:35). According to Perry and Wood (2019:17), local CMT manufacturers need to be promoted to become full manufacturers, and this requires them to be developed, trained and that more rapid

partnership be built. Local supplier development is needed in terms of training, resource support and sustainable compliance, and TCO improvement is significant, particularly in developing countries (Perry & Wood, 2019:17).

According to Joorst (2021:22), TCO is the direct cost obtained, cost of holding and disposing of the machinery. Also, Khan and Yu (2019:6) noticed that managing TCO in manufacturing organisations is essential as it reduces surplus. Netshishivhe (2021:39) further revealed that there are high costs associated with labour and production, tax, finance and electricity in the industry. As previously noted, that lack of finance is a big issue affecting the cost of doing business and productivity in the industry. Clothing manufacturers have expenses to consider when doing business and managing the entire organisation. Dos Santos (2020:30) confirmed that SA is rapidly de-industrialising as it undergoes an extended period of de-industrialisation. According to Netshishivhe (2021:2), a significant percentage (55%) of textile producers, manufacturers, and retailers in Ekurhuleni have been compelled to lay off employees and reduce their business operations. Arrigo (2020:5) advocates that the industry to engage in global sourcing to obtain critical skills and local clothing suppliers are contracted to perform less critical tasks. Veitch (2021:35) noted that large clothing retail shops contract local designers, and the SA government supports small manufacturers in training programmes, cutting machines and tax relief. Mercer (2020:100) confirmed that the governments in developing countries neglected implementing interventions that would elevate and revitalise the industry to improve the competitiveness of domestic countries.

Still, the national development plan of the Retail-Clothing, Textile, Footwear and Leather (R-CTFL) noted the SA government's plans to reach 65% local sourcing in 2030 (Jenkin & Hattingh, 2022:54; Vietch, 2021:5). However, as explained above, there is a gap in addressing the issues related to the revitalisation and support of local suppliers, especially in domestic countries such as SA, where globalisation has crippled the clothing industry. Also, according to Perry and Wood (2019:11), clothing retailers prefer using the services of full manufacturers rather than CMT manufacturers. The DTIC (2021:38), Dos Santos (2020:40), and Kaplan (2020:71) acknowledged that the SA government has implemented various interventions to support the clothing industry. These interventions include monetary assistance in the form of funding, and tax inducements for the purchase of manufacturing resources, as

well as research and expertise improvement programmes, and making provision for improved infrastructure. However, the technological landscape in the industry is affected as there are various challenges, such as a lack of infrastructure and technology in local clothing manufacturing organisations. In addition, Dos Santos (2020:40) noted that SA clothing organisations encounter challenges such as inadequate resources and skills shortages, insufficient funding, and lack of infrastructure and technology and regulation. Veitch (2021:5) and the DTIC (2021:38) argued that the SA government supplies local clothing manufacturers with mechanised technology, such as cutting equipment. However, most organisations are labour intensive. Even amid insufficient knowledge and resources, InvestSA (2020:6) declared that the SA government is doing its best to revitalise the industry through skill development support, productive incentives, and a competitive improvement programme. According to Netshishivhe (2021:34), the industry is being hindered by several factors, including the absence of a reliable government system, high income tax, competition, and corruption.

According to Dos Santos (2020:40), clothing manufacturers in countries with emerging economies, such as South Africa, often lack the necessary resources and capabilities, leading to potential risks for retail clothing stores. As a result, these stores may have to rely on global sourcing for their products. CottonSA (2019:1) noted that some global clothing suppliers are financially stable and have moved to industrial upgrading and investing in advanced machinery, technical systems and staff skills improvements. The clothing industry in developing countries, especially SMME organisations, is experiencing many challenges. The discussion raises a need for enterprise supplier development (ESD) and partnerships between domestic retail clothing shops and CMT manufacturers in the clothing industry. This will assist in enforcing revitalisation, job creation and local economic upliftment. The current study extended on the work of Mai and Phong (2020:1229), an empirical study on how supplier partnerships and collaborations are managed in the clothing industry. The current study also aimed to build upon Perry and Wood's (2019:17) research by examining whether CMT manufacturers in South Africa receive adequate support to achieve full manufacturer status, as was previously common practice.

A summary of the variables discussed in ESD are presented below in Table 3.8.

Table 3.8:   Summary of variables of ESD

Variables in ESD	Authors
Lack of manufacturing capabilities	Netshishivhe (2021:4); Moloi (2019:74)
Government support	DTIC (2021:38); Kaplan (2020:71)
Training and development	DTIC (2021:40) Kaplan (2020:71)
Local sourcing	DTIC (2021:17); Dos Santos (2020: 40); CottonSA (2019:1)
Job creation	DTIC (2021:44); CottonSA (2019:1)
Local economic upliftment	DTIC (2021:19); Mai and Phong (2020:1229)
High imports	Netshishivhe (2021:4); Moloi (2019:74)
Partnership	Mai and Phong (220:1229)

Source: Researcher's own compilation.

3.4.5   Strategic partnership

In the clothing industry, supplier relationships are encouraged in efforts to improve procurement practices, and concepts related to clothing fashion trends are shared to improve awareness. These eliminate surplus stock and enhance delivery. Also, according to Utama *et al.* (2021:125), sanctions that alleviate cost, reduce time, and improve competency are highly related to supplier relationships. Supplier relationships give clothing retailers control over supply chain processes and practices. As such, Singh and Chan (2022:2) argued that the clothing industry needs strict regulations for sourcing. Meanwhile, Perry and Wood (2019:7) claimed that associations between buyers and suppliers in the fashion industry are often short-term and marked by disputes. These relationships are primarily driven by cost and involve multiple sourcing and competitive bidding. Mejías *et al.* (2019:150) designed a model that improves buyer and supplier relationships in the clothing industry, improving social and environmental compliance and sustainability. However, the model needs to pay more attention to the problems that emanate from having multiple supply chain partners, as supplier monitoring and development of multiple suppliers might be challenging and costly.

Also, Twyg (2020:50) contended that honest collaboration with a single supplier partner is more fruitful than honest collaboration with many supply chain partners in the clothing industry. To prevent risks, Singh and Chan (2022:2) stated that the clothing industry should build a profile of suppliers before engaging in subcontracting activities with suppliers. The abovementioned authors also reiterated that supplier collaboration contributes towards environmental sustainability and product improvement, and the industry should ensure that suppliers have an ISO14001 certificate (Singh & Chan, 2022:2; Maria, 2021:3). As per Utama *et al.* (2021:125), a sustainable partnership in the clothing supply chain should involve suppliers and the entire supply chain. This approach has been supported by multiple authors. Moreover, Reis (2019:20) mentioned that supply chain partners are valued on aspects such as green supplier rating and supplier partner suitability. The authors noted that clothing manufacturers should commit to supplying garments styles for sensible clients, compensate accountable SC partners, commit to ethical behaviour, eliminate pollution, and apply natural resources responsibly.

CottonSA (2019:1) advised that it is not easy for procurement organisation to change suppliers when a strong supplier collaboration has been established with a current supplier, and the steadiness of order is secured. However, Netshishivhe (2021:39) explained that if the supplier is not honouring the agreement, clothing retailers will quickly change to other complying suppliers. Chen *et al.* (2023:1236) and Perry and Wood (2019:7) contended that clothing retailers should advance partnerships with suppliers, and that this would result in a quick response to customer demands. According to Dos Santos (2020:40), the retail clothing industry has moved away from collaborating with clothing manufacturers in South Africa. Instead, they opt for importing clothes from China, which are more affordable. The literature indicated barriers in supplier partnerships where contractual agreements are not solid and are being dishonoured (Twyg, 2020:50). These barriers hinder the process of establishing strong supplier development and partnership. The authors discussed in this section found that there are vital contextual elements related to the variables that may improve through supplier development and partnership.

The current study investigated how strategic partnerships can be promoted in the clothing industry. It used the resource base theory to address the need for more resources in the industry and deliberated on government policies and the support

available to assist the industry. The current study applied the stakeholder's theory to determine how relationships between retail shops and local manufacturers may be built to improve localisation and social and environmental stability.

Table 3.9:   Summary of variables affecting strategic partnership in the clothing industry

Variables in strategic partnership	Authors
Supplier partnership	Che *et al.* (2023:1236); Perry and Wood (2019:7); Utama *et al.* (2021:125)
Strict sourcing regulations	Singh and Chan (2022:2)
Relationship is cost driven and described by multiple sourcing and competitive bidding	Perry and Wood (2019:7)
Global competency	Netshishivhe (2021:39)
Social and environmental compliance	Mejías *et al.* (2019:150); Utama *et al.* (2021:125); Reis (2019:20)
Honouring agreements	Netshishivhe (2021:39); Twyg (2020:50)
Honesty and trust	Netshishivhe (2021:39); Twyg (2020:50)
Rating of suppliers	Reis (2019:20); Utama *et al.* (2021:125)

Source: Researcher's own compilation

The next section discusses government policies relevant to the clothing industry.

3.5   GOVERNMENT POLICIES AND REGULATIONS RELEVANT TO THE CLOTHING INDUSTRY

This section discusses the procurement policies and regulations governing the clothing industry.

3.5.1   Policies and regulations governing procurement practices

This section presents a discussion of the World Fair Trade Organisation (WFTO), General Agreement Tariff Trade (GATT) and industrial policy action plan (IPAP).

3.5.1.1   World Fair Trade Organisation (WFTO)

The World Fair Trade Organisation (WFTO) trade policy is based on the global multilateral regulation of trading (Galtier, 2023:1; Zhang, Jiang & Zheng, 2023:2; Obeng *et al.*, 2023:3; Kaplan, 2020:84). According to Zhang *et al.* (2023:2) and Veitch

(2021:2), the WFTO was previously known as the International Federation of Alternative Trader Policy. The WFTO aims to promote fair trade between alternative supply chain trading partners in the clothing industry and grant social value to top clients (Zhang *et al.,* 2023:2; Veitch, 2021:2). According to Jenkin and Hattingh (2022:11), Veitch (2021:2), and Altenburg *et al.* (2020:35) the domestic clothing industry entered the WFTO in 2004, and that is when agreements on textile and clothing (ATC) started as the industry began to compete with clothing industries in the rest of the world. However, this agreement gave China an advantage as it competed under low-cost wages (Mercer, 2020:100). Mavroidis and Sapirj (2019:2) argued that the WFTO policy helps create financial opportunities for suppliers or manufacturers who may be disadvantaged.

3.5.1.2 *GATT policy*

According to Perry and Wood (2019:3), since 1974, global trade has been restricted. However, Jenkin and Hattingh (2022:11) and Altenburg *et al.* (2020:35) noted that the revised multifibre agreement policy in 2005 enforced quotas and promoted outsourcing and global trade in the clothing industry. The authors indicated that the Multi-Fibre Arrangement policy protects the clothing industry by enforcing measurable restrictions on clothing imports from established states, which was communicated under the General Agreement Tariff Trade (GATT) policy. However, Altenburg *et al.* (2020:35) echoed that in 2005 the clothing industry was unified entirely into the GATT system. According to Perry and Wood (2019:4), this unity increased the supplier pool in the clothing industry as an organisation has the privilege of sourcing from suppliers everywhere in the world. In SA, Veitch (2021:2) and Altenburg *et al.* (2020:35) maintained that South Africa entered a global economy in 1994. As a result, the South African government reduced tariffs on imported goods and services, which led to a decline in the clothing industry and the closure of several clothing organisations. Moreover, it caused clothing imports, especially from China to flood in African countries, and SA is one of the significantly affected countries.

Each policy influences procurement practices in the SA clothing industry and affects the overall operations. Shen *et al.* (2019:15) agreed that broadening sourcing in the clothing industry created prospects for importers. The review of the GATT policy had a tremendous impact on global trade and growth in China trading; according to the

World Fair Trade Organisation (2019:48), and world trade statistics indicate that China remains the world-leading product dealer with a stake of 13% of the world exports.

The SA government is planning to incorporate more robust tariff protection within the rules of the world trade organisation to protect the local industry and to reduce the high clothing imports (InvestSA, 2020:4). Based on the literature; there is still a gap that addresses how the GATT policy may be amended to address the flooding of imports that have destroyed the industry, especially in domestic countries such as South Africa (SA). Šajn (2019:2) also debated that European textile manufacturing suffered as the WFTO textile quotas started from the 1990s to 2005. The study builds on the literature to determine the extent to which policy and regulations benefit the private sector, particularly the clothing industry, and identify areas of improvement.

3.5.1.3 *The Industrial Policy Action Plan (IPAP)*

The DTIC also governs the Industrial Policy Action Plan (IPAP) to support the clothing industry through financial assistance (Kaplan, 2020:36; Dos Santos, 2020:90). Even authors indicated that the PPPFA does not fully favour the clothing industry, categorised under the private sector. Kaplan (2020:36) indicated that the Production Incentive Programme (PIP), together with the IPAP, provides financial support and improves the infrastructure and skills in the SA clothing industry. The Production Incentive Programme (PIP) is aimed at the physical transformation of the clothing industry by providing monetary assistance to capitalise on competitiveness upgrading involvements (InvestSA, 2020:4). Kaplan (2020:4) confirmed that the IPAP has improved collaboration with the private sector. For example, the IPAP is investing in a new advanced technical tool for the mining industry. The Production Incentive programme provides mediation to improve labour, processes, products and markets in the SA clothing industry (Veitch, 2021:54). According to InvestSA (2020:4), the SA government is embarking on skills development programmes and is funding local clothing manufacturers. To this end, InvestSA (2020:4) noted that SA manufacturers are encouraged to register their businesses and apply for operating permits, licenses, and other support programmes.

The IPAP funding requires that clothing organisations should partner with CMT manufacturers in product design and development and spend half of their production costs on CMT manufacturers to transform and integrate the industry entirely. Dos

Santos (2020:8) agreed that the industry needs support as it is highly labour-intensive and can utilise new technology, knowledge and skilled labour and produce valuable garments. Dos Santos (2020) indicated that through BRICS engagements, the SA clothing industry may improve the labour force's skills, obtain new machines to improve the quality of garment manufacturing, export more garments, and be eligible for low import tariffs. Brazil, Russia, India, China and South Africa (SA) form part of the BRICS agreement. However, Dos Santos (2020:8) indicated that there are barriers that hinder the effective functioning of the IPAP, such as lack of resources, global sourcing that contradicts the enforcement of industrialisation, unskilled labour, lack of local support, job losses, inequalities and remote areas that are disregarded (Kaplan, 2020:55). The IPAP report reiterated that there is still lack of conformity with the government policy as related to local support.

Tsolakis *et al.* (2023:164) hypothesised that the government of respective countries in the clothing industry should incorporate policies and regulations. This policy creates a gap as the clothing industry engages in global trade and has to adhere to various policies of the countries they are trading with. Based on the discussion in the literature, the shortcoming of the IPAP in SA are that it needs to be more resourceful to save the clothing industry, as some authors have indicated that other industries need assistance, such as the mining industry. Also, In SA, the IPAP policy needs to be fully budgeted to be able to fully subsidise the clothing industry, which faces high job losses and the closure of several clothing manufacturers.

3.5.1.4   *Broad-based Black Economic Empowerment (B-BBEE)*

Act No. 53 of 2003, the Broad-Based Black Economic Empowerment Act (B-BBEE Act), established a framework for fostering black economic empowerment, producing a balanced scorecard, and publishing industry transformation charters. A supporting plan is also available. The codes of good behaviour that were introduced in 2007, included a balanced scorecard that measured companies' black economic empowerment (BEE) credentials on an annual basis (Ekurhuleni, 2019). The policy encourages organisations to support black entrepreneurs and suppliers (Republic of South Africa, 2004:12). The Broad-Based Black Economic Empowerment Amendment Act of 2013 updated the Codes of Good Practice for B-BBEE. These changes were open for public comments as per the Government Gazette (Republic of South Africa, 2017:12).

The amendment of section 10 of Act 53 of 2003 focuses on the application of the code of good practice, such as:

- Determining prerequisite criteria for assigning licenses or approval concerning economic activities.

- Designing and applying the preferential procurement policy.

- Designing prerequisite criteria for the public and private associations.

- Designing prerequisite criteria for granting inducements, allowances, donations, and investment projects to promote broad-based black economic empowerment.

- Assessing compliance with the broad-based black economic empowerment (BEE Advisory Team, 2019:14; Republic of South Africa, 2014:50).

The modification of section 11 of Act 53 of 2003 aims to encourage the provision of financial aid for black economic empowerment, which includes funding for the development of black-owned and operated organisations (DTIC, 2019). According to the DIT, private organisations utilise the generic code of good practice for the state to examine the B-BBEE transformation plan in these organisations. B-BBEE policy encourages organisations to support black entrepreneurs and suppliers. (Ekurhuleni, 2019; Altenburg *et al.*, 2020:35; DTIC, 2019) local suppliers should be preferred during supplier selection and contracting in the SA clothing industry.

3.5.2 Policies promoting a social and sustainable environment

This section presents a discussion of the policies promoting a social and sustainable environment, such as the International Labour Organisation (ILO) and the National Environmental Management Act (NEMA).

3.5.2.1 *International labour organisation (ILO)*

Mejías *et al.* (2019:144) reported that there are standards in place for the textile industry, such as the Global Organic Textile Standard (GOTS), SAC, and International Labour Organisation (ILO), aimed at enhancing social and environmental sustainability. Němcová and Tučková (2019:1193) noted that the SA8000 certification is linked to the ILO as it looks at social accountability in the workplace, and global organisations are required to have such certification. Mejías *et al.* (2019:145) argued that social accountability presents guidelines for compliance and is used to assess compliance with decent work. Bag *et al.* (2023:16), Shen *et al.* (2019:12), and Arrigo

(2020:3) recommended that there should be policies that regulate carbon emissions in industries. As such, Moloi (2019:71) indicated that the SA government has introduced a carbon tax, which compels the industry to combat carbon emissions and promotes energy savings through green initiatives and joint actions.

Bag *et al.* (2023:16) indicated that the government in each country has designed a regulatory framework to promote sustainability in the clothing industry. However, international standards should be met when organisations enter international trading. The clothing industry opts for environmentally friendly materials and safe fabrics for employees during production (Muthu, 2020:8). Hence, Bag *et al.* (2023:16) emphasised that to this end it is essential to adhere to ISO standards. Authors, such as Schneider and Arrigo (2020:3) and Jack (2020:24), have proclaimed that clothing producers continue to outsource employee-concentrated production to outside countries that are able to produce at a lower cost, compromising employees' rights to employment and reducing employee wages. This discussion proves that social sustainability compliance is critical in this industry.

3.5.2.2 *National Environmental Management Act (NEMA)*

The National Environmental Management Act (NEMA), 107 of 1998, established principles and procedures for environmental decision-makers. The Act's principal goal is to act as a qualifying mechanism for the endorsement of a legal code to successfully address cooperative environmental management (Amahlathi Local Municipality, 2020:18; Kuture, 2022:72). Veitch (2021:32) noted that this policy is relevant in the SA clothing industry as it enforces compliance with the environment. However, Tsolakis *et al.* (2023:164) and Huttunen (2022:11) noted that policies on sustainability differ according to nations and countries. Utama *et al.* (2021:119) argued that the code of conduct in the clothing industry should also address issues related to unhealthy working environments. Jack (2020:20) concurred that unpleasant working settings in the clothing industry affect the industry's sustainability.

Shen *et al.* (2019:120) argued that the industry still needs stringent regulations and policies that enhance employees' privileges. Corporate social responsibility (CSR) means that an organisation is responsible for upholding ethical principles and showing respect for people, communities, and the environment. This definition was provided by

Abbate *et al.* (2023:1), Yang and Jiang (2023:1), and Němcová and Tuková (2019:1193).

In addition, the clothing industry's operations should be examined in terms of environmental standards compliance regarding ISO 14001 certification, refuse administration, trash stoppage, plans to salvage, sustainable documents, and environmental tagging (Mejías *et al.*, 2019:145). According to Shen *et al.* (2019:12) and Arrigo (2020:3), the clothing organisation needs to calculate the effect of clothing SC on the environment and adhere to SAC. The study assessed social regulations and compliance in the clothing industry, particularly in SA. The study provides theoretical guidance on the relevance of these policies to the SA clothing industry. Figure 3.5 presents a summary of procurement policies and regulations in the clothing industry.
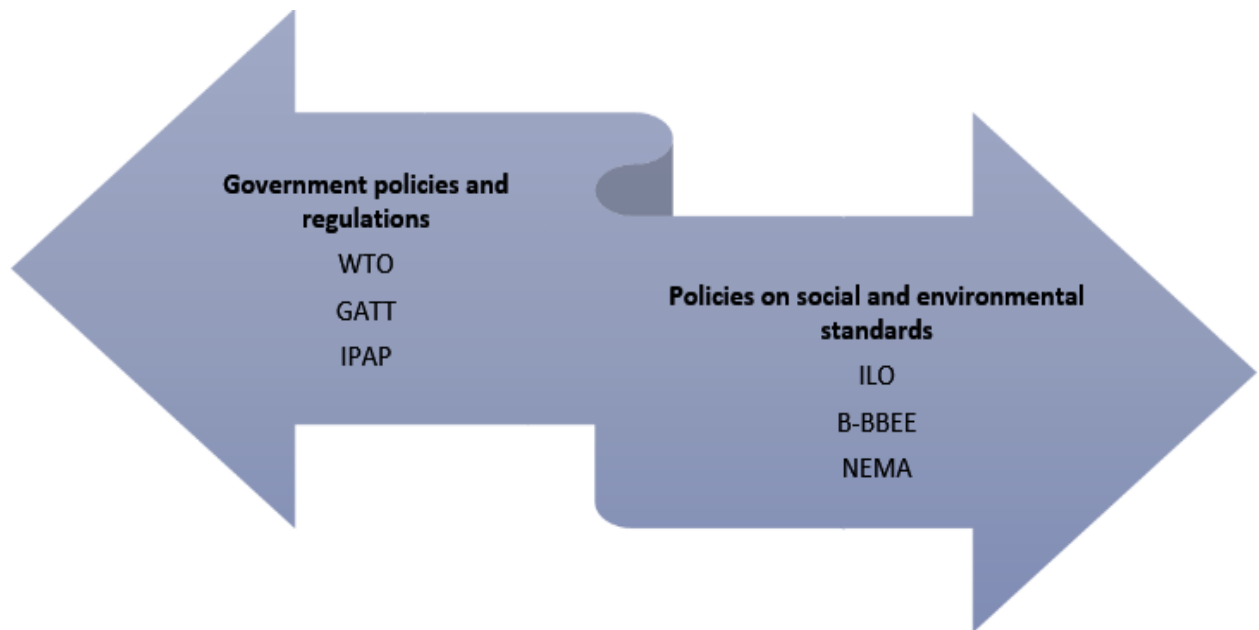
Figure 3.5:   Diagrammatical summary of procurement policies and regulations in the clothing industry

Source: Researcher's own compilation

As discussed, it is crucial that the study evaluates the efficacy of procurement policies and regulations in the industry. Various authors raised non-compliance policies and regulations in the discussion. The next section discusses the value of procurement.

3.6   VALUE OF PROCUREMENT IN THE CLOTHING INDUSTRY

This section focuses on the value of procurement in the clothing industry. Procurement practices in clothing organisations create value by providing benefits to the society and the environment and making organisations profitable (Bag *et al.*, 2023:16; Singh & Chan, 2022:2; Utama *et al.*, 2021:125). Hossain (2019:22) contended that procurement in the clothing industry should realise the value of shortening the lead time through domestic manufacturing and advanced information technology systems. Examples of improvement in technological systems include electronic point of sale (POS) information and ensuring rapid transportation systems. The literature review conducted for the current study found that authors agree that improved technological tools create value in procurement, leading to rapid product ordering and receiving (Yülek, Natsuda, Akkemik & Yağmur, 2019:267). Procurement is there to improve the total cost of the ownership realised (Khan & Yu, 2019:6). However, there are high costs associated with labour and production, tax, finance and electricity in the industry (Netshishivhe, 2021:39). According to Shen *et al.* (2019:3), the organisation may create value by establishing SC partnerships through which procurement can be improved.

In the clothing industry, procurement aims to improve the organisations' competitive edge through reduced-order size in fashion items and improved forecasting. Shen *et al.* (2019:76) noted that procurement aims to improve product development, as some clothing organisations opt for improved fabrics such as micro-fibres and seamless weaving (Jin & Cendrola, 2019:5). Procurement in the clothing industry, also plans to achieve enhanced quality fabrics and creative design (Pereira *et al.*, 2022:1; Utama *et al.,* 2021:124). Procurement in the clothing industry creates improved customer collaboration, infrastructure administration and finance (Gornostaeva, 2023:3; Singh & Chan, 2022:2). Procurement in the clothing industry promotes a long-standing relationship with supply chain partners, which assists in improving SC partners' processes and compliance (Mai & Phong, 2020:1229). Procurement creates transparency and prepares clothing organisations for the fourth industrial revolution through technological advancement (Singh & Chan, 2022:8). Mai and Phong (2020:1237) asserted that procurement aims to improve the clothing industry's income and increase international stake and dominance. It is important to understand that an effective procurement process can help the clothing industry to invest in suppliers that

can lower manufacturing and employee costs, as well as improve the speed of product delivery (Khan & Yu, 2019:6).

The value of procurement is achieved through competitiveness, improved forecasting, enhanced quality fabrics and creative, improved customer collaboration, infrastructure administration and finance, and the clothing industry promoting a long-standing relationship with SC partners which improve the processes and compliance of SC partners (Shen *et al.*, 2019:76; Kaplan, 2020:36; Jin & Cendrola, 2019:5; Jenkin & Hattingh, 2022:17; Braglia *et al*., 2020:187). Mai and Phong (2020:1229) echoed that the value of procurement in terms of design honesty, quality and distribution are achieved when approved. Standards are processed and resolved rapidly and with simplicity. Statista (2021:38) claimed that despite numerous standards in clothing production and supply chain, procurement should improve the efficiency of communication related to brand design, approval, and understanding of processes, products, and standards to all supply chain partners. When organisations focus on procurement that considers the triple bottom line, namely, monetary, social, and environmental factors in the clothing industry, they can create value and meet investors' manufacturing expectations (Statista, 2022:38; Mai & Phong, 2020:1229). Procurement should improve sustainability in fashion production and promote ethical behaviour (Arrigo, 2020:10).

The value of procurement is achieved through a clear contract that supersedes stakeholder value, shifting risk to suppliers, enhancing direction and control to management and staff, and focusing more on risky matters (Twyg, 2020:50). According to Mercer (2020:100), a procurement process that promotes local sourcing with a pleasant working environment and transparent corporate procurement practices and standards creates value and improves good procurement practices. The importance of procurement in the clothing industry has been compromised, as global sourcing has caused the clothing industry to use the service of global suppliers, which has compromised local industry supports, resulting in job losses and the closure of the majority of the clothing manufacturing organisations. The study planned to examine if procurement practices in the clothing industry address both economic and social aspects. The study also aims to assess if the value of procurement is achieved in the industry by addressing sustainable procurement processes and compliance issues.

Table 3.10 below summarises the importance of procurement in the clothing industry according to various authors.

Table 3.10:   **Summary of value in the clothing industry according to various authors**

The value of procurement	Authors
Technical system	Yülek *et al.* (2019:267)
Total cost of ownership (TCO)	Khan and Yu (2019:6)
Improved competitiveness	Shen *et al.* (2019:3)
Enhanced quality fabrics (TQM)	Jin and Cendrola (2019:5); Mai and Phong (2020:1229).
Customer collaboration, infrastructure administration and finance	Kaplan (2020:3)
Promote long-standing relationships and compliance	Shen *et al.* (2019:76); Jin and Cendrola (2019:5); Jenkin and Hattingh (2022:17); Braglia *et al.* (2020:187)
Create transparency and result in communication efficiency	Statista (2021:38)
Competitiveness	Utama *et al.* (2021:125).
Monetary, social, and ecology	Singh and Chan (2022:2)
Promote ethical behaviour	Arrigo (2020:10).
Promote contracts that supersede stakeholder value and reduce risky situations.	Twyg (2020:50)
Local sourcing, a pleasant working environment and transparent practices and standards	Mercer (2020:100).

Source: Researcher's own compilation

The next section discusses the sustainability of procurement.

3.7   SUSTAINABILITY OF PROCUREMENT IN THE CLOTHING VALUE CHAIN

Sustainability constitutes values focused on social integrity, economic capability, and a healthy environment (Huttunen, 2022:7). Singh and Chan (2022:2) also stated that sustainable procurement is about attaining and proving environmental principles that

pay attention to environmental, social, and economic components when trading. Environmental sustainability is discussed in the next section.

3.7.1 Environmental sustainability

Environmental sustainability implies that nature needs to be valued and respected without destroying it, and that natural resource consumption should be done sustainably (Riazi & Saraeian, 2023:1; Huttunen, 2022:7). The study by Mejías *et al.* (2019:150) identified a need for more transparency and compliance with the code of conduct regarding social and environmental compliance by SC partners in the clothing industry. According to various scholars, issues of non-compliance have been identified in the clothing industry (Riazi & Saraeian, 2023:1; Chen *et al.,* 2021:1; Arrigo, 2020:10). Malinverno, Schmutz, Nowack and Som (2023:1), Fung *et al.* (2019:1) and Perry and Wood (2019:2) proclaimed that the clothing industry makes a high contribution to pollution. The chemicals used in the industry pollute the sea, rivers and the environment. Also, clothes manufacturing leads to carbon emissions (Riazi & Saraeian, 2023:1; Rathinamoorthy & Balasaraswathi, 2020:2; Jack, 2020:26). Jenkin and Hattingh (2022:17) noted that it is worrying to learn that the industry uses about 8 000 different chemicals in the garment manufacturing system. The aforementioned authors also noted that it is crucial to conduct maintenance of production equipment to avoid drips during manufacturing. Riazi and Saraeian (2023:1) and Jack (2020:26) highlighted a need for technological advancement to alleviate environmental pollution.

Cooper and Claxton (2022:5), Fung *et al.* (2019:1), and Perry and Wood (2019:2) also confirmed that fast fashion production increases carbon emissions and results in pollution. Also, the literature attests that mismanagement of the use of insecticides on fabrics compromises the environment (Majumdar *et al.*, 2020:2). Statista (2021:38) and Fung *et al.* (2019:1) argued that fast fashion production constantly compromises social and environmental sustainability. According to Jack (2020:24) and Chen *et al.* (2023:1237), the fast fashion industry contributes to increased global sourcing. This is due to the high demand and low prices on garments. Abbate *et al.* (2023:1) and Radhakrishnan (2022:181) noted that the global clothing industry is the highest contributor to global warming. The R-CTFL master plan of SA aims to ensure industry compliance with the ecosystem. Social and environmental standards and compliance

may improve only when SA retail clothing shops consider locally produced garments (Mejías *et al.*, 2019:145; Barnes & Higginson, 2019:14).

Cooper and Claxton (2022:5) and Statista (2021:38) and Perry and Wood (2019:2) advised that fast fashion production compromises quality and leads to lower-priced garments. Cooper and Claxton (2022:3) and Jack (2020:31) asserted that fast fashion manufacturing should be reduced. Jacobs and Karpova (2020:365) and Statista (2021:38) stated that the industry's problem is pressurised by fashion customers who are hesitant to support sustainably manufactured garments, as they demand fast fashion manufacturing. Šajn (2019:4) affirmed that over 1 900 acids are utilised in clothing manufacturing and cause health and environmental risks. Statista (2021:38) reiterated that globalisation had contributed to the quick production of fashion as fashion styles are manufactured in two or three weeks, resulting in pollution. According to Fung *et al.* (2019:1), this has resulted in high carbon emissions. John and Mishra (2023:1) and Maria (2021:3) also contended that a high volume of material is cut off when clothes are manufactured, which results in waste and pollution. Bag *et al.* (2023:2) and Corbishley *et al.* (2021:66) shared the same view that globalisation in the clothing industry has resulted in manufacturing pressure, cheap labour and compromises in terms of environmental measures. For example, the fibre produced internationally in 2019 reached 111 million metric tons, and clothing fabric contains insecticides that destroy the ecosystem and marine life (Chen *et al.* 2219:1236).

Peters *et al.* (2021:2) argued that fast fashion justifies why fibre production doubled. Majumdar *et al.* (2020:2) urged that about 25% of insect killer ingested in the universe emanates from non-organic yarn or fabric. In Bangladesh, the manufacturing structure of a specific clothing organisation fell and killed over 1100 employees, and over 700 textile organisations were shut down due to non-compliance with zero liquid expulsion standards (Majumda *et al.*, 2020:2). Therefore, it is evident that the fashion industry is a high polluting industry causing a great amount of production waste (John & Mishra, 2023:1; Malinverno *et al.*, 2023:1; Mai & Phong, 2020:1229). The clothing industry SC is greatly affected by ecology, monetary and demand risk (Majumdar *et al.*, 2020:17). Bag *et al.* (2023:3) and Statista (2021:38) contended that a lack of appropriate social and environmental ethics is recognised in the clothing industry. Additionally, John and Mishra (2023:1) and Jack (2020:29) and Radhakrishnan (2022:187) confirmed that the volume of off-cut materials at the CMT production factories result in a great amount of

production waste. Perry and Wood (2019:2) and Jenkin and Hattingh (2022:14) argued that it is imperative to enhance the chemical and water consumption proficiency in clothing manufacturing to save costs and eliminate environmental pollution. Buchel *et al.* (2022:243) asserted that pollution in the industry might reduce when the industry focuses on local sourcing. According to Shen *et al.* (2019:12), the clothing organisation needs to calculate the effect of clothing SC on the environment and adhere to SAC.

Therefore, it is crucial to have ISO 14000/14001 certification in this industry and SAC certification. Also, compliance with these certification requirements is essential. Hence, according to Singh and Chan (2022:2), procurement organisations in the clothing industry are awarded accreditation documents, such as ISO 14001, when they adhere to all state regulations and social and environmental responsibilities. Singh and Chan (2022:2) also contended that the industry needs to engage in garment manufacturing systems that adopt non-toxic, reusable, ecological and refurbished resources to eliminate pollution and improve waste disposal. John and Mishra (2023:1) and Shen *et al.* (2019:12) commented that garment manufacturing leads to carbon emission, water wastage and contamination, and clothing organisations must solve such problems. Based on the literature, there is a link between sustainability and policy regulation. The sustainability of the industry needs to be monitored and guided by regulations. Various scholars, such as Abbate *et al.* (2023:1), Shen *et al.* (2019:12), and Mani and Delgado (2019:1) advised that Corporate Social Responsibility (CSR) and awareness of the industry's environmental implications are required from the industry. Authors in the literature indicated that the industry needs to be environmentally compliant. The clothing industry requires more empirical studies to develop a framework for environmental compliance. The next section covers social sustainability.

The variables influencing environmental sustainability are presented in Table 3.11 below.

Table 3.11: Variables influencing environmental sustainability

Variables influencing environmental sustainability	Authors
Lack of compliance	Mejías *et al.* (2019:150)
High pollution	Chen *et al.* (2021:1; Arrigo (2020:10). Fung *et al.* (2019:1); Perry and Wood (2019:2)
Waste, chemical and water disposal	John and Mishra (2023:1); Jenkin and Hattingh (2022:17); Shen *et al.* (2019:12)
Green technology	John and Mishra (2023:1); Riazi and Saraeian (2023:1); Jack (2020:26)
Fast fashion	Statista (2021:38)
Global warming	Statista (2021:38)
ISO certification	Singh and Chan (2022:2)
SAC certification	Shen *et al.* (2019:12)

Source: Researcher's own compilation

3.7.2   Social sustainability

Social sustainability focuses on aspects such as respecting human rights, fair labour practices, living conditions, health, security, well-being, diversity, justice, work-life balance, equality, community upliftment, and humanity (Bag *et al.*, 2023:16; Huttunen, 2022:11). Fung *et al.* (2019:2) reported that non-compliance in the clothing industry affects the organisations' reputations and future dealings. According to (Fung, 2019:2), the clothing industry must treat workers well and ensure the environmental safety of the clothing supply chain.

The clothing industry engages in fast fashion and harms workers in the industry in various ways (Mamun & Hoque, 2022:1; Statista, 2021:38). The clothing industry has been found to have working contracts that are harmful to the health and protection of employees, according to research by Bag *et al.* (2023:16) and Jack (2020:20). Buchel *et al.* (2022:235) found that the industry is associated with the mistreatment of workers, some of which are women, children and immigrants, they additionally found that some workers do not have formal working contracts.

There is a lack of morals amongst workers as employees are not incentivised to work extra hours (Mamun & Hoque, 2022:1; Jack, 2020:24). Good procurement practice adheres to labour law regulations that enforce workers to be paid as per standard

labour rate, and review the working conditions according to acceptable standards (Singh & Chan, 2022:8; InvestSA, 2020:2).

Mercer (2020:100) stated that local manufacturers need to be incentivised to comply with the minimum wage regulated by the clothing bargaining council and the labour laws of SA. To clarify, Mercer (2020:100) noted that this industry competes with Asian countries with lower wage settings, such as China. Sustainable procurement is achieved through procurement practice that considers the community's social upliftment and strives to reform the local economic sector and adhere to social standards (Bag *et al.*, 2023:16; Jin & Cedrola, 2019:5).

It is disturbing to note that according to Veitch (2021:48-54), good procurement practices in the clothing industry are affected by labour strikes, competition intensity, demand changes, unskilled staff, social and environmental crisis. Staff development in the clothing industry is not promoted, as procurement organisations in the clothing industry may prefer to hire a new skilled worker and reward the worker with a high salary instead of training existing unskilled workers because training is seen as expensive. According to Moloi (2019:89), local development, building social capital and growth in the clothing industry of SA is essential as the industry is crumbling. Edmonds *et al.* (2019:iv) stated that, in contrast, it is worrying to note that in European cities this industry still contributes to economic upliftment. Moreover, labour issues involving regular hours of work, reduced income, and women are most exploited (Jack, 2020:20).

According to literature, it is important to consider both social and environmental sustainability in the clothing industry to ensure ethical procurement. Abbate *et al.* (2023:1) and Shen *et al.* (2019:12) advised that clothing organisations must adhere to CSR and beware of the social impacts of the industry. The aforementioned authors debated the link between globalisation and social and environmental sustainability, policy regulations and supplier partnership, as presented by various authors in the literature. Němcová and Tučková (2019:1193) argued that regulations differ according to country; hence in the globalised clothing industry, ethics and regulations of CSR are indistinct. However, Němcová and Tučková's (2019:1193) study is limited to theorising a comprehensive study addressing standard procurement policies that the industry should adopt when trading locally and between countries. Therefore, the current study aimed to extend the work of Mejías *et al.* (2019:145), Fung *et al.* (2019:2), and Mercer

(2020:100) to empirically examine added standard procurement practice to assess the supplier's social, economic, and environmental sustainability in the SA clothing industry.

The current study built on the literature studies of various authors to design a framework that yields social and environmental sustainability in the clothing industry. The variables influencing social sustainability are presented in Table 3.12 below, after which Figure 3.6 provides a diagrammatical illustration of the variables influencing sustainability in the clothing industry:

Table 3.12: Variables influencing social sustainability.

Variables influencing social sustainability	Authors
Safe working environment	Fung *et al.* (2019:2)
Fast fashion harms workers	Statista (2021:38).
Informal working hours	Jack (2020:20)
Community upliftment	Jin and Cedrola (2019:5). Edmonds *et al.* (2019:iv)
Minimum wage	Mercer (2020:100)
Corporate social responsibility	Shen *et al.* (2019:12)
Compliance	Mercer (2020:100)

Source: Researcher's own compilation
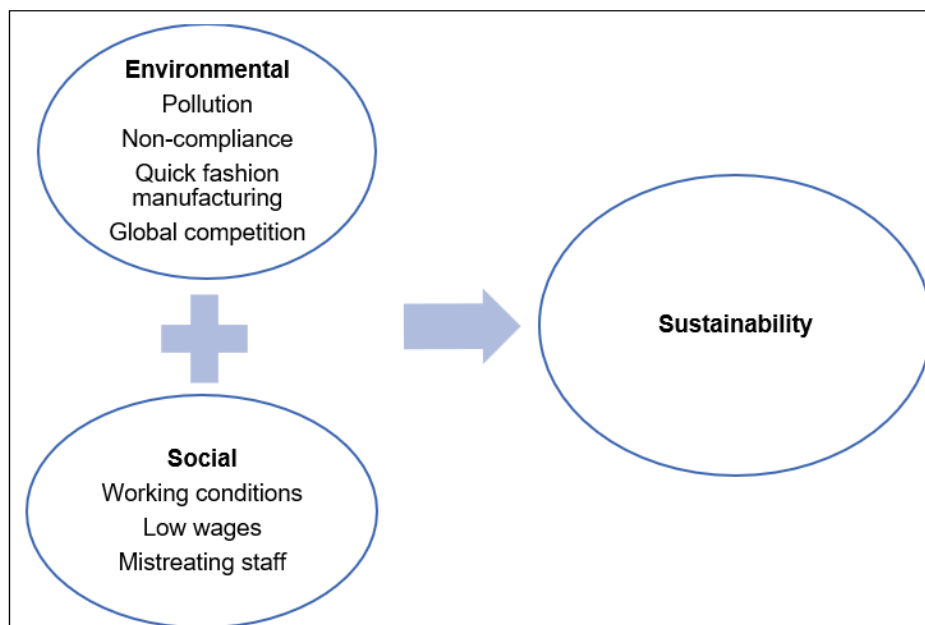
Figure 3.6:   Variables influencing sustainability in the clothing industry

Source: Researcher's own compilation

The challenges of procurement are discussed in the nest section.

3.8 PROCUREMENT CHALLENGES IN THE CLOTHING INDUSTRY

This section summarises the challenges being experienced in procurement. Various authors in the clothing industry still consider good procurement practices as complex and challenging to achieve. However, a wide range of variables affecting procurement practices related to procurement processes, global, social and environmental sustainability, and policy and regulation compliance impact efficient procurement practices in the clothing industry. Utama *et al.* (2021:124) stated that suppliers are rated on their capability and resources in the clothing industry. Bag *et al.* (2023:3) and Worku (2019:98) reported that the clothing industry is highly global and that there is minimal local support.

According to Swaminathan and Venkitasubramony (2023:3), Statista (2021:38), and Shen *et al.* (2019:2), the procurement process of the fashion industry is impacted by the intricate nature of fashion trends. The work of Shen *et al.* (2019:2) also confirmed that there are too many standards and processes in producing clothes, which is detrimental to procurement processes. Each company has its own fashion cycle where fashion design entrepreneurs showcase two major collections annually on global platforms. These authors argued that fashion trends changing continuously with varying SKUs create challenges in monitoring the supply chain processes and practices. This discussion proves that this industry is multi-faceted with an extensive product variety and a short life cycle; hence, good procurement practices and principles are compromised to satisfy fast fashion customers' demands.

The authors, Perry and Wood (2019:9) reasoned that the procurement of basic garments is based on eliminating costs and emphasising green and sustainable SC processes. However, when it comes to fashion, there are often styles changes, as SC partners are driven by quick procurement and manufacturing to balance the supply with clothing demands. All these challenges affect the efficacy of procurement practices in the clothing industry. The growth of global competition in industry emanated from the removal of trade barriers, increased imports, and global competition (Truett & Truett, 2019:2845). Bag *et al.* (2023:3) and CottonSA (2019:3) argued that removing trade barriers increased imports and global competition. Moloi (2019:74) also confirmed that the clothing industry's globalisation resulted in economic

disaster as most clothing organisations were forces to close down their operations. It has become evident that these clothing organisations had to close down due to the flooding of imports, which greatly affected the SA clothing industry and resulted in job losses. Worku (2019:97) contended that intense global competition in the clothing industry, specifically from China, is also crippling other clothing industries in other countries.

It is indicated in the literature by Worku (2019:102) and CottonSA (2019:1) that there are overflows of Chinese clothes in South Africa due to globalisation and these have caused a deterioration in the operations of domestic suppliers, and China continues to have a massive market segment in SA. Worku (2019:98) concurred that the greatest threat to the SA clothing industry is Chinese imports which amount to 74% of the entire clothing and textile sector, including footwear. Worku (2019:97) cautioned that the clothing industry makes money by procuring low-cost garments from China, Bangladesh, and Indonesia. South African Market Insights (2019) stated that 57.75% of the imports of textiles, clothing, and leather goods in South Africa come from China. Hence, the industry struggles to compete in market share growth (Netshishivhe, 2021:33). The literature gap indicates that there is a need to review procurement practices in the industry to encourage localisation and socio-economic objectives. Other authors in the literature indicated that procurement in the clothing industry is underrated.

The industry continues to experience high costs of production and labour and skills shortages and a lack of clothing variety (Netshishivhe, 2021:32; Mokwana, 2021:16). Fung (2019:2) contended that SA clothing organisations are subjected to higher manufacturing costs than in other countries, such as China. Hence, employees engage in a low-wage agreement with workers (Netshishivhe, 2021:32; Mokwana, 2021:16). Jack (2020:35) agreed that global sourcing has reduced the margins of local clothing suppliers and has resulted in job losses. Retailers procure clothes internationally and continue to experience long lead times (Statista, 2021:7). Jack (2020:35) continued that clothing retailers prefer sourcing products globally to take advantage of low costs, ignoring the additional costs associated with agents, contractors, transportation, transaction costs and import duties. Jack (2020:24) and Arrigo (2019:8) noted that the challenges affecting procurement in the clothing industry

result from state policies, politics, strict working hours, technology, and the country's wealth.

Researchers, similarly, noted that the industry is highly globalised (Fung *et al.*, 2019:1 Perry & Wood, 2019:2). Manufacturing problems, fashion trend deviations, equipment maintenance, quality problem, planning and scheduling, late procurement of material and fittings are detrimental to good procurement practices in the clothing industry (Kaplan, 2020:116). Dos Santos (2020:40) mentioned significant problems in developing countries, particularly in the SA clothing industry, such as lack of finance. The industry still operates under hard labour as workers do most of the work instead of technical equipment. Early funding for fashion start-ups is extremely restricted and typically reserved for enterprises in their mature stages. To thrive, new businesses require a significant amount of money. Many clothing organisations need more finance to fund their operation. Fashion entrepreneurs require assistance in obtaining financial support because business concepts are sometimes regarded as high-risk investments with low profit margins.

Netshishivhe (2021:42) asserted that banks are not eager to finance black businesses, and some designers must first prove that they have the necessary skills before being able to access funding. Additionally, good procurement practices in the clothing industry are affected by employee absenteeism, low profits, intense competition, fabric cost instabilities, and high production costs. Veitch (2022:13) argued that as much as the industry is characterised by the strong labour unions that fight for better health and safety conditions; the existence of these many unions in the industry affects the effectiveness of organisational compliance. InvestSA (2020:4) reiterated that while unions in the industry might confront the issue of working condition improvements, they need to reach a state where they are satisfied with the workers' salaries. It is disheartening to note that unexpected changes in customer orders and reduced costs of customer orders force management to cut labour costs and overtime (Nabee & Swanepoel, 2021:1). According to the issues raised by various authors in the literature, good procurement practices catering to social and environmental awareness and upliftment are compromised in this industry. Clothing organisations adopt supplier certification codes, such as ISO 14001, to assess suppliers on cost, values, and morals, and suppliers without such certifications are not contracted. In other words, suppliers are assessed in terms of certification and meeting the requirements.

However, the industry still complies with social and environmental standards. Where there is non-compliance, the industry's policies, regulations, and contractual agreements are violated, compromising sustainable procurement.

3.9   CONCLUSION

This chapter provided a comprehensive literature review of the procurement practices of the clothing industry. Additionally, a brief history of the clothing industry both globally and in SA was provided. The chapter delved into the procurement practices of the clothing industry. The importance of the procurement value chain in this industry was discussed, and the chapter also highlighted the relevant policies and regulations. The chapter also discussed procurement theories relevant to the clothing industry, procurement sustainability in the clothing industry, and procurement challenges.

The literature depicted the variables that impact procurement practices, such as need identification, strategic sourcing, ordering, contracting, enterprise supplier development and strategic partnership. The literature revealed unsustainable procurement practices regarding social and environmental sustainability. Although the literature indicated specific policies and regulations that govern procurement practices in the clothing industry, regulatory compliance, ethical behaviour, and solid contractual agreements are still a challenge in the clothing industry. Even though various authors in the literature discussed procurement practice theories relevant to the industry, there is still a gap in procurement practices that address issues related to the revitalisation and support of local suppliers, while addressing issues of policy and social compliance. The literature suggested that the theoretical and empirical basis for the buyer-supplier relationship in the clothing industry should be re-evaluated.

The next chapter presents the theoretical framework for procurement practices in the clothing industry.

CHAPTER 4:
INSTRUMENT FOR DEVELOPING PROCUREMENT FRAMEWORK FOR THE CLOTHING INDUSTRY

4.1 INTRODUCTION

This chapter presents a discussion of the instrument for developing clothing procurement practices. This chapter discusses contextualised theories relating to procurement practices and the instruments used by scholars to address procurement practices in the clothing industry, and an instrument for developing procurement practices in the SA clothing industry. In addition, the relationship between the variables concerning procurement practices in the clothing industry and previous empirical evidence relating to these variables is discussed. Therefore, this chapter reviews procurement practice frameworks for the SA clothing industry and concludes by providing a summary of the instrument necessary to develop a procurement practice framework for improving procurement practice in the clothing industry of South Africa.

4.2 REVIEW OF PROCUREMENT FRAMEWORKS IN THE CLOTHING INDUSTRY AND GAPS

This section discusses various frameworks and models relating to procurement designed by authors in the clothing industry to understand the common developments and contrasts. Also, these similarities and differences can be used to develop a viable framework for procurement practices in the SA clothing industry.

4.2.1 The theoretical model by Su (2013)

Su (2013) created a structural equation model (SEM) based on a multi-theoretical approach to assess the link or relationship between strategic sourcing, buyer-supplier relationships, supplier evaluation, and sourcing performance. For each variable, there were multiple indicators related to strategic sourcing, buyer-supplier relations, and sourcing and evaluations, and the model was developed to bridge the gap between theory and practice in the textile and clothing industries. The model was tested using data from 180 US textile and apparel organisations. Figure 4.1 provides a summary of the models that are then explained in detail.
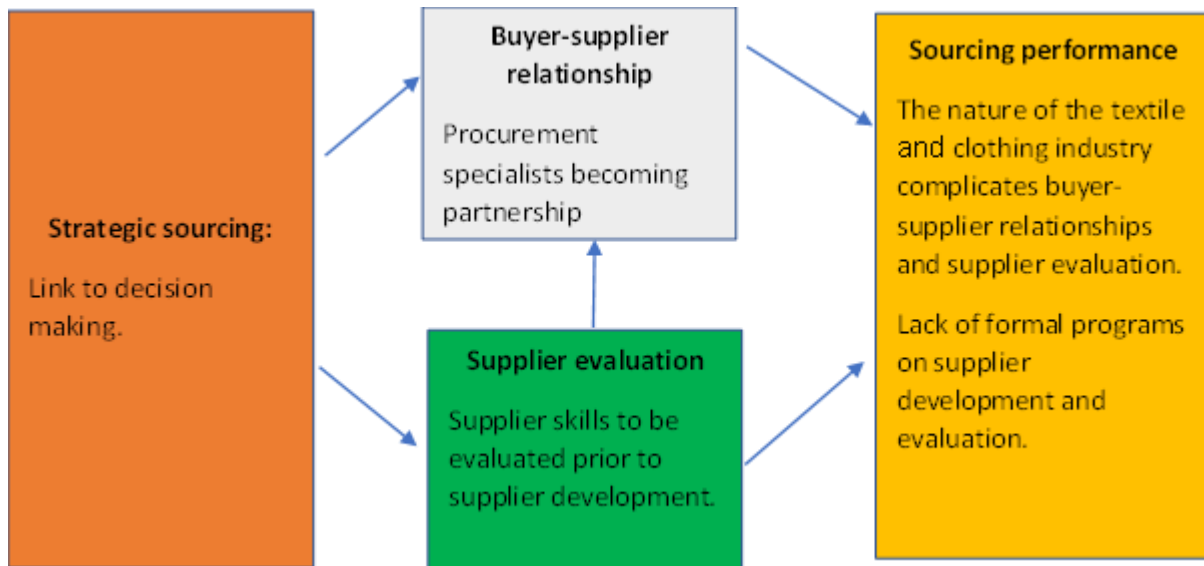
Figure 4.1:   Model for integrating the structural and measurement model -SEM representation

Source: Adapted from Su (2013)

As indicated in Figure 4.1, the theoretical model by Su (2013) connects the variables of procurement practice. The connection of each variable is discussed below.

- **Strategic sourcing**

The model highlights that strategic sourcing is key to the buyer-supplier relationship, supplier evaluation and sourcing performance. The model suggests that strategic sourcing should form part of decision-making in the organisation and may lead to a competitive edge.

- **Buyer-supplier relationship**

According to the Su (2013) model, procurement managers or experts become partnership administrators managing strategic sourcing in organisations. The model suggests that the buyer-supplier relationship should be seen as an investment leading to skilful suppliers, and which improves the core competences of the textile and clothing organisation.

- **Supplier evaluation**

A direct relation or link between strategic sourcing and supplier evaluation in the clothing industry was noted in the study by Su (2013). It is understood in the model that strategic procurement results in supplier management and progress. Supplier evaluation is seen as the key to building a long-term buyer-supplier relationship.

- **Sourcing performance**

The model by Su (2013) recognises that strategic sourcing influences sourcing performance. The model reveals that the complexity of the relationship between buyers and suppliers, as well as the evaluation of suppliers, may be attributed to the nature of the textile and clothing industry. This industry is heavily influenced by factors such as globalisation, competition, technology, and labour-intensive practices. Also, the non-existence of formal programmes on supplier upliftment and evaluation are detrimental to the buyer-supplier relationship and the effectiveness of supplier evaluation. The study by Simpson *et al.* (2002) also shares the same view and echoes the idea that numerous organisations still need structured programmes for evaluating suppliers. Relatedly, Carr and Pearson (1999) also endorsed that there is a connection between strategic sourcing and the buyer-supplier relationship. The work of Modi and Mabert (2007) concurred with the proposal made by Su (2013) that the buyer-supplier relationship should be seen as an investment leading to skilled suppliers and improved core competencies within the textile and clothing organisation.

However, the model of Modi and Mabert (2007) urges that the process of supplier evaluation and certification needs to occur before the skills and knowledge are transferred to suppliers. According to their model, the evaluation of suppliers is crucial for establishing a lasting relationship between the buyer and the supplier. On the contrary, the study by Li *et al.* (2012) contended that it is only some chosen suppliers that require advancement or improvement, therefore, procurement organisations should eliminate the supplier base and carefully select the ones that need to be assessed in terms of performance and capabilities. This argument is in line with that of Miocevic and Crnjak-Karanovic (2012), who advised that only some suppliers contribute equally to the organisation's operational processes. Hence, supplier evaluation should reveal critical suppliers who qualify to obtain resource support. Furthermore, Prahinski and Benton (2004) suggested that the procurement organisation should take steps if the supplier is not inclined to improve their performance.

The model by Su (2013) suggested that strategic sourcing may lead to sourcing performance, which Chan and Chin (2007) agreed with. At the same time, Modi

and Mabert (2007) echoed that procurement organisations should note that constant timely information sharing between partners in the clothing industry leads to improved sourcing performance and can lead to close partnerships. The model by Su (2013) needed to address ethical standards and sustainability issues. Even though the methodology of Su (2013) study may seem viable, seeing that the study was conducted on 180 US textile and clothing organisations, the study ignored sustainability as an important part of procurement practices, as good procurement practices in clothing organisation are linked to social and environmental compliance. The model was purely based on the assessment of supplier standards to improve strategic sourcing, build partnerships, and source performance without considering labour and environmental standards compliance. At the same time, it is understandable that the model by Su (2013) focused on the kind of sourcing that enhances supplier relationship management and sourcing performance.

4.2.2 The theoretical model by Koprulu and Albayrakoglu (2007)

The procurement practice framework developed by Koprulu and Albayrakoglu (2007) recognises that the analytical hierarchy process (AHP) model helps improve procurement practices in the clothing industry. According to Koprulu and Albayrakoglu (2007), the clothing industry may adopt the AHP model when choosing suppliers and building a supplier relationship management strategy. Therefore, model by Koprulu and Albayrakoglu (2007) is an extension of the model developed by Lasch and Janker (2005). Koprulu and Albayrakoglu (2007) named their AHP model, the Supplier Relationship Management model, which also identified challenges relating to the supplier selection process and the criteria to be utilised to choose a reliable supplier in line with the organisational plan. Ultimately, some authors adopted the same AHP model. Shukla (2016) adopted the model developed by Lasch and Janker (2005) and Koprulu and Albayrakoglu (2007), and focused on criteria such as cost, quality, delivery, reliability, and flexibility to assess supplier performance. Also, Chiromo *et al.* (2015) used the same AHP model to develop the supplier selection model for Brand Solution suppliers in the clothing industry (brand solution suppliers supply various custom-made corporate clothes, bags, promotional clothing, and luggage). The AHP model of Lasch and Janker (2005) was initially used in the supply chain management discipline. Koprulu and Albayrakoglu (2007) adopted the AHP model by Lasch and

Janker (2005) and applied their extended Model for Supplier Relationship Management to the clothing industry.

Figure 4.2 below represents the AHP Model for Supplier Relationship Management which follows the elements of the supplier selection process starting from pre-supplier qualification, and qualification to relationship management.
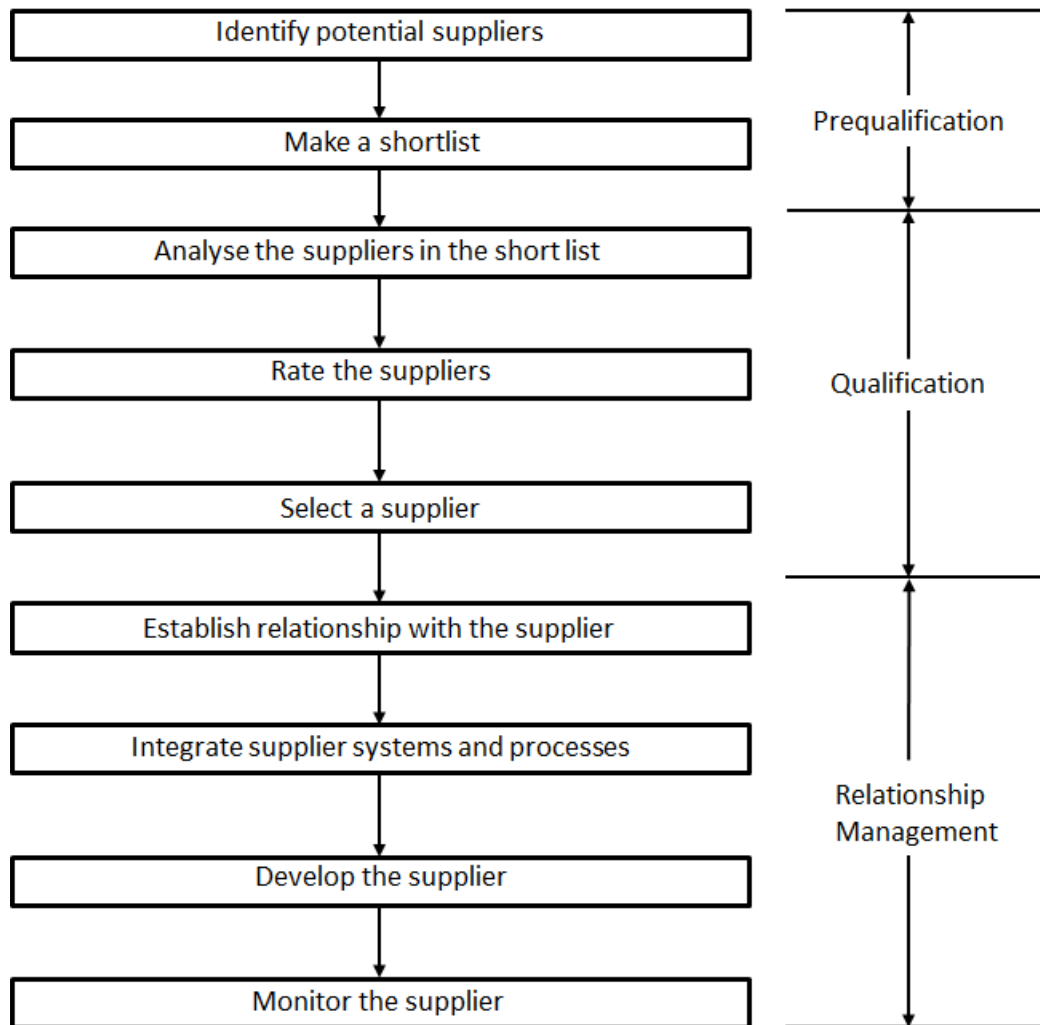
Figure 4.2:   Model for Supplier Relationship Management by Lasch and Janker (2005)

Source: Adopted from Koprulu & Albayrakoglu (2007)

Figure 4.2 presents the AHP Model for Supplier Relationship Management by Koprulu and Albayrakoglu (2007) which is an adaptation of that of Lasch and Janker (2005). Lasch and Janker (2005) used the model to rate new and existing suppliers and to manage them. Koprulu and Albayrakoglu (2007) adopted the model to design an AHP model that the apparel industry can adopt when selecting suppliers, The model

includes nine (9) elements of the supplier selection process that are guided by six criteria for supplier selection clustered into three criteria, namely, prequalifying, qualifying and relationship management, and are used to evaluate suppliers, as discussed below:

- **Prequalification criteria**

    In this stage, suppliers are identified and shortlisted. The model by Lasch and Janker (2005) notes that suppliers that meet the needs are identified. Koprulu and Albayrakoglu (2007) asserted that suppliers in the clothing industry should be assessed based on raw material cost (fabrics and trims) cut and sew, packaging cost and profit. Also, the model revealed that landed costs such as transportation, duty fees and fixed cost need to be considered.

- **Qualifying criteria**

    Suppliers are analysed, rated and selected. The model by Lasch and Janker (2005) indicates that supplier information is required to assess suppliers, as only a few satisfying suppliers may be selected. The model by Koprulu and Albayrakoglu suggests that suppliers should be assessed in terms of superior quality based on fit, and a promotional and shipment sample. Regarding delivery, the AHP model reveals that the supplier's delivery processes are evaluated by product integrity (PI) testing, return to vendor, and an assessment of the quality of the supplier's manufacturing capability. Sample submission and cost to the procuring organisation are measured through the supplier selection process. Most importantly, this supplier evaluation process considers reducing the fashion cycle time and swiftness of delivery time. Any delay in delivery can result in loss of sales. The model by Lasch and Janker (2005) also indicates that supplier technological competency, fiscal and environmental sustainability need to be considered.

- **Relationship management**

    This is the stage where supplier relationships are established, and systems and processes are integrated. The model by Lasch and Janker (2005) states that the competence of the relationship between suppliers and buyers should be constantly reviewed. Also, suppliers are developed and monitored in managing the relationship. The AHP model by Koprulu and Albayrakoglu notes that the supplier's capability to modify order size and product mixes in terms of colour, styles, size,

and so on, is essential in the fashion industry. The fitness of suppliers to handle quick response (QR) orders is another crucial criterion, as well as the readiness to establish a joint venture and visit countries. The AHP model also recognises the need for the supplier team's support of the procuring organisation in terms of supplier innovation, speed, and quality of sampling. The model acknowledges the ability of the supplier to capture the market as crucial. The model by Koprulu and Albayrakoglu (2007) reveals that supplier assessment regarding trust should be built on the aptitude to handle complaints, and ability to expedite orders and financial standing, which should be strongly assessed. Also, the model proposes that suppliers should be assessed on reliability, confidentiality, and compliance.

The model assumes that in terms of trust, the conditions of work from the supplier plant are also examined in terms of standards requirements and social responsibility compliance. Conversely, the study by Shukla (2016) argued that before suppliers are assessed regarding their adherence to standard terms, these policy standards and warranties should be agreed on between the partners. However, Shukla (2016) agreed with the cost factor deliberated in the model by Lasch and Janker (2005) and Koprulu and Albayrakoglu (2007) and commented that the cost factor impacts the cost of manufacturing. Furthermore, Shukla (2016) concurred that good quality should be assessed and advised that poor quality has a negative impact on the organisation's reputation and inventory cost and affects the bottom line. Shukla (2016) also agreed that suppliers should quickly react to buyer requests relating changes in product orders.

All the criteria mentioned above are mapped in the AHP model as a hierarchy in line with the elements of the supplier selection process. Even though this model seems viable in the selection of suppliers, Koprulu and Albayrakoglu (2007) noted that the originators of the AHP model, Lasch and Janker (2005), still needed to address supplier selection criteria. Similarly, Shukla (2016) used the same model and promoted the notion that the AHP model should start by ranking suppliers based on criteria such as quality, cost, delivery, reliability and flexibility, and a percentage scoring or weight should be allocated to each criterion. Koprulu and Albayrakoglu (2007) and Shukla (2016) noted that by using the specific criteria for supplier selection, the organisation will effectively select the best suppliers. Additionally, Shukla (2016) also used the same

model and argued that when selecting suppliers, the production costs should be considered, and these should be guided by manufacturing and labour costs. However, Shukla (2016) debated that this is a challenge in global trade, as suppliers from countries with low labour costs have the upper hand in cost negotiations. Shukla (2016) also echoed that in terms of delivery, the distance between the supplier and the buyer affects delivery.

Utama *et al.* (2021:121) adopted the same model by Koprulu and Albayrakoglu (2007), however, the model by Utama *et al.* (2021) included criteria and tiers for choosing suppliers. Just as Koprulu and Albayrakoglu (2007), Utame *et al.* (2021:121) made the same empirical findings, indicating that quality, delivery, and trust are the critical strategic focus in the supplier selection process, which is a variable for procurement practice. However, Koprulu and Albayrakoglu (2007) followed a methodology that relied solely on the opinion of three clothing industry experts, which raised concerns about the empirical validity of their evidence. It is also notable that the AHP model adopted by Koprulu and Albayrakoglu (2007) was designed during the 2000s where procurement practices were extended to address the issues of supplier relationship discussed in the study. Therefore, the theoretical model by Koprulu and Albayrakoglu (2007) reaffirmed the extended revolution of procurement practices that were based on building trust between SC partners, and that were based on financial stability, confidentiality, supplier production capabilities, and social responsibility.

Chiromo *et al.* (2015) adopted the same model for their study and acknowledged that the model would be effective if used in conjunction with the model by Lasch and Janker (2005) and Koprulu and Albayrakoglu (2007), as it would lead to improved procurement practices for brand solution suppliers. In contrast, Chiromo *et al.* (2015) critiqued the models by Lasch and Janker (2005) and Koprulu and Albayrakoglu (2007) as lacking the ability to address criteria such as technological capabilities, consistency, and customer service. At the same time, the study of Chiromo *et al.* (2015) advised that in terms of relationship building, a smaller number of suppliers should be used to build closer relations with supplier partners as this may lead to cost minimisation, enhanced quality, innovation and improved support through product and process expansion between both supplier and buying partners. Still, the research methodology used the study by Chiromo *et al.* (2015) raised some questions, as the study was conducted for the SA Brand Solution organisation, only in the clothing industry.

Therefore, these findings may only be generalised to some of the clothing industry population.

All these frameworks by Lasch and Janker (2005) adopted by Koprulu and Albayrakoglu (2007), Chiromo (2015) and Shukla (2016) addressed constructs relating to ethical issues in negotiation and contracting in the clothing industry. However, these authors' works did not report on social and environmental sustainability and local support, which are pillars in improving procurement practices' value and socio-economic objectives. Having said that, the findings of these authors may be justifiable according to the historical development of various procurement concepts, such as local support, building local economic activities and industrialisation that were only deliberated on in about 2018 after their publication (Badenhorst *et al.*, 2018). Nevertheless, the recent model by Utama *et al.* (2021) which builds on the models by Lasch and Janker (2005), Koprulu and Albayrakoglu (2007), Chiromo (2015) and Shukla (2016), and which was designed during the era of localisation and industrialisation, did not pay attention to the socio-economic objectives in procurement practices.

4.2.3   The theoretical model by Early (2017)

The procurement practice framework by Early (2017) designed a theoretical model concentrating on the analysis of the following six stages of the procurement practice: sourcing, forecasting, negotiation, contract, ordering and lead time, in relation to social compliance. The model designed by Early (2017) is a guide for responsible buying, focusing on the manufacturing supply chain in the field of textile and clothing for Ethical Trade Initiatives (ETI) in Norway and in the United Kingdom (UK). The model, which is presented in Figure 4.3 below, shows the six stages of the procurement cycle, and the potential impacts for workers across the procurement cycle.

Sourcing strategy and criteria for supplier partnership

Potential impact:

Power imbalance leaves workers vulnerable, particularly women

Assessing impact

Potential impact:

Opportunity to improve conditions for workers

Forecasting and product development

Potential impact:

Excessive overtime, irregular hours, harsh treatment

Order placement, production and lead time

Potential impact:

Excessive overtime, irregular hours, harsh treatment

Price negotiations

Potential impact:

Pressure on workers wage, poor health and safety

Contractual terms

Potential impact :

Improving labour conditions may be overlooked, exposing workers to poor conditions

Figure 4.3:   Six stages of the procurement cycle

Source: Early (2017)

The model in Figure 4.3 is used as a guide to shares insight from the ETIs, their members, trade unions and specialist NGOs, such as Traidcraft and Oxfam. The model addresses the key findings of the supplier survey conducted by the ILO-joint ETI. The six stages of the model are discussed below.

- **Sourcing strategy and criteria for supplier partnership**

  The model suggests that building a long-standing partnership and agreeing on standards is important. The model indicates that where there are imbalances of power, workers become vulnerable, particularly women. Also, there should be a broader discussion surrounding commercial and ethical performance amongst partners. For example, relationships should be transformed from that of policing to partnership or affiliation. The model proved that suppliers need to be rewarded for making improvements to meet the customer's code of conduct, and the model suggested further training for staff, and that the establishment of partnerships is important. Also, working conditions and ethics should be rewarded through long-term contracts and bulk ordering.

- **Forecasting and product development**

  The model noted that the accuracy of forecasting is crucial, as imprecise data causes extreme overtime and pressure, which lead to the mistreatment of employees, and also that the rescheduling of orders has an impact on the total cost. The cost associated with inaccurate data relates to additional costs on overtime, sampling, production, delays, and financial loss. As a result, the organisation keeps temporary workers to deal with such situations.

- **Price negotiation**

  The model shows that when suppliers accept orders below manufacturing cost, their organisation becomes compromised. It is therefore important to discuss with the supplier the actual cost of labour, to agree on fair labour costs, social compliance and even support for the purchase of the production equipment required by suppliers. The model indicates that the survey showed that compliance needs to be improved in terms of negotiations for orders. Hence, some suppliers accept orders below manufacturing cost to secure orders, giving buyers the upper hand during negotiations. This act results in staff layoffs and an inability to invest in technical tools.

- **Contractual terms**

  The model advises that joint arrangements in terms of employee standards are crucial. The model notes that most contracts are established on a commercial

standard rather than on employee wellbeing. The model suggests that there should be a contractual clause stating how suppliers and employees will be paid. The model notes that some clothing organisations still need written contracts with their clients. The contract clause covers bulk ordering, delivery dates and quality standards. To some extent, price may not form part of the written contract. Some contracts do not state processes related to notifying the responsible partner regarding the order costs associated with alterations. Most contracts do not state risk sharing and investments related to specific orders.

- **Order placement, production, and lead time**

The model notes the importance of considering late deliveries, incomplete orders, quality, and order charges, as this leads to a deterioration of labour conditions. Also, the model notes that short lead time results in staff overtime. In addition, the usage of overtime affects the safety of staff, especially women, as they will be required to leave work late, impacting their family lives. The survey proved that short lead time affects manufacturing scheduling and product quality, leading to subcontracting, outsourcing, and the hiring of temporary staff. In terms of subcontracting, suppliers should reveal to partners their subcontracting partners, as well as the state of their working conditions.

- **Assessing the impact of purchasing practice**

The model recommends that suppliers be evaluated regarding their adherence to ethical standards, and the outcome of their procurement practice. The model suggested that the supplier's progress be investigated through survey feedback, resources analysis, and staff interviews. There should be transparency in terms of the supplier evaluation criteria, and improvements to staff and working conditions should be explained. Supplier progress should be assessed, and grievances noted. Technology needs to be considered to gather employees' views, and feedback be given to suppliers on the progress. All this should be done to ensure improvements to the ethical procurement plan, and not to punish the supplier. Early (2017) observed that in the clothing industry, both positive and negative impacts on working conditions can result from conventional and cost-driven procurement practices at every stage.

According to Early (2017) this model may be used as an instrument that focuses on specific procurement practices, or as a guide to procurement practices. It is expected that the concept of procurement practices that was established by Early's (2017) study will have potentially positive impacts on workers in the clothing industry. Early (2017) proposed putting a code of conduct into the contract, clearly stating how buyers will support quality and productivity, also support the improvement of working conditions.

Similarly, Rafn (2017) agreed with the work of Early (2017) and stated that due diligence is one of the crucial tools to monitor compliance with people and employees. Rafn (2017) also acknowledged that task allocation, implementation and risk assessments are important aspects of procurement, as well as taking cognisance of operational processes, employees' rules and regulations and ethical standards in procurement negotiations. Rafn (2017) supported the model by Early (2017) and suggested that the initiative for Etisk Handel (IEH), also known as the Ethical Trading Initiative (ETI) in Norway, reveals the tools for risk analysis and management which may assist in compliance and ethical trading. Reinecke and Donaghey (2020) agreed that the work by Early aims to improve the working environment in the global supply chain and may encourage organisations to establish workers' representation and negotiation in the suppliers' organisations. Reinecke and Donaghey (2020) noted that the procurement guide by Early also supports a strategic partnership, as Early (2017) noted that it is vital to build a buyer and supplier relationship in the clothing industry.

However, Rafn (2017) contended that not only should credit be given to the procurement guide by Early (2017), but recognition must also be given to the International Labour Organisation (ILO) (2014), as their study also discovered that most suppliers often take on orders at lower prices than the manufacturing costs and this compromises employees' payments. It is commendable that the model by Early (2017) was designed from a survey conducted on 1500 clothing suppliers in UK, Denmark and Norway and the insight of the Joint Ethical Trading Initiative members, trade unions and specialist NGOs, such as Traidcraft and Oxfam. Early's model should be praised as it reports on procurement practice issues impacting labour standards. The theoretical model by Early (2017) brings reasonable directives to the buyer action list which relate to building supply chain visibility, developing two-way relationships, assessing existing supplier's organisation, and ethical practice. In selecting new suppliers, the theory recommends that performance measurement, ethical

performance, supplier participation on labour rights improvement and labour rights standards and code of conduct should be assessed. Furthermore, the recommended buyer-supplier code of conduct involves creating a mutually agreed-upon set of obligations for both parties. This code of conduct should be clear and concise.

It is recognised that the Early (2017) model advises that the six stages of procurement practices, namely, sourcing, forecasting, negotiation, contract, ordering and lead time, should focus on social compliance. The theory aims to improve the buyer and supplier relationship to that of a partnership. It also focusses on enhancing labour conditions to arrive at a reasonable balance of power and improving employees' lives. Though the Early's (2017) model addressed social compliance issues, issues relating to environmental compliance were not reflected in the model. Nevertheless, earlier studies by Early (2015:6) confirmed that the ETI compels clothing organisations to evaluate and study short-term marketable practices to protect lasting socially and environmentally sustainable practices. Notably, the model by Early (2017) did discuss aspects of sourcing, negotiation, contracting, and ordering, and aligned them within the context of social sustainability. Still, the model by Early (2017) advises procuring organisations to tighten international procurement and supply chain to advance the welfare of humans who rely on it. However, the model still does not address localisation and industrialisation which may contribute to advancement in the welfare of humans through local job creation and local economic upliftment.

Also, the model focuses on the international clothing industry, as opposed to the clothing industry in developing countries that have different policies and that suffer from global competition and dominance. Therefore, it is evident that there is a need to design a theoretical framework which addresses the kind of procurement practice that links the processes of procurement practices with the social and environmental sustainability that will promote socio-economic objectives, localisation, and industrialisation, especially in developing countries. Although Early's (2017) model surveyed 1500 clothing suppliers, the statistical testing and validation of the results need to be indicated. The section above deliberated on the various frameworks of procurement practices in the clothing industry. The framework by Early (2017) addressed concepts such as demand planning, sourcing, contracting, negotiation and ordering and social sustainability. Some frameworks focused on supplier selection and

evaluation to improve organisational performance (Su, 2013; Chiromo *et al.,* 2015; Koprulu & Albayrakoglu, 2007; Shukla, 2016).

The limitation of these frameworks is that they did not pay attention to the type of sustainable procurement practices that create value in terms of job creation and localisation, especially in the clothing industry in developing countries. Even so, this provided the opportunity to examine sustainably procurement practices in the clothing industry that lead to socio-economic objectives in developing countries.

Table 4.1 presents a summary of frameworks for procurement practices in the clothing industry that were discussed in this chapter.

Table 4.1: **Summary of the framework with the practices according to authors in the clothing industry**

Study	Framework description	Uses /advantage practices
Su (2013)	The study conducted an empirical analysis of a theory-based model of strategic management that combines resource-based and relational perspectives.	It has been proven that strategic sourcing, as part of procurement methods in the clothing business, affects buyer and supplier relationships, supplier evaluation, and purchasing organisations' sourcing performance.
Koprulu and Albayrakoglu (2007)	This model used the theory by Lasch and Janker to create an analytical hierarchy process (AHP) model that a clothing organisation may adopt in choosing suppliers.	Used for supplier selection, rating, supplier development and partnerships. Focuses on building trust between partners based on financial stability, confidentiality, supplier production capabilities and social responsibility.
Early (2017)	Developed a procurement cycle framework with six stages: Impacts on workers throughout the procurement cycle.	Analyses the variables of procurement practices such as sourcing, forecasting, negotiation, contract, ordering and lead time. Examine the effect of these variables on social conformity.

The study that this thesis is reporting on examined the three procurement practice frameworks in the clothing industry presented by Su (2013), Koprulu and Albayrakoglu (2007), and Early (2017), as summarised in Table 4.1. The current study identified key factors that shape procurement in the clothing industry, including demand planning, strategic sourcing, contracting, enterprise supplier development (ESD), and sustainability. These variables were used to develop the study framework. Additionally,

policy and regulations were included in the framework, as the clothing industry often needs more local support in terms of resources, technology and finance to compete globally. The instrument for developing the conceptual framework for the study is discussed in detail in Section 4.3 below.

4.3   INSTRUMENTS FOR DEVELOPING THE CONCEPTUAL FRAMEWORK

This section provides a detailed discussion of the conceptual framework for procurement in the clothing industry, which is the main aim of the study. The conceptual framework for the study adopted constructs such as demand planning (DP), strategic sourcing, contacting, enterprise supplier development (ESD), strategic partnership, government policies and regulations, the value of procurement and social sustainability and environmental sustainability. The framework provides an extension on the work of Early (2017), that of Koprulu and Albayrakoglu (2007), and Su (2013) in conceptualising the constructs of procurement practice, namely, competitiveness, localisation, sustainability and socio-economic objectives in the clothing industry. While the frameworks of Early (2017), and that of Koprulu and Albayrakoglu (2007), and Su (2013) do address procurement practices in the clothing industry from the global context, they do not consider the unique challenges faced by developing countries. These challenges include compromised procurement practice standards due to global competition.

The current study was guided by procurement practices that will promote competitiveness, sustainability and localisation, leading to socio-economic objectives in the SA clothing industry. The literature review of the study showed a proliferation of literature discussing procurement practices such as demand planning, sourcing, ordering, contracting, supplier development and partnership. However, the literature on procurement practices needs to include integrating the kind of procurement practice that leads to socio-economic objectives in the clothing industry in developing countries. Perhaps this is because the clothing industry is highly globalised, and therefore more attention is paid to global sourcing (Jacobs & Karpova, 2020:366; Hossain, 2019:22). Also, regulations differ according to different countries (Němcová and Tučková, 2019:1193).

It was noted that the clothing industry adopts fashion trends from other countries, for example, fashion statements came from global cities like Paris, London and New York (Jacobs & Karpova, 2020:366). It also makes business sense that fashion trade exhibitions take place in the UK and Paris. When buyers attend these fashion shows, they meet global suppliers and start making business deals there. Hence, the discussions on issues relating to localisation could be more extensive in the industry. Even so, the local clothing industry, especially suppliers who are clothing manufacturers, suffer because of global competition, which leads to operations closing down and job losses (InvestSA, 2020:5; CottonSA, 2019:1). Therefore, the procurement practice in the clothing industry must promote localisation to improve socio-economic objectives.

As the current study is based on the SA context, the key instruments for improving procurement practices in the SA clothing industry, particularly, are as follows: demand planning (DP), strategic sourcing, enterprise supplier development (ESD), strategic partnerships, government policies and regulations, the value of procurement, social sustainability and environmental sustainability. Also, addressing challenges in procurement. All these aspects are conceived in the context of procurement practices that affect the growth and development of the clothing industry in developing countries. All these elements, if practised ethically, are deemed to result in sustainable procurement practices in the industry and the promotion of socio-economic objectives in this industry, mostly in developing countries. The key instrument for procurement practice is discussed next.

4.3.1   Procurement practice

The framework admits that the variables of procurement practice, such as demand planning, strategic sourcing, contracting, enterprise development and strategic partnerships, should promote sustainable procurement practices and localisation, improve competitiveness and help the industry to achieve its socio-economic objectives.

4.3.1.1   Demand planning (DP)

In demand planning (DP), the framework advises the clothing industry to practise the kind of procurement that supports local production, even though the industry is benchmarked on international standards. All these standards may be practised with

local suppliers. Yet, the standard should be maintained, and issues relating to accurate order specification, cultural and social needs, seasonality, technological advancement in product design and fashion trends should be addressed.

Table 4.2 below presents a summary of the variables relating to DP in the clothing industry that are recommended by the framework.

Table 4.2: **Summary of variables relating to demand planning (DP) in the clothing industry**

Demand planning	Associated variables
Order specification	▪ Accuracy in forecasting. ▪ Handling of errors. ▪ Administration of the cost associated with specification errors. ▪ Sharing of losses resulting from incorrect orders.
Partners involvement in monitoring fashion trend	▪ Partners attending trade shows for advancements in following recent fashion trends.
Cultural and social needs	▪ Paying attention to cultural and social needs.
Local support	▪ Prioritising local suppliers.

Source: Researcher's own compilation

Table 4.2 presented a summary of DP and these practices form part of the conceptual framework for the study. The next section discusses strategic sourcing.

4.3.1.2 Strategic sourcing

The framework adopted the type of strategic sourcing in the clothing industry linked to local sourcing, assessing social and environmental compliance, supplier capability, resource and technical development, supplier rating and authentication. The framework identified the following three key constructs relating to strategic sourcing: ordering, compliance, and resource capability.

Table 4.3 presents a summary of the variables relating to strategic sourcing suggested by the framework.

Table 4.3: **Summary of variables relating to strategic sourcing in the clothing industry**

Strategic sourcing	Associated variables
Ordering	▪ Local sourcing. ▪ Seasonal ordering. ▪ Participation in global trade exhibitions. ▪ POS used to assist in ordering. ▪ Manufacturing system link to suppliers. ▪ Manufacturing system linked to retail clothing stores (customers). ▪ Attention paid to costs associated with global sourcing. ▪ Managing fashion trends. ▪ Supplier's adherence to recurring orders. ▪ Supplier's manufacturing capability.
Compliance	▪ Social standards. ▪ Environmental standards. ▪ Design structured programmes for supplier rating. ▪ Supplier authentication.
Resource capability	▪ Technological advancement. ▪ Resource availability. ▪ Funding. ▪ Participation in industrial upgrading projects. ▪ Financial stability. ▪ Employees' skills improvement.

Source: Researcher's own compilation

Table 4.3 presented a summary of strategic sourcing practices that form part of the conceptual framework for the study. The next section discusses contracting.

4.3.1.3 Contracting

Retail dominance is seen as an issue, and bargaining power is a problem in the clothing industry, where one party (clothing suppliers) is deemed to be vulnerable during the process of negotiation (Muhwati & Salisbury, 2017:866; Perry & Wood, 2019:8; Dos Santos, 2020:40; Netshishivhe, 2021:39). It is astonishing to observe that some clothing organisations do not have written contracts that are legally binding (Twyg, 2020:50; Rafn, 2017:1; Niemann *et al.,* 2018:11). Hence, the framework suggests that mutual agreements be promoted during contract establishments. Also, that biasness leading to unethical procurement practices in the clothing industry should be prevented during negotiation and contract establishment. The framework promotes the adoption of clear standards and policies relevant to good procuring

practices in the clothing industry when designing contracts. The framework indicates that issues of support relating to resources, infrastructure, and technical and financial support should form part of the negotiations and contractual agreements amongst partners in the clothing industry. Furthermore, when engaging in global sourcing, this industry is subjected to the high cost associated with international trading (Jenkin & Hattingh, 2022:54; Khan & Yu, 2019:39).

It is also alarming to learn that some SA clothing retailers in developing countries do violate their contracts, generally, because they have the upper hand in procurement practices in the clothing industry (Perry & Wood, 2019:8; Veitch, 2021:6; Nabee & Swanepoel, 2021:1). The framework suggests that a supplier audit be conducted in relation to the code of good practice, and in relation to corruption, social and environmental sustainability which are important steps prior in the contractual endorsement. A summary of the code of conduct and variables, as suggested by the framework, is discussed below.

The variables relating to contracting in the clothing industry are summarised in Table 4.4 below.

Table 4.4: **Summary of variables relating to contracting in the clothing industry**

Contract	Associated variables
Agreement be presented in a written format	- Formal contract establishment. - Legal involvements. - Economic behaviour consideration when designing contracts. - Political behaviour consideration when designing contracts. - Market behaviour consideration when designing contracts. - Resource support. - Infrastructure support. - Financial support. - Technical support.
Negotiations	- Vulnerability of partners (retail clothing stores dominating). - Ethics. - Openness. - Biasness prevention. - Bargaining powers. - Opportunistic behaviour. - Technical support. - Technological integration. - Misuse of labour practices. - Minimum working hours. - Remuneration on overtime.
Adoption of policy and standards when designing contract	- Legally binding agreements. - Compliance. - Social upliftment. - Clear and understandable contract. - Assurance of obligations. - Plant visit.
Corporate code of conduct	- Adoption of the corporate code of conduct. - Contract adherence. - Behaviour in procurement negotiation. - Environmental compliance. - Plant visit.

Source: Researcher's own compilation

Table 4.4 presented a summary of the variables of contracting. These variables have been defined and form part of the conceptual framework for the study. The next section discusses ESD.

4.3.1.4   Enterprise supplier development (ESD)

The study noted that there is a need for CMT clothing manufacturers in developing countries, like SA, to be promoted to becoming full manufacturers. Hence, the framework advises that CMT clothing manufacturers be supported to enable them to become full manufacturers in the future. The framework also advocates for significant local supplier development in terms of training, resource support, sustainable compliance and TCO improvement, particularly in developing countries (Perry & Wood, 2019:17). Netshishivhe's (2021:37) study noted that the industry suffers from a lack of the appropriate skills to market their businesses, and this also impacts the cost of business. The framework suggests that local support through the provision of resources, advanced technology and financial support may assist the industry in achieving the TCO and ESD in the clothing industry.

In the literature review, it was noted that scholars raised the concern that 74% of the clothes in SA are imported. It has also been noted that CMTs have stopped transforming to full manufacturers in the clothing industry. As is observed in the SA clothing industry, most clothing organisations are SMMEs, and according to Perry and Wood (2019:11), clothing retailers prefer using the services of full manufacturers rather than CMT manufacturers. Resource support is still an issue which can be addressed through enterprise development in the local clothing industry. Hence, the study's framework advises that ESD should fully support the clothing industry, especially in developing countries, where resource support, supplier training, technical support and localisation are seen as the key to local clothing supplier development.

A summary of the variables relating to ESD in the clothing industry is presented in Table 4.5.

Table 4.5:   Summary of variables relating to ESD in the clothing industry

ESD	Associated variables
Local support	- Support of local CMT manufacturers by clothing retail shops. - Support the transformation of CMT clothing manufacturers to full manufacturing organisations. - Skills improvements. - Technological advancements. - Technological integration support. - Infrastructure development. - Machinery advancement. - Financial support. - Production incentives. - Competitive improvement programmes. - Training of suppliers, including staff. - Contributing to local employment creation.
Preserving the TCO for both partners	- Reducing surplus. - Marketing cost reduction. - Product cost reduction. - Bottom line upliftment. - Manufacturing cost reduction. - Reducing lead times. - Transport cost reduction. - Warehouse cost reduction. - Carbon emission cost reduction.

Source: Researcher's own compilation

Table 4.5 presented a summary of the variables of ESD that form part of the conceptual framework for the study. The next section discusses strategic partnerships.

4.3.1.5   *Strategic partnerships*

The framework agrees with scholars in the literature that improvements to the buyer-supplier relationship in the clothing industry may improve sustainable procurement practices (Mejías *et al.*, 2019:150). However, as discussed previously in the academic literature, strong collaborations have unfortunately developed with global suppliers. According to the literature, clothing retail stores are the dominant players in the industry. However, no clear partnerships have been established that focus on moral operations in the clothing industry (Dos Santos, 2020:40; Netshishivhe, 2021:39). The framework assumes that a strategic partnership is formed where there is agreement and trust between parties. The framework suggests that relationships be established

between local partners in the clothing industry. The framework maintains that partners strive towards common goals, namely, rebuilding the local clothing industry, reforming the local economic sector, improving global competency, maintaining the TCO for all partners, and enhancing profitability.

Table 4.6 presents a summary of the variables relating to strategic partnerships in the clothing industry.

Table 4.6: **Summary of variables relating to strategic partnerships in the clothing industry**

Strategic partnerships	Associated variables
Relationship management	Building relationships with capable local CMT clothing suppliers.
Competency	All partners strive to improve global competency. Reform the local economic sector.
Trust	Building honesty and trust. Improving moral practices.
Compliance	Consideration of the social well-being of the local community. Adhering to policies on environmental compliance.

Source: Researcher's own compilation

Table 4.6 presented a summary of the strategic partnership constructs that form the conceptual framework for the current study. The next section discusses government policies and regulations.

4.3.2 Government procurement policies and regulations

This section discusses government policies and regulations, such as Broad-based Black Economic Empowerment (B-BBEE), the Industrial policy action plan (IPAP) and the National Environmental Management Act (NEMA).

The sub-section below discusses B-BBEE and IPAP as applicable to procurement.

4.3.2.1 *B-BBEE AND IPAP*

The B-BBEE policy encourages organisations to support black entrepreneurs and suppliers (DTIC, 2019). For example, in SA, through the IPAP policy, the government encourages organisations to support the clothing industry by buying proudly South

African-produced clothes to promote growth in this industry (Kaplan, 2020:5; CottonSA, 2019:1). The SA government, using the IPAP policy can offer monetary funding and capital and resource support, however, only registered clothing manufacturers can apply for such funding (Kaplan, 2020:5). Numerous studies in the literature review echoed that there is a lack of local support for the clothing industry in developing countries, and the studies contended that globalisation had crippled the industry (InvestSA, 2020:5). A benefit of the IPAP funding is that it compels large retail clothing shops in SA to partner local manufacturers in efforts to fully transform and integrate the industry (Kaplan, 2020:41). However, the IPAP indicates that there are barriers that hinder the effective functioning of the IPAP policy, such as a lack of resources, global sourcing that contradicts the enforcement of industrialisation, unskilled labour, lack of local support, job losses, inequalities and remote areas that are disregarded (Kaplan, 2020:55).

The framework encourages the clothing industry to adopt policies to build the kind of procurement practice that promotes local capital and localisation of the clothing industry, especially in developing countries. Hence, adopting the B-BBEE and IPAP policies in supporting local clothing suppliers assist with job creation and localisation, which will have a positive socio-economic impact on the industry, community and country. Therefore, fully adopting the B-BBEE and IPAP policies should promote the kind of procurement practice in the clothing industry that leads to the achievement of socio-economic objectives.

A summary of the BBEE and IPAP, as suggested by the framework, is presented in Table 4.7.

Table 4.7:   Summary of the B-BBEE and IPAP as suggested by the framework

B-BBEE	IPAP
Encourage clothing retailers to support local clothing suppliers.	Offer funding to local clothing enterprises.
Local clothing retails to comply with the B-BBEE policy requirements on local support.	Local clothing organisations should apply for funding. IPAP should promote the provision of local capital.

Source: Researcher's own compilation

Table 4.7 presented a summary of the procurement practices policies which form the conceptual framework for the study. The next section discusses the NEMA.

4.3.2.2 The National Environmental Management Act (NEMA)

The framework presented environmental sustainability as a critical construct as it impacts demand planning, strategic sourcing, negotiation and contracting in the clothing industry. Mejías *et al.* (2019:150) found that operations in the clothing industry should be examined regarding aspects of environmental standards compliance in terms of ISO 14001 certification, refuse administration, trash stoppage, plans to salvage, sustainable documents, and environmental tagging. The framework developed by the current study recognises that environmental compliance leads to ethical procurement, and clothing organisations that show compliance with environmental policies are seen to be practising good procurement. The framework sanctions that clothing organisations need to calculate the effect of clothing SC on the environment, and they need to adhere to the SAC (Shen *et al.,* 2019:12). Non-compliance through high pollution appears to be a concern in the clothing industry (Fung *et al.*, 2019:1; Perry & Wood, 2019:2). The framework suggests that the clothing industry may adopt a coherent approach by collaborating with suppliers in the clothing industry to promote environmental sustainability and product improvement, and it becomes crucial to ensure that suppliers have the ISO14000 certification. Adopting the NEMA policy in procurement may help the industry to enhance sustainable procurement.

Table 4.8 provides a summary of the variables relating to the NEMA policy proposed by the framework.

Table 4.8:   Summary of the NEMA policy and related variables

NEMA	Associated variables
ISO 14001 certification	▪ Availability of ISO 1400 certification. ▪ Compliance with ISO 1400 certification.
Sustainable Apparel Coalition (SAC)	▪ Manage pollution in the production of clothes.

Source: Researcher's own compilation

Table 4.8 presented a summary of the NEMA requirements and the relevant certifications. The next section discusses the value of procurement.

4.3.3　Value of procurement

The framework suggests that the clothing industry in developing countries should engage in procurement practices that support long-standing partnerships and compliance. Also, the framework advocates for procurement practices that create value by benefiting the society and the economy. The clothing industry should realise the nature of procurement practice that leads to lead time reduction through domestic manufacturing, advanced information technological systems, such as electronic point of sale information, and ensure rapid transportation systems (Swaminathan & Venkitasubramony, 2023:11; Teke, 2022:15). The framework also acknowledges that technological transformation is a priority for this industry, and that some industries have adopted online systems as trading platforms to improve demand satisfaction and competency (Singh & Chan, 2022:8; Mitterfellner, 2020:131). The framework recognises that other developing countries have become resourceful with regard to the raw material needed to manufacture clothes. For example, it is encouraging to learn that 54% of mohair is produced in SA (InvestSA, 2020:6). Hence, the framework suggests that the clothing industry in developing countries is resourceful and may be able to trade locally. The need to depend on global resources may be suppressed. Therefore, it is possible to establish local partnerships to enhance quality standards, cost improvement, compliance, and sustainability.

Table 4.9 below presents a summary of the variables associated with the value of procurement in the clothing industry.

Table 4.9:   Variables associated with the value of procurement in the clothing industry

Value of procurement	Associated variables
Quality standards	▪ Total quality management (TQM).
Cost improvement	▪ Total cost of ownership (TCO).
Resource support	▪ Resource capability.
Improved demand planning	▪ Ordering accuracy. ▪ Lead time improvement.
Compliance	▪ Devotion to ethical standards. ▪ Clear practices and standards. ▪ Adherence to the code of conduct. ▪ Adherence to the corporate code of conduct.
Long-standing relationship	▪ Local CMT support.
Local sourcing	▪ Local economic development. ▪ Local infrastructure upliftment.
Pleasant working environment	▪ Health and safety of workers. ▪ Fair wages. ▪ Remuneration programmes.
Environmental sustainability	▪ Consideration of eco-system during clothing manufacturing processes. ▪ Consider local community during clothing manufacturing processes.

Source: Researcher's own compilation

Table 4.9 presented a summary of NEMA requirements and the relevant certifications. The next section discusses the sustainable procurement.

4.3.4   Sustainable procurement

This section discusses the social and environmental sustainability issues covered by the framework.

4.3.4.1   Social sustainability

The framework suggests that partners in the clothing industry should support each other in improving the working environment and ensuring employees' safety. It is documented in the literature review of the study that clothing industry partners should maintain pleasant working conditions and present the employees with some privileges. The literature states that the clothing industry operating in developing countries still

needs to improve compliance with labour standards and practices (Bag *et al.*, 2023:16; Huttunen, 2022:11; Fung *et al.*, 2019:2). Good procurement practice in the clothing industry should aim to meet the social standards relating to employee rewards and recognise the importance of the health and safety of staff.

Table 4.10 summarises the aspects relating to social sustainability in the clothing industry.

Table 4.10: **Summary of aspects relating to social sustainability in the clothing industry**

Social sustainability	Associated variables
Partner support in improving working setting.	- Fair remuneration and rewards. - Recognition of employees.
Employee safety, reward, and recognition.	- Procurement organisations work with suppliers to ensure health and safety measures and employees' well-being. - Employee safety and rewards be incorporated when designing contractual agreements.

Source: Researcher's own compilation

Table 4.10 presented a summary of social sustainability practices incorporated in the conceptual framework. The next section discusses environmental sustainability.

4.3.4.2 *Environmental sustainability*

The framework suggests that fast fashion production and pollution be minimised as it destroys the ecosystem. It also suggests that there should be preventative measures in place relating to increased carbon emission, and the use of insecticides on fabrics. It is crucial that the effect of clothing SC on the environment be calculated.

Table 4.11 presents a summary of the aspects relating to environmental sustainability in the clothing industry.

Table 4.11:   Summary of aspects relating to environmental sustainability in the clothing industry

Environmental sustainability	Associated variables
Pollution.	▪ Manage the production of quick fashion as it leads to increased pollution. ▪ The production of clothes in a suitable (eco-friendly) manner.
Partners support in reducing pollution as per the policy requirement.	▪ Preventative measures in place relating to increased carbon emission. ▪ Manage the use of insecticides on fabrics. ▪ Refuse administration. ▪ Calculating the effect of clothing SC on the environment.

Source: Researcher's own compilation

Table 4.11 presented a summary of the environmental sustainability practices incorporated in the conceptual framework. The next section discusses procurement challenges addressed by the framework.

4.3.5   Procurement challenges

The framework notes that variables affecting procurement practices relating to procurement processes, global social, social and environmental sustainability, and policy and regulation compliance, can impact efficient procurement practices in the clothing industry. However, the industry still needs to comply with the social and environmental regulations of the country. The framework notes that the industry is globalised and that the high volume of clothing imports from other countries challenges the competitiveness of clothing manufacturers in developing countries. It is clear that retail clothing shops dominate the industry and have the bargaining power during negotiations. The government and local support can improve the industry's competitiveness and economy. Fair contractual agreements and good conduct should be upheld, even with local suppliers. Import tariffs should be revised to boost the industry and improve the economy. Fast fashion also complicates the manufacturing processes and may lead to forecasting errors. The framework suggests that even when local suppliers (clothing manufacturers) are contracted, a fair contractual agreement and code of good conduct should not be compromised.

Table 4.12 presents a summary of aspects relating to procurement challenges in the clothing industry.

Table 4.12: **Summary of aspects relating to procurement challenges in the clothing industry**

Procurement challenges	Associated variables
Non-compliance	- Support in terms of funding. - Adherence to social and environmental sustainability.
Imports	- Funding, resources and technical support is needed to improve competitiveness. - Import tariffs should be revised to restrict competition.
Lack of support	- Funding, resources and technical support is needed. - Retail clothing shops should buy locally.
Biasness	Fair contracts.
Complexity	- Fast fashion should be reduced. - Fast fashion increases complications and manufacturing and forecasting errors.

Source: Researcher's own compilation

The next section discusses the aspects of socio-economic objectives that are incorporated in the conceptual framework for the study.

4.3.5 Socio-economic objectives

The framework suggests that the kind of procurement practice that supports policy adoption relating to local ordering, local resource support, local infrastructural development and technical support, local ESD and partnerships, and valuable procurement may lead to improved procurement value that leads to job creation, sustainability, competitiveness, and localisation. The aspects of socio-economic objective in the clothing industry are summarised in Table 4.13 below.

Table 4.13: **Summary of the aspects relating to socio-economic objectives in the clothing industry**

Socio-economic objectives
Job creation
Competitiveness
Sustainability
Localisation

Table 4.13 presented a summary of the aspects relating to the socio-economic objectives in the study.

As discussed in this section, it is noted that the framework of the study proposed procurement practices in the clothing industry that aim to promote sustainable procurement that leads to the achievement of socio-economic objectives. A weakness of the clothing industry is that procurement practice is not fully guided by policies and regulations (Veitch, 2021:6; Nabee & Swanepoel, 2021:4; Jenkin & Hattingh, 2022:40). There also seems to be the issue of non-compliance in terms of standard policies and regulations (Fung *et al.*, 2019:2), since the clothing industry engages in global sourcing and policies and regulations differ per country (Bag *et al.*, 2023:16). As the study is based on the South African clothing industry, some of the procurement policies and regulations relating to the SA clothing industry are included. The framework suggests that the clothing industry should avoid policies addressing issues of non-compliance. The framework suggests that policies, such NEMA, IPAP and B-BBEE may be fully implemented to improve procurement practices in the clothing industry: The framework suggests the implementation of policies and regulations standards discussed should be in line with localisation and the variables relating to the value of procurement may lead to sustainable procurement practices in the clothing industry, particularly in the SA clothing industry.

The framework incorporates the following variables of procurement practice: demand planning (DP), strategic sourcing, enterprise supplier development (ESD), strategic partnership, government policies and regulations, the value of procurement, and sustainable procurement. All these variables, if fully implemented, may lead to the type of procurement practices that support socio-economic objectives that focus on localisation, job creation and may lead the industry to industrialise. The framework of the study is presented in Figure 4.4 below.
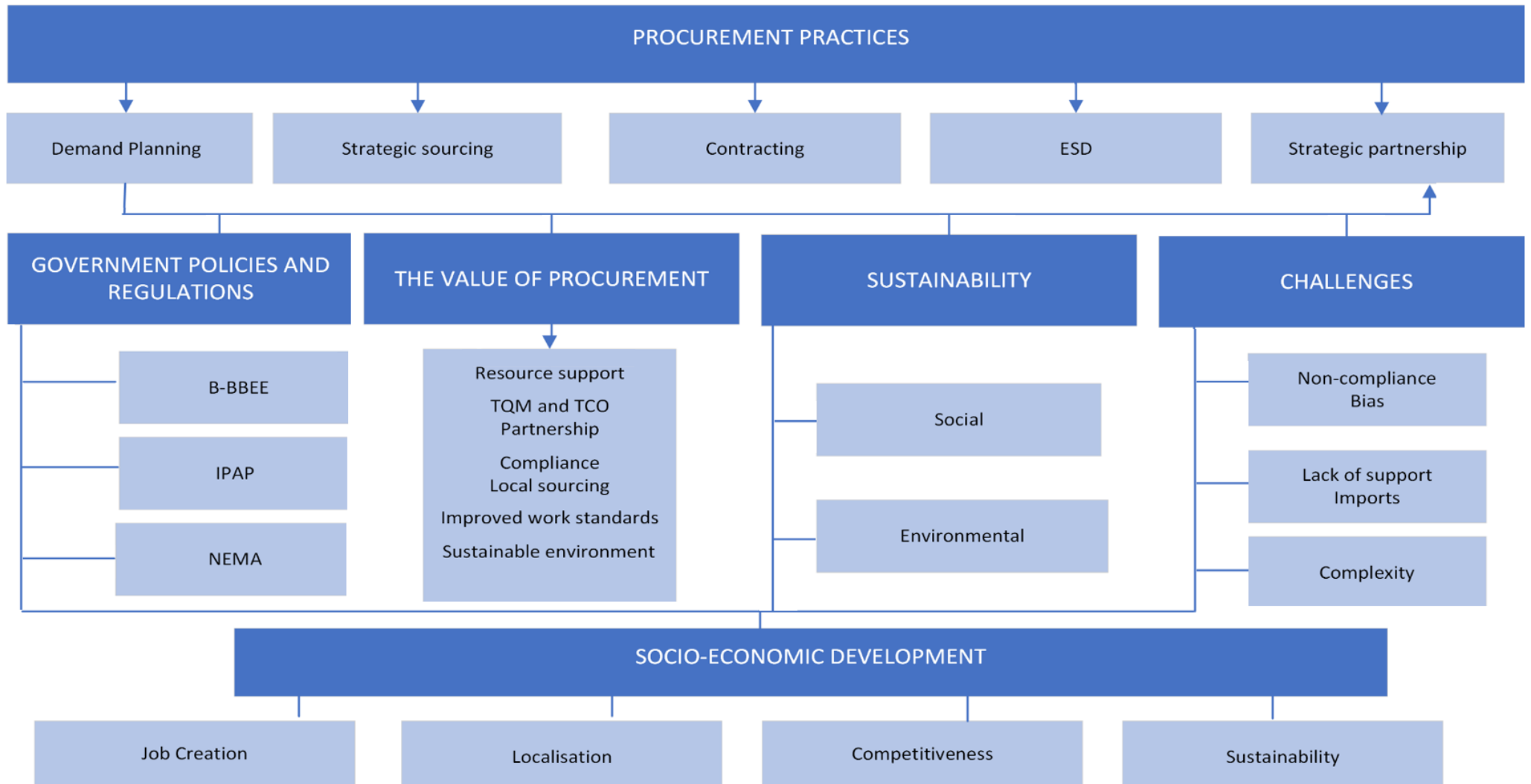
Figure 4.4: The instrument for procurement practices in the clothing industry

Source: Researcher's own compilation

4.4   CONCLUSION

The literature noted that compliance in honouring contractual obligations and the existence of formal contracts are seen as some of the loopholes in the clothing industry (Fung *et al.*, 2019:2). The literature review revealed that even though there are existing policies guiding sustainable ethical procurement and localisation in the clothing industry, honouring of such policies is still a challenge, and that policies differ from country to country (Bag *et al.*, 2023:16). Even so, the three frameworks discussed in this chapter did not address policies that promote local sourcing leading to socio-economic objectives. The model for procurement practice in the clothing industry by Su (2013) designed and developed a SEM using a multi-theoretical perspective to evaluate the connection or relationship between strategic sourcing, the buyer-supplier relationship, supplier evaluation and sourcing performance. However, this model by Su (2013) did not address issues relating to ethical standards and sustainability. In addition, the procurement practice model for supplier relationship management by Koprulu and Albayrakoglu (2007), adopted from Lasch and Janker (2005), identified challenges pertaining to the supplier selection process with criteria for choosing the most reliable supplier in line with the organisational plan. However, the model did not touch base on aspects relating to localisation, and social and environmental sustainability.

The procurement practice framework by Early (2017) identified six stages in the procurement cycle. Coincidentally, the Early (2017) model advises that the six stages of the procurement practices, namely, sourcing, forecasting, negotiating, contract, ordering and lead time should pay attention to social compliance. Still, this model is lacking in terms of the discussion of aspects relating to procurement practice in the clothing industry that take cognisance of environmental sustainability, and localisation leading to the achievement of socio-economic objectives. This is logical, as all these models were designed for the global clothing industry, and do not focus on the procurement practice that promotes localisation and socio-economic objectives. Hence, the current study designed an instrument for procurement practice in the clothing industry that may lead to socio-economic upliftment in the industry, especially in developing countries that have been negatively affected by global competition. The next chapter (Chapter 5) discusses the research methodology employed in the study.

CHAPTER 5:
RESEARCH METHODOLOGY

5.1 INTRODUCTION

The previous chapter presented a discussion of the theories relating to procurement practices in the clothing industry and revealed a gap in the body of knowledge on procurement practices in the SA clothing industry. This resulted in developing the conceptual framework and formulating the study's research problem, questions, and objectives. This chapter presents the research design and methodology. The chapter defines the research design and justification for the selected methods relating to the research problem. It discusses the research design, research philosophies, research approach, research methodological choice, research strategy, distinction of the population, sampling procedure, and data collection. The data techniques and procedures employed in testing the research instrument used to assess how procurement is practised in the clothing industry are presented. The R-software program, JASP 0.16.3 (2022) was used to perform factor analysis, reliability analysis, and descriptive statistics. Also, SAS 9.4 (2020) was used to perform the SEM. The chapter concludes with some ethical considerations concerning the research study.

5.2 RESEARCH DESIGN

The research design is an essential component that serves as the foundation for guiding all the necessary steps required to achieve the research objective (Mukherjee, 2020:8; Saunders *et al.*, 2019:173). Saunders *et al.* (2019:173) mentioned various research designs which may be adopted by research studies. This gives direction to the research philosophy and method relevant to each study. Saunders *et al.* (2019:174) developed a research design that considers various factors, such as research philosophies, approaches to theory development, methodological choice, research strategy, data collection and analysis, the time horizon, techniques, and procedures. Mukherjee (2020:8) and Saunders *et al.* (2019:173) also noted that the research question of the specific study gives direction to the research path. Various research designs are illustrated in Figure 5.1 below.

136
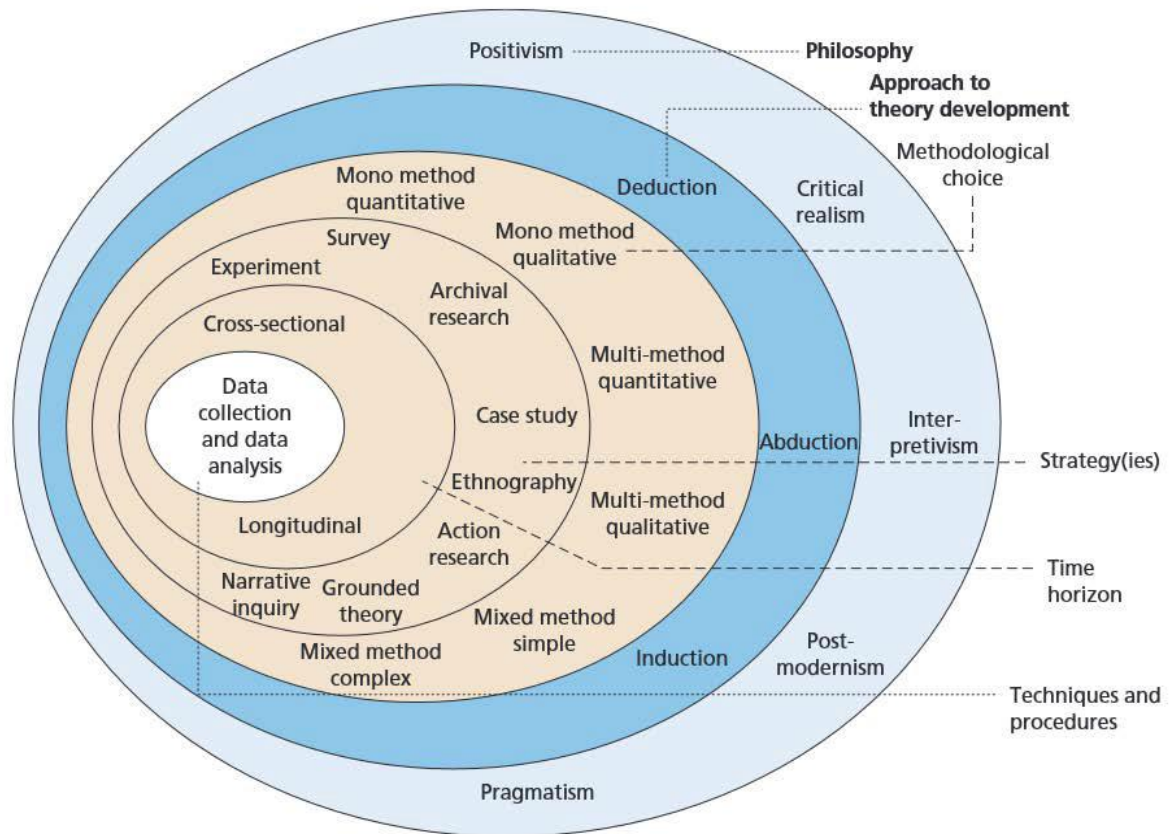
Figure 5.1:   Research design

Source: Saunders *et al.* (2019:174)

As shown in Figure 5.1, there are various research designs and research paths in which research studies may be conducted. The study followed the research design proposed by Saunders *et al.* (2019:174), as illustrated in Figure 5.1. To gain an understanding of the problem statement, research objectives, and title of the study, various scholars' theories were reviewed through a thorough analysis of the literature. Since the current study aimed to develop a procurement framework for the promotion of socio-economic objectives in the SA clothing industry, it was informed by the assumption made by Corbishley *et al.* (2021:66), Statista (2021:38), Jacobs and Karpova (2020:366) and Šajn (2019:10) that the clothing industry has become globalised, and the focus should shift to how global sourcing compromises the localisation and industrialisation in this industry. For example, Worku (2019:98) stated that almost 74% of clothing garments procured in SA is sourced from international suppliers.

Therefore, the current study used the research path developed by Saunders *et al.* (2019:174) to investigate reliable solutions to this research assumption. The next section discusses the research philosophies and indicates the research philosophy applicable to the current study.

5.3   RESEARCH PHILOSOPHIES

Research philosophies involve assumptions about the environment, societal truths, and the establishment of ideas and knowledge (Saunders *et al.*, 2019:173). These philosophies are used in management and business research to help the researcher identify the research gap, and the questions and literature sources to obtain solutions. The research strategy and method form part of the research philosophy (Saunders *et al.*, 2019:189). As indicated in Figure 5.1, critical realism, positivism, pragmatism, post-modernism (constructivism) and interpretivism form part of the research philosophies. According to Creswell and Creswell (2018:47), these are the pillars which clarify the assumptions or the worldviews, as discussed in detail below:

- **Positivism:** Positivism and interpretivism are the general philosophy in which research is undertaken (Acharyya & Bhattacharya, 2020:12). According to Saunders *et al.* (2019:144), the positivist philosophy believes in true reality to produce decrees, such as generalisation. In positivism, the researcher might use concepts to establish a hypothesis (Acharyya & Bhattacharya, 2020:12). Hair *et al.* (2020:307) and Saunders *et al.* (2019:176) noted that in positivism, the researcher studies philosophical attitudes or positions through the observation of social reality to produce meaningful generalisations. Hence, the authors confirmed that positivism is linked to deduction and the quantitative research design.

- **Critical realism:** This is the worldview and experiences underlying the configuration of reality that shapes the statement actions (Saunders *et al.*, 2019:147). This research philosophy asserts that there are two steps to reasoning: through feelings and events and the mind based on past experiences (Hair *et al.*, 2020:309; Saunders *et al.*, 2019:147).

- **Pragmatism**: Pragmatism or methodological pluralism endeavours to link the breach between the interpretivist and positivist epistemologies (Ngulube, 2017:127; Mertens, 2023:10). Pragmatism emphasises that events are relevant

when they are reinforced by actions (Saunders *et al.*, 2019:176). Pragmatism is linked to a mixed-method research design (Nunfam, 2021:2; Mertens, 2023:10).

- **Interpretivism**: Studies the meanings that indicate that human beings are different from physical occurrences (Hair *et al.*, 2020:307; Saunders *et al.*, 2019:176). This research philosophy is associated with the qualitative research design and an inductive approach to theory development (Saunders *et al.*, 2019:176). It aims to establish recent and better reasoning and interpretation of the social world viewpoint (Saunders *et al.*, 2019:149).

- **Postmodernism**: This philosophy encourages marginalised opinions or views in discussions that challenge reasoning (Acharyya & Bhattacharya, 2020:12). Saunders *et al.* (2019:176) maintained that the goal of this research philosophy is to investigate and challenge the effect of association that supports the dominant belief. The Saunders also indicated that this philosophy challenges the leading opinions as contributions.

The research philosophies discussed above are governed by important thoughts or theories, or assumptions such as ontology, epistemology, and axiology (Mertens, 2023:61; Saunders *et al.*, 2019:145). The authors indicated that beliefs or thoughts are essential declarations that are real, thereby making the study irrelevant to the investigation.

Table 5.1 below summarises comparisons of these thoughts or theories and the typical method adopted by each assumption.

Table 5.1:   Comparisons of research philosophical theories or assumptions

ONTOLOGY (Nature of reality)	EPISTEMOLOGY (What constitutes acceptable knowledge)	AXIOLOGY (Role of value)	TYPICAL METHODS
POSITIVISM			
One true reality **Real, external, independent** **Granular** **Ordered**	Scientific methods. Measurable facts or observation. Law-like generalisation, numbers, casual justification, and predictions as outcomes.	The researcher is independent or detached from what is researched.	Is typically deductive. Large sample measurement. It follows a quantitative method of analysis with a collection of data being analysed.
CRITICAL REALISM			
Stratified (the empirical, the actual and the real)	Epistemological relativism. Historically, knowledge has been both established and transient. Societal facts exist. Constructions. Input historical explanations in a casual manner.	Value-landed research.	This is a detailed analysis of current structures and agency, considering historical context. There are various methods and types of data that are appropriate for different subject matters.
POSTMODERNISM			
Nominal **Intricate, rich** **Socially designed through power associations.** **Certain implications, explanations, and facts are overshadowed and suppressed by others.**	Do dominant ideologies determine what is considered as "truth" and "knowledge"? Pay attention to absences, silences, oppressed or suppressed meanings, as well as analysis and tone.	Value constituted research. Researcher and research rooted in power associations. Certain research stories are silenced and overlooked, while others are prioritised and given more attention.	Deconstructive reading involves analysing texts and their underlying realities by comparing them to each other. Detailed searches of abnormalities, silences, and absences. Scope of data type, naturally qualitative method of analysis.

ONTOLOGY (Nature of reality)	EPISTEMOLOGY (What constitutes acceptable knowledge)	AXIOLOGY (Role of value)	TYPICAL METHODS
Changes in procedures, events, and methods.	Contributing to the exposure of power dynamics and challenging dominant perspectives.	The research is focused on impulsive behaviour and is being done thoroughly.	
INTERPRETIVISM			
Intricate, rich **Socially structured through power relations** **Some meanings, explanations, truths are governed and silenced by others.** **Fluctuation of activities, encounters, and practices**	Theories and concepts are too simplistic. Focus on narrative, stories, observations, and explanations. New understanding and world viewpoints as contribution.	Value-bound research. The researchers themselves can be a part of what they are studying, making it a subjective process. The contribution heavily relies on the researcher's interpretation.	Typically, deconstructive. Reading text and realities against themselves. Thorough investigations into anomalies, moments of silence, and absences. Range of data types, typically qualitative method of analysis.
PRAGMATISM			
The external factors are intricate and diverse. **Ideas are the foundation of reality's practical manifestation.** **There is a constant flow of various activities, events, and routines.**	Understanding the practical significance of knowledge within certain situations. Theories and knowledge that lead to successful action are considered true and reliable. Concentrate on issues, methods, and how they relate to the situation at hand. Contributing to informed future practice through problem-solving.	Value-driven research. Research is driven by the doubts and beliefs of the researcher who initiates and sustains it. Researcher reflexive.	Follows the research problem and research question. Range of methods: mixed methods, multiple, qualitative, action research. Prioritises practical solutions and tangible results.

Source: Saunders *et al.* (2019:145)

Various comparisons of thoughts around the research philosophies were presented in Table 5.1.

The study was guided by the positivism research philosophy since the researcher aimed to study the philosophical attitude or positions that exist in procurement practices in the SA clothing industry to establish a procurement framework for the promotion of socio-economic objectives. As specified in Table 5.1, in positivism, the ontology thought constitutes the nature of reality. The epistemology thought in positivism presents what constitutes acceptable knowledge based on scientifically measurable facts and observations and influences the researcher's choice on what to study. Axiology thinks about roles and value where the researcher remains separate or independent from that which is researched. The current research approach employed positivism, resulting in the use of a deductive and quantitative method for data collection. A large sample size of 621 participants was deemed sufficient for the study. Various authors, such as Creswell and Creswell (2018:54), Eisend and Kuss (2019:96), Saunders *et al.* (2019:145), and Mertens (2023:18) confirmed that positivism promotes numeric observation and the study of human behaviour using a scientific approach and theory verification. In addition, the above authors indicated that the positivism philosophy holds the belief that causes determine the effects of the outcome. Therefore, it was crucial for the current study to test the constructs that constitute research questions and hypotheses in positivism.

Given the above, Table 5.2 below summarises the rationale for adopting the positivism research philosophy in the current study.

Table 5.2: **Summary of the rationale for adopting the positivism philosophy in the study**

Positivism ontology: Nature of reality
- There are facts that exist about procurement practice in the SA clothing industry that may be revised through scientific discoveries.   - Ontology was adopted to assess the position of the clothing industry in relation to procurement practices.   - Assesses how procurement practices impact socio-economic objectives in the industry.
Epistemology
- There are assumptions that procurement practices are affected by policies and regulations.   - Measures the effect of policies identified on the procurement practices in the clothing industry, such as B-BBEE, IPAP and NEMA.   - Measures the influence of procurement practices, such as demand planning, strategic sourcing, contracting, ESD and strategic partnerships, procurement value and sustainability.   - Measures the influence of procurement practices on the value of procurement.   - Involves empirical observation and measurements.   - Numerical data analyses using scientific procedures.
Axiology
- The researcher maintain independence when collecting data and maintain an objective position.   - Ethical procedures are to be considered.
Typical methods
- Apply deductive research approach.   - Follow the quantitative research method of collecting, analysing, interpreting, and writing results.   - A structured online survey examined the truth about procurement practice, policy and standards, sustainability, and procurement that adds value, and challenges.   - Data was collected from 621 participants in clothing manufacturers (for example, Cut Make Trim (CMT) manufacturers, full manufacturers, corporative businesses, and others).   - Theory verification.   - Hypothesis testing.   - Explain the rela tionships among variables being tested.   - Incorporation of relevant procurement theories in the study.   - Redesign a workable procurement framework for the SA clothing industry.

Source: Researcher's own compilation

As pointed out in Table 5.2, the positivism philosophy was adopted in the current study to determine the position of the clothing industry in relation to procurement practices. The researcher aimed to investigate the following constructs relating to procurement practices in the SA clothing industry: demand planning (DP), strategic sourcing compliance (SSC), strategic sourcing resource capabilities (SSRC), contract mutual agreement (CMA), contract negotiation (CN), contract policy and standards (CPS), enterprise supplier development (ESD) and strategic partnerships. Also, the following are the variables relating to procurement practice in the SA clothing industry: government policies and regulations, National Environmental Management Act (NEMA), the value of procurement, social sustainability, environmental sustainability, lack of support, and complexity, as well as their association. Thus, the empirical observation employed a quantitative research method. In Chapter 4, the study examined various theories relating to procurement practices in the clothing industry. These theories were verified empirically to redesign a workable instrument for promoting socio-economic objectives in the SA clothing industry. The researcher maintained independence when collecting data and maintained an objective position. Section 5.4 discusses the various research approaches, and the approach selected for the current study.

5.4   RESEARCH APPROACH

Saunders *et al.* (2019:153) stated that there are three research approaches which assist in theory design, namely, the deductive, inductive, and abductive approaches.

- The deductive research approach involves assumptions that the researcher primarily regards as real. It includes the establishment of theory that is subjected to severe testing through a sequence of propositions. The research is conducted on a large sample of respondents (Saunders *et al.*, 2019:153).

- The inductive research method follows a pre-established observation of occurrences to draw inferences (Creswell & Creswell, 2018:126; Leedy & Ormrod, 2014:17). This approach formulates a theory based on data collected from a sample of respondents interviewed, and the observations and thoughts of the respondents (Saunders *et al.*, 2019:153).

- The abductive research approach tests existing theories and assumptions to design conclusions and to build new theories (Saunders *et al.*, 2019:145). This approach combines both the deductive and inductive approaches.

The various research approaches, including the features, are summarised in Table 5.3.

Table 5.3: Differentiated research approaches and features

	Deductive	Inductive	Abductive
Logic	In deductive reasoning, when the assumption is real, the deduction must also be real.	Inductive inference involves using established premises to come up with untested conclusions.	Abductive inference involves using established premises to create conclusions that can be tested.
Generalisability	Making a general statement and applying it to a particular situation.	Generalising based on specific interaction.	Drawing conclusions from the connections between specific instances and broader patterns.
Use of data	Data collection is a method that is employed to assess theories or hypotheses that pertain to an existing theory	The process of data collection involves examining a phenomenon, detecting patterns and themes, and establishing a conceptual framework.	Collecting data is a method used to examine an incident, discover themes and patterns, organise them within a conceptual framework, and then verify them by collecting more data, and so on.
Theory	The process of either proving or disproving a theory is known as falsification or verification.	Theory generation and building	Create or adjust theories by building upon existing ones as needed. This way, new theories can be created of current theories improved.

Source: Saunders *et al.* (2019:153)

Various research approaches and their features were discussed in Table 5.3. Since a positivist research philosophy guided the study, the deductive research approach was deemed to be helpful because it starts with a theory and is based on reading academic literature and creating a research plan to verify the theory. The literature review was useful to design an empirically tested conceptual framework. The empirical study was

accomplished through the collection of primary data using a quantitative cross-sectional survey.

5.5 CHOICE OF RESEARCH METHOD

The three methodological choices relevant for adoption in a research project or study are qualitative research, quantitative research, and mixed method studies (Mertens, 2023:2). These methodological choices are discussed further below.

5.5.1 Quantitative research

Bairagi and Munot (2019:8) noted that a quantitative research method accepts that the universe is stable and uses mathematical analyses on parameter values to arrive at solutions. Hair *et al.* (2020:161) agreed that in the quantitative research method, numbers are used to measure the character of the variables or constructs. Furthermore, the research instrument uses structured questions to answer precisely what it intends to answer. A quantitative research method is characterised by analysing the association between the variables and measuring scientifically using numeric data (Eisend & Kuss, 2019:164). Bairagi and Munot (2019:8) emphasised that in quantitative research, scientific numeric data is used on parameter (variables) values to draw conclusions. Saunders *et al.* (2019:176) maintained that a quantitative research method is associated with positivism. Furthermore, Creswell and Creswell (2018:35) claimed that quantitative research uses hypotheses and structured questions to collect data. Moreover, the quantitative research approach focuses on ensuring the reliability and validity of the research instrument used.

5.5.2 Qualitative research

According to Creswell and Creswell (2018:43), a qualitative research method discovers the understanding of, and connotations of people or groups as related to social difficulties. Bairagi and Munot (2019:9) noted that qualitative research methods assume that the world is uneven, hence, variances in parameters (variables) may occur over time. Saunders *et al.* (2019:179), similarly, stated that this type of research intends to learn the basic causes and desires of humans using interviews. Further, the qualitative approach to data collection obtains open-ended data, uses narrative studies, grounded theory, phenomenology, case studies and ethnography.

The data analysis processes in qualitative research designs use text and pictures to analyse data (Creswell & Creswell, 2018:35). This is the type of research that accepts that the universe is unstable, and as stated in the previous paragraph, variances in parameters may emerge with time (Bairagi & Munot, 2019:9). Therefore, meanings and the relationships amongst those meanings are studied in qualitative research (Saunders *et al.*, 2019:176). Hair *et al.* (2020:161) posited that qualitative research methods use in-depth interviews or observation to collect data. Common themes are established and ordered into patterns in qualitative research, and this type of research highlights the trustworthiness of the respondents.

5.5.3   Mixed method research

Mertens (2023:2) stated that mixed method research combines quantitative and qualitative methods and combines two types of data using a logical and theoretical framework. Saunders *et al.* (2019:179) confirmed that a mixed method is a combination of several research methods that combine quantitative and qualitative data-collection methods, and various types of analyses in one research project. This research method is frequently linked with pragmatism and critical realism research philosophies. The researcher may seek to understand the truth about certain assumptions and seek to understand the relationship between certain phenomena to arrive at possible solutions. Ultimately, it assists the researcher to deliver the contextual background and to clearly recognise the research problem. It is an alternative method that may be adopted if there is not enough data to analyse from the qualitative and quantitative data that has been collected separately (Creswell & Creswell, 2018:35).

Table 5.4 presents the attributes of quantitative and qualitative research methods.

Table 5.4: Attributes of quantitative and qualitative research methods

POINT OF CONTRIBUTION		
Attributes	**Quantitative**	**Qualitative**
Researcher position	The researcher is typically perceived as separate and unbiased from the subjects they are studying.	The researcher cannot be considered independent from those whom they are researching.
Sample element	The individuals participating in the survey are commonly referred to as respondents.	The individuals involved in the activity are commonly known as participants or informants.
Sample type	In order to ensure generalisability, probability sampling techniques are frequently utilised.	In general, it employs non-probability sampling methods.
Data collection	This method of collecting data is highly structured. Collects and compiles the findings using numerical and standardised data.	The data collection methods utilised are either unstructured or semi-structured. The data collected is not standardised and needs to be categorised.
Analysis	Analyses relationships between variables.	Understand the meanings that participants attribute through their spoken or written words, as well as images, and the relationships that are associated with them.
Presentation of the outcome	Uses statistics and graphs to analyse data. Outcomes and meanings are derived from numerical data.	Analyses are carried through conceptualisation. Meaning can be derived from words (spoken or written), as well as images.

Source: Saunders *et al.* (2019:178, 180)

Table 5.4 presented the attributes of qualitative and quantitative research methods. Since the study was guided by a positivism research philosophy, the quantitative research method was employed (Mertens, 2023:61). The methodological choice of the study is based on the quantitative research approach.

5.5.4 Justification for using quantitative research

According to Hair *et al.* (2020:161), research questions are structured in a quantitative research study to answer exactly what the researcher intended to find out. The researcher in the study adopted the quantitative research approach to test how procurement is practised in the SA clothing industry, the policies and regulations affecting procurement practice, the value of procurement, sustainability, and

challenges of procurement. Even though there are standard procurement practices that are noted in the literature and government policies known to the industry, it is important to examine the application, since there are assumptions relating to procurement, such as non-compliance, lack of local support, and sustainability, which affect the socio-economic objectives in the industry. The researcher chose the quantitative approach to be able to discover precisely what the problem is.

The study tested constructs that lead to the kind of procurement practice that promotes socio-economic objectives in the SA clothing industry statistically by using rating scales in a structured questionnaire (Leedy & Ormrod, 2014:97; Saunders *et al.*, 2019:178; Creswell & Creswell, 2018:54). Most of the studies on procurement practice that were identified in the literature review on the clothing industry, followed a quantitative research method. Also, the theories on procurement practices by Koprulu and Albayrakoglu (2007) and Su (2013) and Early (2017) that were incorporated in the conceptual framework of the study (as discussed in Chapter 4), used a quantitative research method. For example, the theory by Koprulu and Albayrakoglu (2007) followed a quantitative research method to test supplier selection, rating, supplier development and partnership to design the AHP model that a clothing organisation may adopt in choosing suppliers. Su (2013) applied a quantitative method to examine the procurement organisation's buyer and supplier relationship, supplier evaluation, and sourcing performance.

Similarly, Early (2017) used a quantitative method to study the construct of procurement practices, namely, sourcing, forecasting, negotiation, contract, ordering and lead time. The study assessed the impact of these variables on social compliance and localisation. Furthermore, quantitative studies assist researchers in measuring the character of the variables or constructs based on clear and understandable questions. This justifies the relevance of using a quantitative research method in the study, since the researcher ask clear questions that would provide answers to relevant issues relating to the procurement practices that promote socio-economic objectives, particularly in the SA clothing industry. Constructs, such as policies and regulations, demand planning, strategic sourcing, contracting, ESD, strategic partnership, procurement value, sustainability, and procurement challenges were deemed relevant in answering the research questions.

These constructs were measured and studied using statistical analyses. Moreover, causal relationships between constructs were tested. Conclusions were drawn based on data about behaviour and the association between the constructs.

5.6 RESEARCH STRATEGY

A research strategy gives an indication of how to address the research questions of the study being undertaken. The various research strategies are as follows: experiment, survey, archival, case study or grounded theory, action research, narrative and ethnography.

Saunders *et al.* (2019:190) discussed the research strategies in detail, as below:

- **Experiment:** It is laboratory-based research that uses an experiment to test constructs. It studies the probability of change in constructs (dependent and independent constructs).

- **Survey:** This is used to answer questions such as what, where and how. Questionnaires are used to collect information from a large sample in a population to make uncomplicated judgements. The survey aims to answer research questions and achieve objectives using statistical data-collection methods.

- **Archival:** It uses secondary sources or existing documents in searching for information. These are documents such as online resources, reports, and visual and audio documents.

- **Case study:** Focuses on real-life situations to search for in-depth information. The information search may be conducted through individuals, organisations, events, associations, and some other instances.

- **Grounded theory:** Focuses on theoretical discussions of social contacts and processes in a broad range of contexts. It is used to explore broad matters in organisations. It uses inductive approaches to solving matters.

- **Action research:** It uses several stages established to solve real business challenges using an involving and joint approach using various forms of understanding or reasoning. It begins with a specific topic with the research questions, but the question changes as the research matures.

- **Narrative:** It is a story that translates a situation and uses a qualitative research method to tell the story. It aims to maintain linear associations and the order of situations as voiced by the participants (narrators).

- **Ethnography:** This involves studying the values and social structure of a particular cluster. The researcher studies the surrounding environment, observing the beliefs, behaviour, rituals, and values of a particular group, and communicating with the group in searching for solutions.

The study adopted a survey to search for information on procurement practices in the clothing industry. As discussed, surveys are a widely used method in organisational and management research. Surveys gather statistical data to answer research questions and achieve the study's objectives. According to Levin, Fox and Forde (2017:3), a survey seeks to restructure the influence of independent variables on dependent variables, and variables are recorded after they happen. A survey can investigate a huge number of crucial independent constructs and their association with any dependent construct. The researcher in the study used a survey to collect data related to standard information on the population of clothing manufacturers in the Western Cape, KwaZulu-Natal (KZN) and Gauteng. This assisted the researcher in determining information about the attributes, opinions, behaviour, or experiences of clothing manufacturers regarding procurement practices. Constructs relating to procurement practices in the clothing industry were assessed on a sample of (n=621) respondents. Surveys could also be completed online and through email, and the study also made use of field workers (Saunders *et al.*, 2019:180).

During to COVID-19 level 3 lockdown restrictions, the researcher contacted the Apparel and Textile Association of South Africa (ATASA) and the South African Apparel Association (SAAA) to obtain consent to conduct the study, as they are reporting bodies in clothing manufacturing organisations or factories (Appendix D). Both associations granted the researcher authorisation to conduct the study (Appendix E). ATASA agreed to disseminate the survey on behalf of the researcher to the clothing manufacturing factories listed in their database, for the managers or experts in procurement to complete. As the lockdown restrictions in SA were revised, and people were allowed to travel, and economic activities resumed, the researcher worked with

Taarifa research consultancy to assist with the provision of field workers to improve the response rate. This resulted in the response rate (n=612) being obtained.

5.7 RESTATING THE RESEARCH QUESTIONS

The following research questions were stated in Chapter 1.

5.7.1 Main research question

- What kind of procurement framework can the SA clothing industry use to promote socio-economic objectives?

5.7.1.1 Sub-research questions

- How is procurement conducted in the SA clothing industry?

- What are the relevant policies and regulations governing procurement in the SA clothing industry?

- What is the value of procurement in the SA clothing industry?

- How sustainable is procurement in the clothing value chain?

- What are the procurement challenges faced by the SA clothing industry?

- Are there differences in the application of procurement practices by the clothing industry stakeholders?

5.8 POPULATION AND SAMPLING

This section presents the population and sampling of the study.

5.8.1 Population

Clothing manufacturing organisations in South Africa are located in several provinces in the country, with most organisations established in the Western Cape, KZN, Free State, as well as Gauteng (Veitch, 2021:10). For the purposes of the study, the population included clothing manufacturing organisations (Hair *et al.*, 2020:185). It is important to note that most of the population in the SA clothing industry are micro-enterprises. SARS reports that there are approximately 4500 tax-registered CTFL manufacturers in South Africa, of which the majority are micro-enterprises (InvestSA, 2020:2). However, according to Veitch (2021:10) there are just 800 registered clothing manufacturers.

5.8.2 Sampling

To gather information about a whole population, a sample is taken which is a smaller portion that represents the entire group. In this case, a sample was chosen to represent the clothing industry in South Africa (Hair *et al.*, 2020:185). This sample typically consists of units of analysis, such as people, households, or firms, that are chosen based on specific criteria. Researchers can gain insights into the larger population by studying this specific group (Acharyya & Bhattacharya, 2020:169).

The study drew a sample from the sample frame of clothing manufacturers located in the following three provinces of SA, namely, the Western Cape, KwaZulu-Natal, and Gauteng (Adams & Lawrence, 2019:193), as a majority of the population in the SA clothing industry is found in these three provinces. Table 5.5 presents the inclusion and exclusion criteria of the study.

Table 5.5:   **Inclusion and exclusion criteria**

Inclusion criteria	Exclusion criteria
Direct human participant involvement	Non-human
Owners/ managers / specialists in the SA clothing industry	Non specialist/ General workers
Wishing to participate	Refusal to participate
Age above 18 years and below 65 years old	Age below 18 years and above 65 years old

5.8.2.1 *Sample size*

A sample size is a portion selected from the entire population being studied (Acharyya & Bhattacharya, 2020:169; Hair *et al.*, 2020:182). Two types of sampling that are documented in research are discussed below:

- **Probability sampling:** This process involves assessing the probability of selecting a representative population for inclusion (Bairagi & Munot, 2019:94; Adams & Lawrence, 2019:191). One way to select a representative sample is through probability sampling techniques, which include simple random sampling, systematic sampling, stratified sampling, and cluster sampling (Bairagi & Munot, 2019:94).

- **Non-probability sampling:** In the context of non-probability sampling, each and every member of the population is provided with an equitable chance of being chosen (Bairagi & Munot, 2019:94; Creswell & Creswell, 2018:212). Non-probability sampling involves various methods for selecting a sample, but it is subjective in nature (Adams & Lawrence, 2019:193).

The non-probability sampling method was selected for use in the study. Non-probability sampling follows sampling methods such as convenient, judgement, quota, snowball, and purposive sampling (Bairagi & Munot, 2019:97; Adams & Lawrence, 2019:193). Table 5.6 presents a summary of the various types of sampling techniques.

Table 5.6:   Types of sampling techniques

Probability (random) sampling	Description	Non-probability (non-random) sampling	Description
Simple random sampling	Assign elements of the target population an equal opportunity to be chosen.	**Convenience sampling**	A sample that is easily accessible to the researcher is chosen.
Systematic sampling	To select participants, every 10th or 20th person is chosen when choosing participants randomly.	**Quota sampling**	A specific subset of the population is selected in a non-random manner to serve as a sample. With quota sampling, the researcher handpicks the participants who will be part of the research.
Stratified random sampling	Randomly choosing each participant in each subgroup, for example: age, gender, marital status.	**Judgmental**	The researcher selects a sample that they believe accurately represents the population.
Cluster sampling	Randomly choosing a cluster on each targeted population, for example: organisation, household, geographical area.	**Snowball sampling**	This approach targets individuals who willingly took part in the study and also gave recommendations for other potential participants.

Sources: Adapted from Adams & Lawrence (2019:203); Saunders et al. (2019:297) and Hair et al. (2020:185)

Initially, the study intended to adopt a random probability sampling from clothing manufacturers registered with the National Bargaining Council of SA. However, as many clothing organisations have shut down their operations, it was difficult to access

all the respondents. Some authors in the literature, for example, Jacobs and Karpova (2020:366) and Jenkin and Hattingh (2022:54) and Moloi (2019:74), have also confirmed that globalisation in the clothing industry has resulted in economic disaster, as most clothing organisations have been forced to close down their operations. The study conducted by Netshishivhe (2020:423) also experienced a poor response rate from the participants. Nevertheless, Netshishivhe's (2020:423) study revealed that a significant proportion of local textile producers, manufacturers, and retailers in Ekurhuleni, South Africa, had to resort to retrenchment and downsizing, with 55% of them being affected. According to Mokwana's study (2021:12), SMEs in the textiles, clothing, and leather goods industry faced significant challenges due to COVID-19, which resulted in many of them having to close either temporarily or permanently.

The doctoral study by Dos Santos (2020) adopted convenient sampling when sampling respondents in the clothing industry to reach available respondents in the industry in KZN. Foreign nationals operate most CMT clothing organisations in SA, the study excluded them, as the focus is on the SA-owned clothing organisations' achievement of socio-economic objectives and localisation. Therefore, the researcher was compelled to revert to snowball sampling and request SA clothing organisations that completed the survey for referrals to other SA clothing organisations that are still in operation. The study by Kirchherr and Chares (2018:3) that focused on enhancing the diversity of snowball sample, argued that academic scholars grounded in quantitative research perceived random sampling as a set norm of data collection. However, when faced with a population that is tough to reach for a significant study that is worth investigating, snowball sampling becomes an option. Dusek, Yurova and Ruppel (2015:281) concurred that this sampling technique is relevant to be applied to qualified specialists in the field of study to obtain quality and reliable information. Therefore, the study focused on the managers or owners of clothing organisations who have intensive skills and experience in procurement practice in the industry to ensure that quality data was obtained.

The researcher in the current study collaborated with a registered research organisation, named Taarifa that specialises in data collection and offers fieldwork services to enhance the response rate. The researcher managed to collect 621 surveys from clothing manufacturers situated in the provinces of the Western Cape, KwaZulu-Natal and Gauteng, which is more than the estimated sample. The sample

of the study is n=621 and is deemed large enough to allow the researcher to estimate and reduce sampling error to increase the accuracy of the test outcome (Eisend & Kuss, 2019:146).

5.9 RESEARCH INSTRUMENT

The study utilised the explanatory descriptive research approach to address inquiries about the who, what, where, and how aspects of the subject (Bairagi & Munot, 2019:7). The researcher's objective was to gather information on how procurement is carried out in the clothing industry. This was done by using the constructs that are relevant to procurement practices in the clothing industry, and that had been obtained from the literature review. The research instrument was measured using a relevant measuring scale. The various different measuring scales are discussed below, and the applicable measuring scale used in the study is explained.

5.9.1 Measuring scale

According to Hair *et al.* (2020:359) and Adams and Lawrence (2019:123), a research instrument can be measured using four measuring scales, as explained below:

- **Nominal scale**: Categorises situations or constructs into groups or classes without assigning them any numerical value.

- **Ordinal scale**: Data is categorised based on their size order. This method allows researchers to rank the information effectively (Adams & Lawrence, 2019:124).

- **Interval scale**: Involves using numbers to measure causal variables (Adams & Lawrence, 2019:125). Saunders *et al.* (2019:567) stated that the interval scale can be used for statistical analysis that is not possible with nominal ordinal data.

- **Ratio scales**: Measure absolute changes in data or variables, such as reaction time (Adams & Lawrence, 2019:127).

The study employed an ordinal scale, since the constructs were assessed on rank data at the hand of a four-point Likert scale. The initial part of the survey (Section A) consisted of demographic details. In Section A1, categories 1 to 4 were assigned to describe the type of organisation. Sections A2 to A3 represented the size of the organisation, and years of experience and a number from one to five was assigned to each category.

A four-point Likert scale related to ordinal data was included in Sections B to F of the questionnaire (see Table 5.8 and Appendix B for the questionnaire). Data was coded according to the three forms of degrees used to answer the Likert scale questions, and the scales were assigned numbers, as indicated in Table 5.7 below.

Table 5.7:   Forms of degrees

Forms of degrees
The degree of agreement.
The degree of significance.
The degree of importance.

The research questions were divided into sections that correspond with the study's research objectives. Table 5.8 shows how the research questionnaire's constructs align with the research objectives.

Table 5.8:   Research constructs and items

Model construct	Factors of each construct	Section of the survey	Number of items	The study research objectives
Procurement practice	Demand planning (DP), strategic sourcing compliance (SSC), strategic sourcing resource capabilities (SSRC), contract mutual agreement (CMA), contract negotiation (CN), contract policy and standards (CPS), enterprise supplier development (ESD), strategic partnership	B1, B2, B3, B4, B5	55	To determine how procurement is conducted in the SA clothing industry.
Policies and regulations	B-BBEE and IPAP	C1	4	To determine the procurement policies and regulations governing the SA clothing industry.
	NEMA	C2	3	
The value of procurement practice	Value of procurement practice	D	12	To investigate the value of procurement in the clothing industry.
Sustainability of procurement practice	Social sustainability	E1	4	To investigate the extent of sustainability in the procurement clothing value chain.
	Environmental sustainability	E2	6	
Procurement challenges	Lack of support	F1	8	To determine procurement challenges faced by the SA clothing industry.
	Complexity	F2	4	
Total			**96**	

5.10 DATA COLLECTION

This section outlines the process followed by the study to collect the data. Data collection is a process employed in collecting data from the population of the research project or study, depending on the nature of the study (Hair *et al.*, 2020:203). A critical literature review was conducted in Chapter 3 on procurement practices in the clothing industry. The construct of procurement practices in the SA clothing industry was conceptualised in Chapter 4. Following the study's literature review, a population of 800 was identified. Due to non-responses and the closure of many SA clothing organisations from the chosen population, a sample of 621 managers or experts was selected using convenient sampling. Approval for the research was requested from the reporting body of the SA clothing industry before data collection began.

5.10.1 Data-collection methods

There are various methods of collecting data. Data may be collected from secondary and primary data sources (Hair *et al.*, 2020:204; Saunders *et al.*, 2019:338), as discussed below:

- **Secondary data source**

Secondary data is collected from existing data that was collected for other purposes (Hair *et al.*, 2020:204; Saunders *et al.*, 2019:338). According to Saunders *et al.* (2019:341), secondary data may be examined to obtain new or different knowledge. Secondary data in the study was obtained from reports, journals, newspaper articles, archived data, Google, spreadsheets, and so forth.

- **Primary data source**

Primary data is exclusively the information obtained through personal collection, as acknowledged by researchers, which may be either qualitative or quantitative (Hair *et al.*, 2020:204; Bairagi & Munot, 2019:133). As per the findings of Saunders *et al.* (2019:341), a range of techniques, including interviews, observations, and surveys, are employed by researchers to collect primary data throughout the research journey. Bairagi and Munot (2019:133) noted that primary data allows the researcher to obtain real opinions about the subject under consideration. The study employed primary and secondary data to determine how procurement is practised in the SA clothing industry. Secondary data was collected using articles from accredited journals, academic

theses and dissertations, books, clothing industry reports, magazines and articles, as well as conference papers presented by scholars. The literature review in Chapter 3 incorporated critical literature sources on: (i) Procurement practices in the SA clothing industry, (ii) Policies and regulations adopted by the SA clothing industry, industry. (iii) The value of procurement practices in the clothing (iv) Sustainability of procurement, (v) Procurement challenges in the SA clothing industry.

The literature review was conducted to assist the researcher in determining the procurement practices in the SA clothing industry and to contribute to the design of the instrument for procurement practice to promote the socio-economic objectives of the clothing industry. The empirical research or primary data in the study focused on the quantitative data research design. This approach was adopted since no specific studies could be found that were conducted on developing a procurement framework for promoting socio-economic objectives in the SA clothing industry. Primary data is also needed to obtain real views about procurement practices in SA manufacturers.

5.10.2 Cleaning and organising data

The processes following during the cleaning and organising of the data are listed and explained below:

- **Data cleaning and coding**

  Data was entered into the data file in a Microsoft Excel spreadsheet. Numbers were allocated to each survey response, and each response was entered into the data set. The data set was verified to prevent and correct errors (Adams & Lawrence, 2019:246). Missing values on certain questions that were not answered in the survey were identified using frequency tables.

- **Organising data**

  Prior to conducting statistical analysis, the data was carefully screened to ensure its suitability (Hair *et al.*, 2020:327). The study focused on evaluating the psychometric properties, specifically with exploratory factor tests. Mean, Standard deviation (SD) and Frequency data was calculated. To better illustrate the quantitative data, frequency distribution tables and graphs were created. Additionally, descriptive diagrams like bar charts and pie charts were used. The

data was exported to JASP 0.16.3 (2022), using the R-software program, and labels were assigned to data in the variable view window.

5.11 DATA ANALYSIS METHODS

This section discusses the data analysis process followed by the study. Each stage of the data analysis process indicated was appropriate to assist the researcher in designing an instrument for procurement practices in the SA clothing industry. According to Carter *et al.* (2023:6), the significance of data in research lies in its ability to aid researchers in developing theoretical explanations. Carter *et al.* (2023:6) also noted that a rigorous process of data collection, analysis, and presentation that is closely aligned with the research question and design, is required. According to Bairagi and Munot (2019:163), statistical analyses are used to analyse data and define statistics and a group of mathematical software programs are used to show the research outcomes and support hypotheses to and give reliability to the research methodology, and present conclusions. The study used JASP 0.16.3 (2022) to analyse the EFA, and reliability and descriptive data analyses were done using the R-software program. The R-software performed the analyses similar to the well-known SPSS program. SAS 9.4 (2020) was used to perform the SEM.

Table 5.9 shows the stages of data analysis in the study.

Table 5.9:   Data analysis involved three stages.

STAGE 1	STAGE 2	STAGE 3
Validation of the instrument	Descriptive analysis	Inferential data analysis
Exploratory factor analysis (EFA) and Reliability analysis	Means and Standard deviation (SD)	Structural equation model (SEM)
Discriminant validity	Test of assumptions	Hypothesis testing

As tabulated in Table 5.9, the study adopted three (3) phases of data analysis, as discussed below.

5.11.1 STAGE 1: Validation of the research instrument

This section discusses the assessment of the validity and reliability of the research instrument used in the study.

5.11.1.1 *Assessing validity of the study*

According to Adams and Lawrence (2019:144), validity implies the uniformity in practices to guarantee that the research instrument applied in the study is relevant, and that the concepts are measured precisely. Adams and Lawrence (2019:144) contended that the measuring instrument may be reliable, yet lack validity, hence, it is crucial to test both validity and reliability. Even so, Creswell and Creswell (2018:215) maintained that validity assists in drawing meaningful and useful inferences from the scores of the research instruments.

The following are the various types of validity:

- Face validity assesses whether a construct or constructs measures exactly what it should measure. However, if experts conclude that the items match the definition, it indicates that the test has face validity (Hair *et al.*, 2020:264).

- Content validity refers to whether the measuring instrument adequately samples the content being measured (Madadizadeh & Bahariniya, 2023:1). This refers to the extent that a measure covers the research interest. To ensure the validity of the questionnaire's content, the researcher can seek feedback from professionals in the study discipline by presenting them with the questionnaire (Maree & Pietersen, 2020:262).

- Construct validity: Hair *et al.* (2020:264) asserted that construct validity evaluates what the variable or scale is assessing. It is measured using convergent and discriminant validity tests.

- Convergent and discriminant validity: Convergent tests assess if the variables have an association, and discriminant validity assess the degree to which the variables are not associated.

Pilot testing was conducted to measure the research instrument in terms of face validity and content validity. Eisend and Kuss (2019:134) confirmed that a pilot test of the questionnaire is essential to refine the questionnaire so that the data collected can meet acceptable validity and reliability standards. A pilot test of the study was conducted to measure if the relevant aspects related to procurement practices in the clothing industry were covered by the measuring instrument and to test the validity of the research questions.

The suitability of the measuring instrument for the observed variables of procurement practices in the clothing industry was tested through content validity (Eisend & Kuss, 2019:134; Creswell & Creswell, 2018:216). Typically, a pilot study requires the participation of between five (5) and fifteen (15) respondents (Quinlan *et al.*, 2019). The purpose of the pilot test for the purposes of the current study, was to identify any flaws in the research instrument, and to make the necessary improvements. The pilot test was carried out on 15 managers from the clothing industry, and experts in procurement. The feedback received from the managers was incorporated into the final version of the instrument, as per the recommendations of Pietersen and Maree (2020:262) and Creswell and Creswell (2018:215). The respondents commented and made suggestions on how to improve the wording.

According to their suggestions, the researcher added terms used in the industry, changed the sequence of the questions, shortened some of the questions to a manageable length, changed the wording where questions were ambiguous, and deleted irrelevant questions. Thereafter, the ethics committee at the University of South Africa approved the questionnaire based on the ethical standards of the university. Construct validity measures a general sense of what a construct or variable implies (Adams & Lawrence, 2019:144). It refers to how well different groups of related items measure the constructs covered by the questionnaire. To ensure construct validity, item analysis and factor analysis can be employed by researchers (Yayla, Ilgin & Özlü, 2022:230). The study conducted convergent and discriminant validity on the constructs relating to procurement practices in the clothing industry to assess the association of the variables and the degree to which the variables were not associated.

The study employed exploratory factor analyses to validate the measuring instrument statistically, as discussed below.

- **Exploratory factor analyses (EFA):**

This section summarises the study's exploratory factor analyses (EFA). Academic authors, such as Sarstedt and Mooi (2019:289) and Eisend and Kuss (2019:144), noted that factor analysis is used when a study has many related constructs (constructs that make up a scale). According to Eisend and Kuss (2019:146), as soon as a reliable, valid, and generalisable measurement instrument is designed, the researcher can use the instrument to collect data from the participants of interest. For

this reason, the researcher worked with the statisticians in designing a structured questionnaire to verify if the items of each construct were aligned with the research objectives and questionnaire. The Kaiser-Meyer-Olkin (KMO) measure and Bartlett's test of sphericity were used to assess sample adequacy. According to Hair *et al.* (2020:44), the rotation of factors may be interpreted by either orthogonal, oblique, or Promax factor solutions. The principal axis factoring extraction method used the PROMAX applied rotation method to validate and rotate factors in the study.

5.11.1.2 Assessing the reliability of the measuring instrument

The measuring instrument was also tested for reliability. Reliability measures the degree to which the research instrument used on a range of different respondents can produce the same results (Maree, 2016:240). Reliability tests if the scores of the research instruments are acceptable. According to Creswell and Creswell (2018:215), reliability refers to the uniformity of the research instrument.

The study performed reliability tests using Cronbach's alpha, composite reliability and average variance extracted (AVE) tests, as discussed below.

- **Cronbach's alpha**

Cronbach's alpha tests the internal consistency of the entire scale (Parry, 2020). The coefficient α can have a value between 0 and 1. A higher value of α means higher scale reliability and reflects the measurement's accuracy. Cronbach's alpha coefficient was used to measure if the degree of the research questions is high, moderate, or low, and the acceptable alpha value is .05, which refers to 5% of probability (Creswell & Creswell, 2018:213). To test the reliability of the questionnaire, Cronbach's alpha values were determined through item analysis on the questions from Sections B, C, D, E, and F of the questionnaire. According to Wan, Ryan and Duffy (2022:5), when testing the reliability of data using the values of Cronbach's alpha and composite reliability (CR), if both the values of Cronbach's alpha and CR are greater than 0.7, then the data shows good reliability. The internal consistency of the construct was measured using the Cronbach's alpha coefficient. Cronbach's alpha of the construct was above 0.7, which was considered reliable, indicating good internal consistency among items on the scale.

- **Composite reliability**

The internal reliability of each construct was also assessed by means of the composite reliability (CR) index test. The composite reliability index has a range of 0 to 1. When the reliability estimates are above 0.6, it indicates good scale reliability. This suggests that all the measures consistently represent the same construct (Fornell & Larcker, 1981).

- **Average variance extracted (AVE)**

To assess convergent validity, Fornell and Larcker (1981) and Parry (2020) suggested the use of the average variance extracted (AVE). According to the authors, this refers to the level to which different techniques used to calculate the variables produce similar results. The authors also indicated that convergent validity is achieved when all factor loadings are statistically significant, and the scale for AVE is 0.50. This demonstrates high convergent validity amongst the constructs and their distinct components. Both AVE and CR are used to test the convergent validity of a construct. According to Fornell and Larcker (1981), if the AVE is less than 0.5, but the CR is greater than 0.6, then convergent validity is still considered as being achieved.

- **Discriminant validity**

To ensure discriminant validity, Fornell and Larcker (1981) noted that the average variance (AVE) of the extracted constructs should be weighed against the square of the correlation estimate (standardised) between them. Hair *et al.* (2020:463) confirmed that the AVE values of the constructs should be greater than the squared correlation estimate between them, with a minimum threshold of 0.5. This ensures that each construct has greater variety than another, representing a different collection of indicators. To determine discriminant validity, confirmatory factor analysis (CFA) is used to ensure that each item is only associated with its designated construct and not with any other. The current study assessed discriminant validity through the use of CFA, where all the items were loaded only on to their labelled constructs, and there were no cross-loadings (Fornell & Larcker, 1981). This involved ensuring that each item was only loaded on to its designated construct and not shared with any other constructs. Discriminant validity was performed on procurement practices, NEMA and government policies and regulations, sustainable procurement, environmental sustainability, lack of support and complexity. Discriminant validity can be tested on

two constructs. However, it was not run on the procurement value as it contained only one construct.

5.11.2 STAGE 2: Descriptive data analysis

The study used a four-point Likert scale to measure each item, where all the variables to measure each item were assessed on an ordinal discrete level. A descriptive test was applied in the study, since the study was quantitative and compared means and standard deviations, and the measuring scale was ordinal. The JASP 0.16.3 (2022) was used to perform factor analysis, reliability analysis and descriptive statistics, using the R-software program. The study collected data on one sample and tested different variables on a paired sample of numerical data. The demographic information of the respondents was analysed descriptively (Section A), as well as the constructs of procurement practice (Section B), government policies and regulations impacting procurement practice, the value of procurement (Section D), sustainability of procurement (Section D) and procurement challenges (Section F).

Descriptive statistics were analysed as indicated below.

- **Mean and standard deviation.** Tables were used to present the calculation of mean, standard deviation, and data distribution in the descriptive statistical analysis of the study in Chapter 6. Univariate assisted the researcher in describing and stating the data pattern. Since the measuring scale of the study consisted of a categorical and ordinal scale which has to do with categories and measurable casual variables following a specific order, this assists in finding the best-fit analysis. According to Adams and Lawrence (2019:228), standard deviation (SD) is a single number that sums up the magnitude to which scores vary from the mean, and the mean represents the average. The mean of each scale was calculated, and the standard deviation determined.

- **Frequency distribution tables are** used to group quantitative data and are used when there are more than one dependent variable (Bairagi & Munot, 2019:179). Frequency mean tables were used to describe the characteristics of the study in Sections B, C, D, E and F of the measuring instrument. The number of responses and percentages were used to describe the level of the response rate of each scale (Chapter 6).

- **Pie charts:** This chart consists of a circle which is divided into several segments, with each segment representing a specific category (Bairagi & Munot, 2019:180). A pie chart was used to present the description statistics to show the types of organisations as indicated by the respondents Chapter 6.

- **Bar charts**: The elements of data ideas analysed using frequency distribution tables are presented using bar charts (Daniels & Minot, 2020:96; Bairagi & Munot, 2019:180). The shape and the scores, and the distribution of each scale in a study is typically shown in a bar chart. The size of the organisation in terms of the number of permanent employees and years of experience were presented using a histogram in the descriptive statistics (Chapter 6).

- **Skewness and kurtosis**: To test the skewness of data, it needs to be determined whether the distribution is skewed to the left or right. If the distribution is skewed to the left, then the skewness is negative (Hair *et al.*, 2020:361). If it is skewed to the right, then the skewness is positive (Daniels & Minot, 2020:246). Adams and Lawrence (2019:247) explained that skewness is a number that shows the degree of skewness in a distribution.

  The data also needs to be tested in terms of kurtosis. Kurtosis measures whether data is peaked or flat as related to normal distribution. For parametric tests, it is recommended to have skewness and kurtosis values ranging between -1 and +1, which is considered normal. The study's data was tested for accuracy, normality, kurtosis, and skewness. Data distribution was calculated (Skewness and Kurtosis) (Sarstedt & Mooi, 2019:107). The frequency tests were calculated through JASP 0.16.3 (2020) to check missing values and for any outliers, normality, kurtosis, and skewness. Based on the skewness and kurtosis of the descriptive statistics, some graphs in the study were normally distributed, and others were skewed. Assessing the data in terms of deviations from normality and kurtosis and skewed data happens if there is an unequally distributed variable that can be positive or negative (Sarstedt & Mooi, 2019:119).

The next section discusses the SEM statistical tests.

5.11.3 STAGE 3: Structural equation modelling (SEM)

Multivariate statistical methods are necessary to analyse complex connections between variables (Hair, 2020:458). These approaches can predict multiple outcomes

through various pathways. Inferential statistics were used in the study to make assumptions and conclusions based on the data gathered from the population (Daniels & Minot, 2020:246; Adams & Lawrence, 2019:244). SEM is common in life sciences education research. SEM combines regression and factor analysis to test research hypotheses. In essence, SEM is a multivariate process that examines research hypotheses. Eisend and Kuss (2019:167) stated that SEM is a test of systems of hypotheses, and conclusions are drawn depending on the variance and covariance pointers found in a set of data. Also, conclusions are based on associations among complex variables. According to Sarstedt and Mooi (2019:280), SEM tests how the construct relates to certain variables. It evaluates the association between these variables or constructs. SEM also empirically tests the goodness-of-fit of the conceptual model (Perry & Wood, 2020).

SEM may be performed to test one variable of a Likert scale amongst numerous variables regarding the outcome (Creswell & Creswell, 2018:220). SEM is considered a powerful tool to employ, and therefore, the study utilised a Likert scale with sixteen (16) variables, and the association of these variables had to be tested amongst each other to validate the study's hypotheses and conceptual model. As study data is normally distributed and skewed, SEM is the best-fitting tool, as it accommodates both normality and skewed data (Newsom, 2018:1). The association between constructs in the research instrument was tested. SEM was tested in line with the model fit of the study and hypotheses. According to Perry and Wood (2020), tests such as the Chi-square, RMSEA, CFI and SRMR are performed when a model is tested for goodness-of-fit indices. The path standardised coefficient test was performed to test the study's hypotheses. The goodness-of-fit test was performed on two models. The first model consisted of all paths, and the second model consisted of the statistically significant path.

5.11.3.1 Chi-square

As per the findings of Hair *et al.* (2020:216) and Parry (2020), Chi-square is a vital statistical tool that enables the measurement of differences between actual and predicted covariance matrices. It is a widely used method to determine the goodness-of-fit between a given model and the observed data. However, it is important to note that the accuracy of Chi-square can be affected by sample size, and therefore, may

not be suitable for larger sample sizes. In this particular study, Chi-square tests were conducted with confidence, given that sample size was sufficient, with n= 621. The results of the Chi-square were tested on Model 1 and Model 2, as indicated below.

- **Model 1 (All paths)**

The model Chi-square evaluated model fit, as well as the differences among the sample and fitted covariance matrices.

- **Model 2 (Significant paths only)**

Model fit and inconsistencies among the sample and fitted covariance matrices were evaluated using the model Chi-square.

5.11.3.2 Root mean square error of approximation (RMSEA)

A number close to 0 (zero) suggests a good fit. The RMSEA is not affected by the size of the sample (Kline, 2015; Hooper, Coughlan & Mullen, 2008). The results of the RMSEA were tested on Model 1 and Model 2.

5.11.3.3 Comparative fit index (CFI)

CFI is a non-centrality parameter-based measure devised to counteract sample size effects (Perry & Wood, 2020). The CFI is unaffected by sample size. The comparison is made between the fit of a target model and the fit of an independent or null model, and how well the estimated model fits compared to the null model.

5.11.3.4 Standardised mean square residual (SRMR)

SRMR is the square root of the variance between the residual of the sample covariance matrix and the hypothesised model (Perry & Wood, 2020). The results of the SRMR were tested on Model 1 and Model 2.

5.11.3.5 Assessing of procurement practice performance model's hypothesis

The hypothesis of the procurement practice performance model was tested using the SAS 9.4 (2020) output on the path's standardised coefficient with relevant critical ratios. To comprehend the function and connection of each component in the proposed conceptual model, SEM was utilised to analyse the association within and between separate sections leading to the final model (Perry & Wood, 2020, Hair *et al.*, 2020:216). To demonstrate a considerable impact on a variable, standardised path coefficients should be at least 0.2, and ideally larger than 0.3.

5.11.4 Hypothesis testing

The hypotheses presented in Chapter 1 (Section 1.4) were tested as indicated below:

- **Research hypothesis 1 (H1):**

H01a: Procurement practices are not affected NEMA.

H1a: Procurement practices are affected by NEMA.

Research hypothesis 1a was tested in Table 7.3, which examines the relationship between procurement practices and NEMA. The variables of procurement practice were tested against government policies and regulations.

H01b: Procurement practices are not affected by procurement policies and regulations.

H1b: Procurement practices are affected procurement policies and regulations.

Research hypothesis 1b was tested in Table 7.3, which examined the relationship between procurement practices and policies and regulations governing procurement practices. The variables of procurement practice were tested against government policies and regulations.

- **Research hypothesis 2 (H2):**

H02: Procurement practices do not affect the value of procurement.

H2: Procurement practices affect the value of procurement.

Research hypothesis 2 was tested in Table 7.4. The relationship between the value of procurement as a construct and procurement practice was tested.

- **Research hypothesis 3 (H3):**

H03: Procurement practices do not affect environmental sustainability.

H3: Procurement practices effect environmental sustainability.

Research hypothesis 3 was tested in Table 7.5. The association between the environmental sustainability construct was examined with the variables of procurement practice.

- **Research hypothesis 4 (H4):**

H04: Procurement practices do not affect social sustainability.

H4: Procurement practices affect social sustainability.

Research hypothesis 4 was tested in Table 7.6. The association between social sustainability was tested construct was examined with variables of procurement practices.

- **Research hypothesis 5 (H5):**

H05: Procurement practices are not affected by lack of support.

H5: Procurement practices are affected by lack of support.

Research hypothesis 5 was tested in Table 7.7. The association between lack of support and the variables of procurement practices was tested.

- **Research hypothesis 6 (H6):**

H06: Procurement practices are not affected by complexity.

H6: Procurement practices are affected by complexity.

Research hypothesis 6 was tested in Table 7.8. The association between the complexity and variables of procurement were tested.

5.12 ETHICAL CONSIDERATIONS

To ensure ethical procedures, an application for ethics clearance was submitted to the governing body of the South African clothing industry (Appendix D) and the University of South Africa (UNISA). This clearance was obtained in accordance with the UNISA requirements (see Appendix C). Additionally, the respondents were sent a letter stating that their participation in the survey was voluntary and that the information collected would be used to complete a PhD degree. The consent letter was signed by the respondents. The researcher clarified to the respondents that the information obtained would be treated as private and remain unbiased and impartial throughout the research process (Acharyya & Bhattacharya, 2020:12). The survey was pilot tested and sent to twenty (20) CMT clothing industry managers and procurement specialists in the SA clothing industry, and fifteen (15) answers were received. In the

cover letter, the purpose of the study was explained. Cover letters were utilised to obtain background information on the study and to obtain consent from the participants (Appendix D and E).

5.13 LIMITATIONS OF THE STUDY

The study contributed to the improvement of procurement practices in the SA clothing industry by designing a framework that aimed to ensure localisation and socio-economic improvement in the industry and in the country. However, there are certain limitations that need to be stated:

- It is important to note that only a few clothing industry organisations are involved in full manufacturing; most of the organisations are CMT manufacturers.

- It might be challenging to convert all clothing manufacturing organisations to become full manufacturers.

- Some clothing manufacturing organisations have closed down their operations due to global competition and the COVID-19 pandemic.

- Also, convincing clothing retailers with solid relationships with international clothing suppliers to support local clothing manufacturers might be challenging.

Hence, the study was pilot tested on SA clothing industry organisation, and procurement specialist. This was done to build on the literature review and the research instrument to ensure that the study designed a workable procurement framework for the industry.

5.14 RESEARCH TIMELINE

A research study may be longitudinal or cross-sectional (Hair *et al.*, 2020:205). A longitudinal research project may take an extensive period to complete, while with a cross-sectional research project, data is collected at a single point in time (Saunders *et al.*, 2019:190). Cross-sectional research applies a survey research strategy to explain an event or a phenomenon (Saunders *et al.*, 2019:190). Since the study sought to understand the application of procurement practices in the clothing industry, and employed a survey to collect evidence, analytical cross-sectional research was employed.

5.15 CONCLUSION

The chapter presented the research design and methodological process applied in the current study. The study was guided by the positivist research philosophy. The researcher aimed to study the philosophical attitude or positions that exist in procurement practices in the SA clothing industry to establish an instrument for procurement practice. The methodological process followed in this study was characterised by important thoughts or theories such as ontology, epistemology, and axiology. These theories guided the researcher in determining the position of the clothing industry in terms of procurement practices and assisted the researcher to analyse the constructs relating to procurement practices in the SA clothing industry. The study was guided by positivism which supports quantitative research to guide the research process. The survey was deemed a suitable instrument to address the research objectives and answer the study's research question. The sampling procedure and data collection process and the methods used to analyse data were discussed in this chapter. Also, validity and reliability measures were discussed to ensure the quality of the data. The research ethics, timeline, as well as the limitations, were also discussed.

Table 5.10 below summarises the research design processes followed in this chapter, as guided by Saunders *et al.* (2019:174).

Table 5.10:   Research design of the current study

Philosophy	Positivism
Approach to theory development	Deductive
Methodological choice	Quantitative
Research strategy	Survey
Time horizon	Cross-sectional research
Data collection and analyses	Descriptive, factor analysis, reliability analysis and SEM model

Source: Adapted from Saunders *et al.* (2019:174)

The process presented above assisted the researcher in developing a procurement framework that may be used in the SA clothing industry to promote socio-economic objectives. The next chapter presents the descriptive data analyses of the findings of this research.

CHAPTER 6:
DESCRIPTIVE STATISTICS

6.1   INTRODUCTION

This chapter reports on the descriptive statistics for the study. The study population consisted of managers, owners, and specialists with knowledge of procurement practices in the clothing industry. The sample consisted of 621 respondents. The demographics of the respondents are presented and analysed using pie charts and bar charts. The results of procurement practices in the SA clothing industry are presented using frequency tables. The key variables in this study are: demand planning (DP), strategic sourcing compliance (SSC), strategic planning: resource capabilities (SSRC), contract mutual agreement (CMA), contract negotiation (CN), contract policy and standards (CPS), enterprise supplier development (ESD), TCO, strategic partnership, procurement policies and regulations, National Environmental Management Act (NEMA), the value of procurement, social sustainability, environmental sustainability, lack of support and complexity. The validity and reliability of the measuring instrument are also discussed in this chapter. This study used JASP 0.16.3 (2022) and the R-software program to run the EFA, reliability and descriptive data analyses. JASP 0.16.3 (2022) performs statistics analyses similar to the statistical package for social sciences (SPSS) program.

The demographics of the clothing industry are presented in the next section.

6.2   DEMOGRAPHIC PROFILE OF THE RESPONDENTS

This section presents the demographic profiles of the respondents (Section A in the questionnaire). The respondents were asked to describe the type of organisation, the size of the organisation, the number of years in business in terms of the number of permanent employees, and the number of years in operation. The results of types of organisations in the SA clothing industry are presented in the next section.

6.2.1   Types of organisations

This section presents the type of organisations in the SA clothing industry, as shown in Figure 6.1.
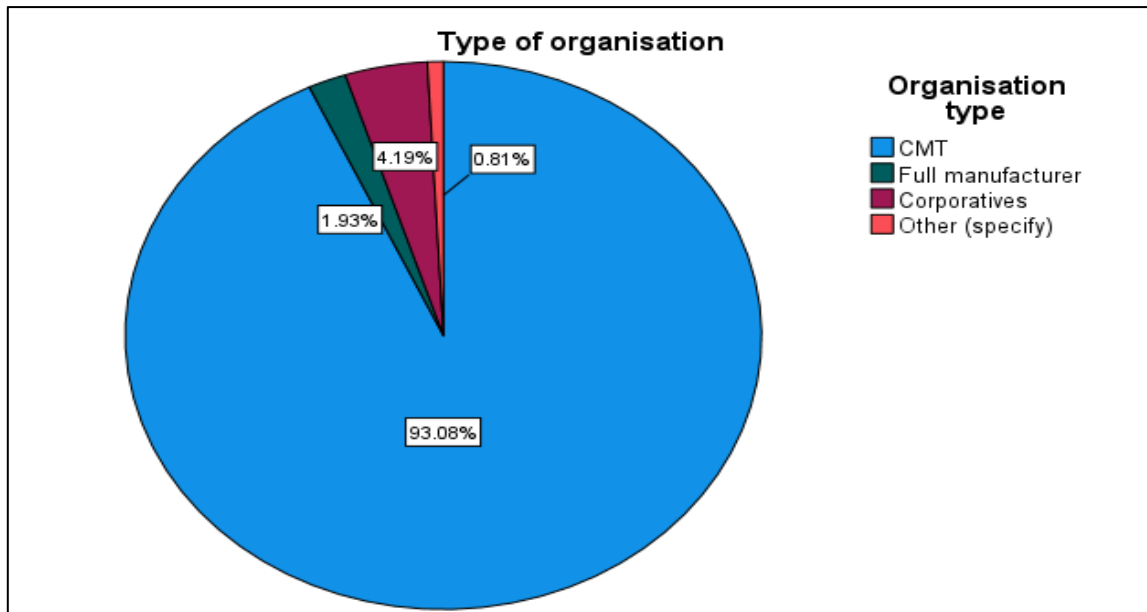
Figure 6.1:   Description of the organisation (N=621)

The respondents were asked to state their type of organisation. As indicated in Figure 6.2, 93.08% of the population of the SA clothing industry are Cut Make and Trim (CMT) clothing manufacturers, while 4.19% are classified as corporative businesses, 1.93% are full manufacturers, and the remaining 0.8% are classified as clothing brands, brand owners, designers, fashion brands, independent fashion studios, tailors, and dressmakers. As per the findings of the study, most organisations in the clothing industry are CMT, they receive fabrics from customers, cut the fabric and sew a garment according to order specifications. The results of the organisation's size are presented in the next section.

6.2.2   Size of the organisation

This section presents the size of the clothing organisations in terms of permanently employed workers. The results of the findings are presented in Figure 6.2 below.
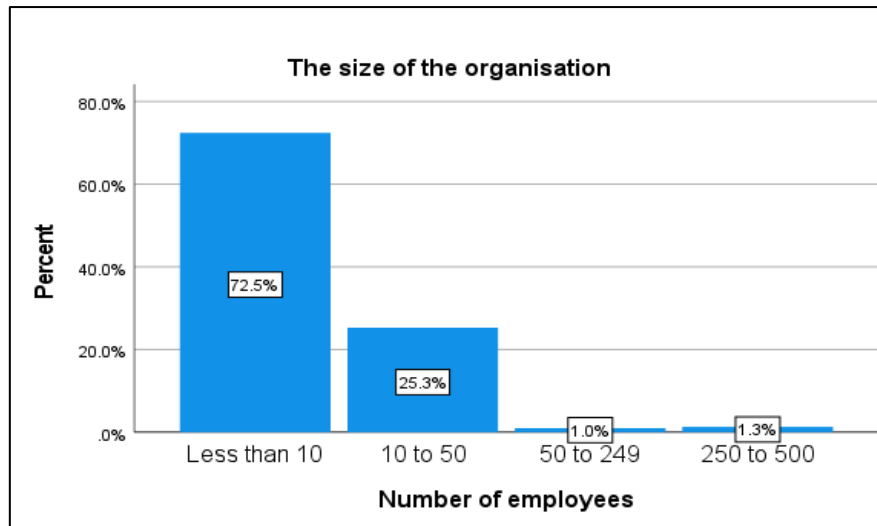
Figure 6.2: **Size of the organisation**

As shown in Figure 6.1, the respondents were asked to state the size of their organisation in terms of the number of permanent employees. From the data collected, 72.5% of clothing organisations are small businesses with less than 10 employees, while 25.3% have 20 to 50 employees, 1% have 50 to 249 employees, and 1.3% have above 500 employees. Therefore, most clothing organisations are small businesses with less than 10 employees. The results related to the experience of clothing organisations in terms of years of operation are presented in the next section.

6.2.3 Number of years of experience

This section presents the number of years of experience of the clothing organisation, as reflected in Figure 6.3.
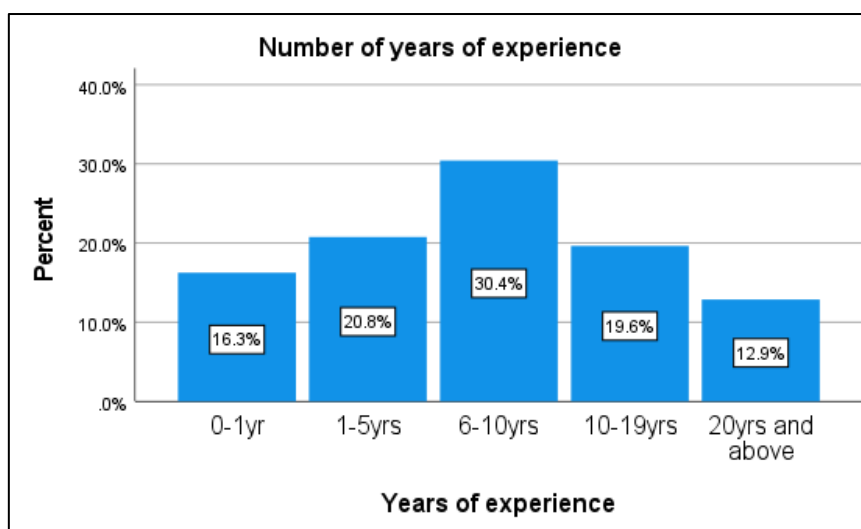
Figure 6.3: **Number of years of experience**

The respondents were asked to state their years of experience in the clothing industry. From the data collected, 30.4% of clothing organisations have been operating for 6 to 10 years. 20.8% have 1 to 5 years of experience, 19.6% have 10 to 19 years of experience, 12% have experience of 20 years and above, and 16.3% have 0 to year experience. The findings show that most clothing organisations are small businesses with experience of up to 10 years. The next section discusses the descriptive data analyses of the study.

6.3   DESCRIPTIVE DATA ANALYSIS

This section discusses the distribution of the scores of constructs and items of the descriptive data analyses of the study. Descriptive analysis was performed exclusively on the validated factors. There are sixteen (16) constructs in the study. There are nine (9) constructs of procurement practice, namely: demand planning (DP), strategic sourcing compliance (SSC), strategic sourcing resource capabilities (SSRC), contract mutual agreement (CMA), contract negotiation (CN), contract policies and standards (CPS), enterprise supplier development (ESD), TCO and strategic partnership. The other constructs in the study include procurement policies and regulations, NEMA, the value of procurement, social sustainability and environmental sustainability, complexity, and lack of support. The next section discusses the results of the descriptive statistics for procurement practice.

6.3.1   Distribution of scores on procurement practices

This section discusses the composite score of each construct of procurement practice.

Table 6.1 presents the distribution of scores for each construct.

Table 6.1:   Distribution of scores on procurement practice

Constructs	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
Strategic partnership	621	1.70	4.00	3.54	.399	-.717	.660
CMA	621	1.00	4.00	3.28	.593	-1.220	2.033
TCO	621	1.00	4.00	3.29	.504	-.575	.652
DP	621	1.00	4.00	3.49	.445	-1.066	3.181
CPS	621	1.00	4.00	3.40	.492	-.914	2.149
SSC	621	1.00	4.00	3.31	.496	-.797	1.846
SSRC	621	1.00	4.00	3.49	.574	-1.438	2.449
CN	621	1.00	4.00	3.41	.572	-1.001	1.441
ESD	621	1.00	4.00	3.53	.510	-1.029	1.139

Table 6.1 shows the composite scores of items that comprise the procurement practice constructs. There were 621 responses to these questions. As indicated, the highest mean score is shown on the statement measuring strategic partnership (mean=3.54, std dev=0.399), which means that the respondents strongly agreed with all the statements. This is followed by ESD (mean=3.53, std dev=.510), meaning that the respondents see most statements on ESD as very important. They also mostly strongly agreed with the statements about DP (mean=3.49, std dev=.445) and statements related to CPS (mean=3.40, std dev=.492). They also confirmed that the statements related to SSRC are extremely significant (mean=3.49, std dev=.574). Most respondents strongly agreed with the CN statements (mean=3.4, std dev=.572). Also, the statements related to SSC were noted as extremely significant (mean =3.31, std dev =.496). However, the respondents viewed the statements related to CMA as significant (mean=3.28, std dev=.593). The respondents also agreed with the statements on TCO (mean= 3.29, std dev=.50 4). The next section presents the descriptive test results for each item of procurement practices constructs.

6.3.2   Distribution of items of procurement practice

This section presents the study's findings on the constructs of procurement practices. It examines how procurement is practised in the SA clothing industry. The following constructs of procurement practice: DP, SSC, SSRC, CMA, CN, CPS, ESD in local

support, TCO and strategic partnership, were analysed, presented, and are discussed in this section. The results of demand planning (DP) are presented in the next discussion.

6.3.2.1   Exploring demand planning

This sub-section aims to determine how demand planning (DP) is practised in the SA clothing industry. It consists of eight statements. The respondents were asked to indicate their level of agreement on a four-point Likert scale format, which ranged from 1 = strongly disagree, 2= disagree, 3= agree, and 4= strongly agree. Table 6.2 presents the responses related to demand planning.

Table 6.2:   Responses to demand planning

		B1.1	B1.2	B1.3	B1.4	B1.5	B1.6	B1.7	B1.8
SD	Count	13	11	5	6	5	5	5	9
	Column %	2.1%	1.8%	0.8%	1.0%	0.8%	0.8%	0.8%	1.5%
D	Count	20	19	19	13	28	30	12	24
	Column %	3.2%	3.1%	3.1%	2.1%	4.5%	4.8%	1.9%	3.9%
A	Count	268	248	244	246	250	283	238	252
	Column %	43.2%	40.0%	39.4%	39.7%	40.3%	45.7%	38.4%	40.6%
SA	Count	319	342	352	355	337	301	365	335
	Column %	51.5%	55.2%	56.8%	57.3%	54.4%	48.6%	58.9%	54.0%

As reflected in Table 6.2, most respondents agreed strongly with the statement about DP. The highest level of agreement is on supporting local clothing manufacturers, while 58.9% and 38.4% of the respondents strongly agreed and agreed, respectively, that retail clothing stores should give local clothing manufacturers preference when ordering clothes. Some respondents, 1.9% and 0.8%, disagreed and strongly disagreed. This is followed by the statement about sharing costs resulting from specification error. Of the respondents, 57.3% strongly agreed, and 39.7% agreed that partners must agree on the costs associated with specification errors, while only a small percentage disagreed (2.1%) and strongly disagreed (1%). The third highest level of agreement is on managing order specification errors. Most of the respondents strongly agreed (56.8%) and agreed (39.4%) that managing order specification errors

can result in significant costs, which is crucial to managing these costs. However, 19% and 5% of the respondents disagreed and strongly disagreed, respectively.

The results show that most respondents agreed with the statements about DP in the SA clothing industry. From the results, it is confirmed that managing forecasting errors is crucial to have an accurate number of orders. It is also noted that order specification errors can result in significant costs, and it is important to manage these costs. The respondents agreed that partners need to agree on costs associated with order specification errors, and that when dealing with international customers, they must pay attention to cultural needs. When planning, it is important to consider social needs. It has been confirmed that clothing retail buyers should prioritise local manufacturers when ordering clothing. Taking part in international trade shows helps them to learn about new fashion trends. Contrarily, the literature confirmed that DP is associated with inaccurate orders, and that there are costs associated with inaccurate orders, which result in additional costs related to overtime, sampling, production, delays, and financial loss. Hence, the literature states that business partners should share costs from errors when ordering clothes (Yue, 2020:147).

According to CottonSA (2019:1), local manufacturers are not supported as clothing retail buyers in the clothing industry prefers to establish a contract with global suppliers, and award them contracts. It was also noted in the literature that procurement practice in the clothing industry is influenced by new fashion trends motivated by other brands and style collections emanating from trade exhibitions happening in countries such as London, Paris, and New York (Jacobs & Karpova, 2020:366). A study by Gornostaeva (2023:1) indicated that the industry is shifting towards customised clothing brands that express customer preferences, cultures, and fashion tastes. Hence when planning, for customers' demands, clothing products, should accommodate customer likeness, culture, and taste. From the findings, demand planning should support local buying, errors on orders should be avoided, and partners need to share the loss if they happen. Also, the needs of customers and attending global trade shows are important in demand planning.

The results of strategic sourcing are presented in the next discussion.

6.3.2.2 Strategic sourcing practices

This section presents the findings related to strategic sourcing practices. There are two variables of strategic sourcing practice, namely, compliance and resource capabilities. The respondents were asked to state the level of significance of statements relating to strategic sourcing resource compliance (SSC) in their organisations on a four-point Likert scale format, ranging from 1 = insignificant, 2 = less significant, 3 = significant, and 4 = extremely significant. The results of strategic sourcing compliance are discussed below.

a) Strategic sourcing compliance (SSC)

In this sub-section, the results of strategic sourcing compliance are discussed, it consists of six statements. These statements aim to test if compliance in strategic sourcing is practised in the SA clothing industry, and it consists of five questions. Table 6.3 below presents the responses to strategic sourcing compliance.

Table 6.3:   Responses to strategic sourcing compliance

	I		LS		S		ES	
	Count	Row %	Count	Row %	Count	Row %	Count	Row %
B2.1.2	21	3.4%	56	9.0%	279	44.9%	265	42.7%
B2.2.1	12	1.9%	30	4.8%	308	49.6%	271	43.6%
B2.2.2	14	2.3%	60	9.7%	280	45.1%	267	43.0%
B2.2.3	12	1.9%	46	7.4%	306	49.3%	257	41.4%
B2.2.4	10	1.6%	47	7.6%	279	45.0%	284	45.8%

From the results in Table 6.3, most of the respondents rated the statements on SSC as significant in their organisation. The highest response is on adhering to social standards. The respondents noted that adhering to social standards is significant (49.6%) and extremely significant (43.6%), as it defines compliance in their organisation. Only a few respondents (1.9%) rated this as insignificant, and 4.8% of the respondents rated it as less significant. This was followed by the statement on designing structured ratings for suppliers, where 49.3% of the respondents viewed the design of structured rating for suppliers as associated with compliance in clothing organisations as extremely significant and significant (41.4%). Others rated this

statement as (1.9%) insignificant and less significant (7.4%). The third highest level of agreement was related to supplier authentication or verification, where 45.8% and 45% of the respondents noted that supplier authentication/verification was extremely significant and significant in their organisation, while 7.6% and 1.6% of the respondents viewed this as less significant and insignificant.

From the findings, it is noted that paying attention to and complying with social standards is crucial. Also, compliance with environmental standards in strategic sourcing is important. It is suggested that clothing organisations design structured ratings for suppliers and authenticate suppliers regarding compliance and delivery capabilities. In addition, seasonal ordering forms part of procurement practice in the SA clothing industry. The literature also noted that customer orders are planned before the fashion sale season begins (Yue, 2022:149). Fast fashion companies have significantly impacted the fashion industry by releasing 10 to 24 collections every year, leading to a change in the fashion landscape. Hence, the industry is rated as a high contributor to pollution (Šajn, 2019:10). The findings were confirmed by Mai and Phong (2020:1229) who cautioned that suppliers should be rated for promoting good procurement practices and stated that supplier authentication in terms of social and environmental compliance is recommended in the clothing industry.

Furthermore, Reis (2019:20) maintained that supply chain partners are valued in terms of aspects such as green supplier rating and supplier partner suitability. As much as the respondents noted that seasonal ordering and compliance with environmental and social standards are important, it seems difficult to manage that when it comes to fashion clothes, as they are produced constantly, and unfortunately, increase pollution in the industry. This also makes it difficult to comply with environmental standards. The results of strategic sourcing resource capabilities (SSRC) are presented below.

b) Strategic sourcing resource capabilities (SSRC)

Resource capabilities in strategic sourcing are discussed in this sub-section. It consists of four statements to examine if resource availability is significant to strategic sourcing in their organisation. The responses are presented in Table 6.4 below:

Table 6.4:   **Responses to resource capability in strategic sourcing**

		B2.3.2	B2.3.3	B2.3.5	B2.3.6
I	Count	8	31	16	10
	Column %	1.3%	5.0%	2.6%	1.6%
LS	Count	25	60	25	32
	Column %	4.0%	9.7%	4.0%	5.2%
S	Count	221	184	186	197
	Column %	35.7%	29.6%	30.0%	31.8%
ES	Count	365	346	393	381
	Column %	59.0%	55.7%	63.4%	61.5%

As indicated in Table 6.4, most respondents rated all statements about SSRC as extremely significant. The highest level of response is about financial stability as associated with being resourceful. 63.4% and 30% of the respondents see financial stability as extremely significant and significant in their organisation and associate it with being resourceful. Whereas 4% and 2.6% of the respondents see this as less significant and insignificant. The second highest response was related to employee skills improvement, and 61.5% and 31.8% of the respondents noted that employee skills improvement is extremely significant and significant, while 5.2% and 1.6% saw it as less significant and insignificant. The third highest response was related to resource availability, where 59% and 35.7% of the respondents noted that resource availability is extremely significant and significant in their organisation, while 4% and 1.3% of the respondents saw this as less significant and insignificant.

The results show that strategic sourcing that considers resource availability, funding, financial stability, and skill to perform is extremely significant to the industry. However, the literature study by Sibiya and Barnard (2019:7) noted that SMMEs encounter challenges such as inadequate resource and knowledge competencies, insufficient funding, and lack of infrastructure, technology, and regulation. Studies examining the clothing industry also reiterated that SA clothing industry suffers from a lack of skills and strength to compete globally (Netshishivhe, 2021:33). From the finding, it can be concluded that the SA clothing industry struggles to compete due to insufficient

resources, funding, and skills. Also, due to a need for more technological advancements. The following section discusses contracting in the industry.

6.3.2.3 *Contracting*

In this section of the study, the results of contracting are presented. Contracting consist of two variables, namely, mutual agreement, policies and standards adoption and negotiation. The results of the mutual agreement when contracting is presented below:

a) Contract mutual agreement (CMA)

This sub-section consists of seven statements. Table 6.5 below presents the results of mutual agreement when contracting.

Table 6.5:   Responses to mutual agreement in contracting

		B3.1.1	B3.1.2	B3.1.3	B3.1.4	B3.1.5	B3.1.6	B3.1.7
IS	Column %	3.5%	4.7%	3.2%	9.5%	3.4%	2.4%	2.3%
LS	Count	40	57	43	92	42	27	33
	Column %	6.5%	9.2%	6.9%	14.8%	6.8%	4.3%	5.3%
S	Count	298	274	281	250	266	265	262
	Column %	48.1%	44.1%	45.3%	40.3%	43.0%	42.7%	42.4%
ES	Count	260	261	276	220	289	314	309
	Column %	41.9%	42.0%	44.5%	35.4%	46.8%	50.6%	50.0%

Table 6.5 shows that most respondents agreed with the statement on contracting mutual agreement (CMA). The highest level of response was related to resource support, where 50.6% and 42.7% of the respondents noted that resource support is extremely significant and significant in their organisation, while 4.3% and 2.4% viewed this as less significant or insignificant. The second highest response was related to infrastructural support, where 50% and 42.4% of the respondents noted that infrastructure support is extremely significant and significant in their organisation, while 5.3% and 2.3% saw this as less significant and insignificant. The third highest response was related to establishing a formal contract, where 48% and 41.9% of the respondents noted that establishing formal contracts with partners in their organisation is significant and extremely significant as it assists in establishing a mutual agreement.

However, 6.5% and 3.5% of the respondents regarded this as less significant and insignificant.

The study's results revealed that the respondents' rate of agreeing with their partners on formalising legally binding contracts is significant. They also rated the consideration of market, political and economic behaviour as significant in contract establishment. They noted that resource and infrastructural support are significant in their organisations. Some of the findings, however, contradict the literature, for example, Twyg's (2020:50) research report on the fashion sector and InvestSA (2020:2) revealed that some clothing organisations still need to have legally binding contracts. Twyg's (2020:50) report also confirmed that the SA fashion industry is still in the beginning stages of understanding in terms of understanding the law pertaining to contract clauses.

However, the literature confirmed the findings, which noted that considering economic, market and political behaviour when designing contracts is crucial (Arrigo, 2020:7). From the findings, it can be assumed that contracts between partners need to be legalised. Partners need to support each other regarding resources, infrastructure and the technology required to conclude the deal. There is a need for agreement on situations relating to marketing, economics and politics that may impact contract agreements. The results of the study regarding negotiating when contracting are presented below.

b) Contract negotiations (CN)

The sub-section presents the results of how negotiation is handled when contracting with business partners, and it consists of three statements. The results are shown in Table 6.6 below.

Table 6.6:   Responses to negotiation when contracting

		B3.2.3	B3.2.4	B3.2.5
SD	Column %	2.4%	1.1%	1.5%
D	Count	45	33	47
	Column %	7.2%	5.3%	7.6%
A	Count	263	251	239
	Column %	42.4%	40.6%	38.9%
SA	Count	298	327	320
	Column %	48.0%	52.9%	52.0%

As shown in Table 6.6, most of the respondents agreed with the statements about contract negotiation (CN), for example, 52.9% and 40.6% of the respondents strongly agreed and agreed that they need to consider the issue of bargaining powers during negotiation. While 5.3% and 1.1% of the respondents disagreed or strongly disagreed, 52% and 38.9% of the respondents strongly agreed and agreed with the need to pay attention to opportunistic behaviour during negotiations, and 7.6% and 1.4% of the respondents disagreed and strongly disagreed with the statement. Of the respondents, 48% and 42.4%, strongly agreed and agreed that they need to pay attention to biasness during negotiations, while 7.2% and 2.4% disagreed and strongly disagreed. The respondents in the study strongly agreed that issues of biasness, opportunistic behaviour and bargaining powers should be attended to during contract negotiation.

These findings contradict the literature, where Perry and Wood (2019:8) argued that clothing retailer buyers have the upper hand over suppliers as they dominate the industry, and that this is costly to clothing suppliers. From the findings, it can be assumed that even though the issues of bargaining powers are not promoted, they do exist during contract negotiation. The findings related to policy and standards adoption when contracting is presented next.

c) Contract policies and standards (CPS)

This sub-section shows the results of policy and standards adoption when contracting, and it consists of five statements. These statements aim to determine if the clothing industry adopts policies and standards when contracting. The respondents were asked to indicate the level of agreement on a four-point Likert scale format, which ranged

from 1 = strongly disagree, 2= disagree, 3= agree, and 4= strongly agree. The results are stated in Table 6.7 below.

Table 6.7:   Responses to policy and standards adoption when contracting

	SD		D		A		SA	
	Count	Row %	Count	Row %	Count	Row %	Count	Row %
B3.3.1	12	1.9%	23	3.7%	331	53.4%	254	41.0%
B3.3.2	3	0.5%	19	3.1%	306	49.3%	293	47.2%
B3.3.3	11	1.8%	35	5.6%	302	48.6%	273	44.0%
B3.3.4	11	1.8%	29	4.7%	278	45.0%	300	48.5%
B3.3.5	7	1.1%	10	1.6%	261	42.1%	342	55.2%

Table 6.7 reveals that most respondents agreed with the statements related to adopting contract policies and standards (CPS), as 55.2% and 42.1% of the respondents strongly agreed and agreed with the statements. Only 1.6% and 1.1% of the respondents disagreed and strongly disagreed, while 53.4% and 41% of the respondents agreed and strongly agreed that designing legally binding agreements assists in defining policies and standards in their organisations. Only 3.7% and 1.9% of the respondents disagreed and strongly disagreed. Of the respondents, 49.3% and 47.2%, agreed and strongly agreed that compliance with agreed standards when designing contracts defines policy adoption. While some 3.1% and 0.5% disagreed and strongly disagreed. Most respondents in the study also strongly agreed that in terms of contract agreements they should design legally binding contracts with their business partners and be compliant with the agreed standards and procurement policies. They also noted that both parties should clearly understand the standards set. They strongly agreed to consider social upliftment elements in the contract clause.

However, the study by Mejías *et al.* (2019:150) identified a lack of transparency and compliance with the code of conduct regarding social and environmental compliance by SC partners in the clothing industry. Twyg's (2020:50) fashion sector research report and InvestSA (2020:2) found that some clothing organisations do not have legally binding contracts. Mejías *et al.* (2019:145) theorised that strategic sourcing is linked to social, and environmental standards and supplier compliance. Also, that

environmental and social responsibilities and the examination of supplier compliance are some of the variables that may be used to evaluate qualifying suppliers in the clothing industry. Most of the respondents strongly agreed that it is crucial to design clear, legally binding contracts and comply with procurement policies and standards. However, there are still issues of non-compliance with these standards in the industry.

The results of enterprise supplier development (ESD) are discussed in the following section.

6.3.2.4   *Enterprise supplier development (ESD)*

Enterprise supplier development (ESD) is divided into two sub-sections: local support and TCO The results of local support are discussed below:

a) Local support in ESD

This sub-section examines if local support is promoted in ESD, and it consist of three statements. The respondents were asked to indicate their agreement with the importance of local support on a four-point Likert scale format, which ranged from 1 = Not important at all, 2= Less important, 3= Important, and 4= Very important.

Table 6.8 below displays the results of the responses to local support in ESD.

Table 6.8:   Responses to local support in ESD

		B4.1.4	B4.1.5	B4.1.6
NIA	Count	3	3	3
	Column %	0.5%	0.5%	0.5%
LI	Count	28	31	19
	Column %	4.5%	5.0%	3.1%
I	Count	214	234	234
	Column %	34.5%	37.8%	37.8%
VI	Count	375	351	363
	Column %	60.5%	56.7%	58.6%

Table 6.8 shows that many of the respondents agreed with all the statements about local support in ESD, where 60.5% and 34.5% of the respondents noted that technological advancement is very important and important in local support. Only 4.5%

188

and 0.5% of the respondents viewed this as less important and not important at all. Of the respondents, 58.6% and 37.8% agreed that infrastructural development is very important and important in local support, while 3.1% and 0.5% viewed this as less important and not important at all. Of the respondents, 56.7% and 37.8% agreed that technological integration support is very important and important to local support, while some 5% and 0.5% viewed it as less important and not important at all.

The responses noted that local support in ESD in terms of technical support and integration, as well as infrastructure, is crucial. The literature argued that even though the industrial action policy plan of the country states that the IPAP offers infrastructural support to the clothing industry, it still indicates a lack of resources and technological capabilities (Netshishivhe, 2021:3; Dos Santos, 2020:40). Therefore, a need to support local manufacturers in terms of resources, infrastructure and technical support was noted in the findings of the current study. The results of managing the TCO are discussed below:

b) Total cost of ownership (TCO)

This sub-section that examined if TCO is preserved consisted of nine statements. The respondents were asked to indicate their level of agreement on a four-point Likert scale format which ranged from 1 = strongly disagree, 2= disagree, 3= agree, and 4= strongly agree.

The results of managing the TCO are reflected in Table 6.9.

Table 6.9:   Responses on preserving the TCO

		B 4.2.1	B 4.2.2	B 4.2.3	B 4.2.4	B 4.2.5	B 4.2.6	B 4.2.7	B 4.2.8	B 4.2.9
SD	Count	13	10	15	4	10	21	20	14	15
	Column %	2.1%	1.6%	2.4%	0.6%	1.6%	3.4%	3.2%	2.3%	2.4%
D	Count	55	57	66	26	39	45	56	43	73
	Column %	8.9%	9.2%	10.7%	4.2%	6.3%	7.3%	9.0%	6.9%	11.8%
A	Count	348	301	289	286	318	292	270	283	276
	Column %	56.2%	48.6%	46.7%	46.3%	51.2%	47.2%	43.5%	45.6%	44.5%
SA	Count	203	251	249	302	254	261	274	280	256
	Column %	32.8%	40.5%	40.2%	48.9%	40.9%	42.2%	44.2%	45.2%	41.3%

As indicated in Table 6.9, most respondents showed agreement with the statements about preserving the TCO. The highest response was related to preserving the total cost of owning the business assists in reducing surpluses. For example, 56.2% and 32.8% agreed and strongly agreed that preserving the total cost of owning the business assists in reducing surpluses. Only 8.9% and 2.1% of the respondents disagreed and strongly disagreed. Of the respondents, 51.2% and 40.9% agreed and strongly agreed that preserving the total cost of owning the business reduces manufacturing cost. Only 6.3% and 1.6% of the respondents disagreed and strongly disagreed. Also, 48.9% and 46.3% of the respondents strongly agreed and agreed that preserving the total cost of owning the business assists in uplifting profit. Some 4.2% and 0.6% of the respondents disagreed and strongly disagreed with the statement.

The study's outcome noted that preserving the TCO leads to a surplus, product cost, marketing cost and lead-time reduction. It also leads to higher profits, and reduced transport and storage costs. It also improves compliance with government policies on carbon emissions. The study by Khan and Yu (2019:6) also confirmed that procurement is there to improve the TCO. Therefore, procurement is there to assist in preserving the TCO in clothing organisations. The next section discusses the results of strategic partnerships.

6.3.2.5 *Strategic partnership*

This section that examined how a strategic partnership is practised in the SA clothing industry, consisted of nine statements. The respondents were asked to indicate their level of agreement on a four-point Likert scale format, which ranged from 1 = strongly disagree, 2= disagree, 3= agree, and 4= strongly agree. The responses regarding strategic partnership are presented in Table 6.10 below.

Table 6.10:   Responses to strategic partnership

	SD		D		A		SA	
	Count	Row%	Count	Row %	Count	Row %	Count	Row %
B4.1.1	7	1.1%	19	3.1%	246	39.6%	349	56.2%
B4.1.11	1	0.2%	14	2.3%	209	33.7%	397	63.9%
B5.1.1	5	0.8%	5	0.8%	273	44.0%	338	54.4%
B5.1.2	0	0.0%	22	3.6%	258	41.7%	339	54.8%
B5.1.3	1	0.2%	11	1.8%	262	42.3%	346	55.8%
B5.1.4	1	0.2%	11	1.8%	244	39.4%	364	58.7%
B5.1.6	2	0.3%	14	2.3%	236	38.1%	367	59.3%
B5.1.7	6	1.0%	9	1.5%	248	40.1%	355	57.4%
B5.1.9	4	0.6%	21	3.4%	269	43.5%	325	52.5%

The results in Table 6.10 show that most respondents agreed strongly with the statements about a strategic partnership. The highest response was related to training. Of the respondents, 63.9% and 33.7% considered that training of the clothing manufacturer, including staff, was very important and important in local support. Some 2.3% and 0.2% saw that as less important and not important at all. The second highest response was related to compliance with standards. The respondents strongly agreed (59.3%) and agreed (38.1%) that compliance with standards should be assured. Some 2.3% and 0.3% disagreed and strongly disagreed. The third highest response was related to building relationships amongst partners. Of the respondents, 58.6% and 39.3% strongly agreed and agreed that trust is crucial in building partner relationships. Some 1.8% and 0.2% disagreed and strongly disagreed.

From the findings of the study, it can be noted that (i) clothing retail shops should build relationships with capable local manufacturers; (ii) all partners should strive to improve global competency; (iii) all partners should strive to reform the local economic sector; (vi) trust is crucial in building relationships amongst partners; (v) the industry should set clear standards with business partners; (vi) compliance with agreed-upon standards should be ensured; (vii) adherence to the code of conduct is important; and (viii) obedience to policies relating to environmental compliance is important. There

were high responses in terms of agreement with the statement in this section of the questionnaire. SA studies have confirmed that there is a lack of strategic partnership in the SA clothing industry, as local clothing manufacturers are not supported by clothing retail shops because they prefer to establish contracts with global suppliers (Mavela, 2020:33; Arrigo, 2020:7). The work of Netshishivhe (2021:3) also noted a lack of local support, and that the influx of imports has resulted in job losses and the closure of most clothing manufacturing.

The work of Singh and Chan (2022:2) revealed that the clothing industry still lacks stringent regulations and policies that enhance employees' privileges. The model by Mejías *et al.* (2019:150) noted that improving the clothing industry's buyer and supplier relationships, social and environmental compliance, and sustainability is crucial. Based on the results, it can be concluded that clothing manufacturers need to partner with local retail buyers in local buying, establish global competency, reform the local economic sector, adhere to compliance with procurement standards and become environmentally sustainable. The next section presents the results related to the policies and regulations adopted by the SA clothing industry.

6.4 GOVERNMENT POLICIES AND REGULATIONS ADOPTED BY THE SA CLOTHING INDUSTRY

This section examines whether clothing organisations know procurement policies and regulations that regulate and support the SA clothing industry. The results of policies and regulations adopted by the SA clothing industry are divided into procurement policies and regulations and the National environmental Management Act (NEMA). The distribution score results of government policies and regulations are presented in Table 6.11.

6.4.1 Distribution of scores on government policies and regulations adopted by the SA clothing industry.

This section discusses the composite scores of constructs on policies and regulations. Table 6.11 below presents the distribution of scores on policies and regulations adopted by the SA clothing industry.

Table 6.11: **Distribution of scores on government policies and regulations adopted by the SA clothing industry**

Constructs	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
NEMA	615	1.00	4.00	3.15	.668	-.858	.912
Procurement related policies and regulations	615	1.00	4.00	3.33	.513	-.791	1.223

As indicated in Table 6.11, most respondents agreed with the statements that measure NEMA and procurement policies and regulations and. Procurement policies and regulations has the highest mean score of 3.33, the std deviation of 0.513. This is followed by NEMA with the mean score of 3.15, and std deviation of 0.668. The next section discusses the results of each item related to the policies and regulations adopted by the SA clothing.

6.4.2 Distribution of items on government policies and regulations adopted by the SA clothing

This sub-section discusses the results regarding government policies that support the clothing industry, consisting of four statements. The respondents were asked to indicate their level of agreement on a four-point Likert scale format, which ranged from 1 = strongly disagree, 2= disagree, 3= agree, and 4= strongly agree. There were 615 responses in this section.

The descriptive statistics results related to procurement policies and regulations related to procurement are discussed in the next section.

6.4.2.1 Procurement policies and regulations

The results of government policies and regulations are discussed in this section. Table 6.12 presents the results related to government policies and regulations adopted by the SA clothing industry.

Table 6.12:   Responses to procurement policies and regulations

		C1.1	C1.2	C2.2	C2.3
SD	Count	24	14	5	6
	Column %	3.9%	2.3%	0.8%	1.0%
D	Count	45	39	15	54
	Column %	7.3%	6.4%	2.4%	8.8%
A	Count	315	290	293	299
	Column %	51.2%	47.3%	47.6%	48.8%
SA	Count	231	270	302	254
	Column %	37.6%	44.0%	49.1%	41.4%

As shown in Table 6.12, the highest level of response was related to the B-BBEE policies promoting local support. Of the respondents, 51.2% and 37.6% agreed and strongly agreed that the B-BBEE policy encourages clothing retail shops to support local clothing manufacturers. Some 7.3% and 3.9% disagreed and strongly disagreed. The second high response was related to funding, where 49.1% and 47.6% of the respondents strongly agreed and agreed that clothing manufacturers of SA should apply for funding. Some 2.4% and 0.8% disagreed and strongly disagreed. The third highest response concerned the Production Incentive Programme (PIP), promoting the provision of local capital support. Of the respondents, 48.8% and 41.4%, agreed and strongly agreed with the statements, while 8.8% and 1% disagreed. From the findings, it is noted that B-BBEE compliance is required in terms of local support. Supports such as funding and local buying are much needed.

According to the literature, the B-BBEE policy encourages organisations to support black entrepreneurs and suppliers. (Ekurhuleni, 2019; Altenburg *et al.*, 2020:35; DTIC, 2019). However, some authors say this is not happening as the industry is globalised. The local clothing industry is competing with highly skilled and resourceful international suppliers. Hence, local clothing retail buyers opt to do business with international suppliers (Netshishivhe, 2021:3). Based on the study's outcome, it can be concluded that clothing retail buyers should comply with the B-BBEE policy that encourages them to support local suppliers. They should support local clothing manufacturers, buy from them, and have long-term partnerships with them. Local clothing manufacturers in the

industry should take advantage of the opportunity to apply for SA government funding through IPAP.

The results related to NEMA are discussed in the next section.

6.4.2.2 National Environmental Management Act (NEMA)

This sub-section aimed to determine if the clothing industry is aware of the National Environmental Management Act (NEMA) of 107 of 1998 that regulates compliance in the industry, and it consisted of three statements. The respondents were asked to indicate their level of agreement on a four-point Likert scale format, which ranged from 1 = strongly disagree, 2 = disagree, 3 = agree, and 4 = strongly agree.

The results related to the NEMA are presented in Table 6.13 below.

Table 6.13:   Responses to NEMA

		C4.1	C4.2	C4.3
SD	Count	20	25	18
	Column %	3.3%	4.1%	2.9%
D	Count	84	69	74
	Column %	13.7%	11.2%	12.1%
A	Count	333	324	310
	Column %	54.1%	52.8%	50.5%
SA	Count	178	196	212
	Column %	28.9%	31.9%	34.5%

Table 6.13 reflects that the highest response of the respondents was that 54.1% and 28.9% of the respondents agreed and strongly agreed that it is crucial to have ISO 14001 certification, while some 13.7% and 3.3% disagreed and strongly disagreed. The second highest response from the respondents was that 52.8% and 31.9% of the respondents agreed and strongly agreed that having SAC certificate is crucial. Some 11.2% and 4.1% disagreed and strongly disagreed. The third highest response was that 50.5% and 34.5% of the respondents agreed and strongly agreed that compliance with ISO 14001 is important. Some 12.1% and 2.9% disagreed and strongly disagreed.

The results confirmed that the SA clothing industry should comply with the NEMA policy requirements, which requires clothing organisations to have ISO14001 and SAC

certification. The results also align with the findings of Lau *et al.* (2019:42) who noted that clothing organisations adopt supplier certification codes, such as SA ISO14000, to assess suppliers in terms of cost and values, and morals. Suppliers without such certifications will face contract withdrawals from clothing retailers or partners. Also, Singh and Chan (2022:2), and Maria (2021:3) emphasised that supplier collaboration contributes to environmental sustainability and product improvement, and the industry should ensure that suppliers have the relevant ISO14000 certificate. According to Shen *et al.* (2019:12), the clothing organisation needs to calculate the effect of clothing SC on the environment and adhere to SAC. Therefore, it is crucial to have ISO 14000/14001 certification in this industry, and SAC certification. Also, compliance with these certification requirements is important.

The next discussion presents descriptive statistics results on the value of procurement.

6.5 THE VALUE OF PROCUREMENT

This section presents the results of the descriptive statistics regarding the procurement value. It presents the results of the composite scores and the results of each item related to the value of procurement. The composite score is discussed in the next section.

6.5.1 Distribution scores of the value of procurement

The distribution of scores related to the value of procurement in the SA clothing industry is discussed and presented in Table 6.14.

Table 6.14: Distribution of scores on the value of procurement

Constructs	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
Procurement value	613	2.00	4.00	3.51	.405	-.473	-.046

As shown in Table 6.14, most respondents strongly agreed with the statement related to the value of procurement, with a mean score =3.51, and std deviation 0.405. The results of each item of the value of procurement are discussed below.

196

6.5.2 Distribution of items on the value of procurement

This section, consisting of twelve questions, examined the value of procurement practice in the SA clothing industry. The respondents were asked to indicate their level of agreement on a four-point Likert scale format, which ranged from 1 = strongly disagree, 2 = disagree, 3 = agree, and 4 = strongly agree. There were 613 responses to this section. Table 6.15 presents the results of the findings related to the value of procurement in the SA clothing industry.

Table 6.15:   Responses to the value of procurement in the SA clothing industry

	SD		D		A		SA	
	Count	Row %	Count	Row %	Count	Row %	Count	Row %
D1.1	5	0.8%	6	1.0%	296	48.3%	306	49.9%
D1.2	1	0.2%	11	1.8%	296	48.4%	303	49.6%
D1.3	0	0.0%	13	2.1%	283	46.3%	315	51.6%
D1.4	3	0.5%	13	2.1%	245	40.0%	352	57.4%
D1.5	6	1.0%	29	4.7%	283	46.2%	295	48.1%
D1.6	3	0.5%	13	2.1%	281	45.9%	315	51.5%
D1.7	2	0.3%	11	1.8%	259	42.4%	339	55.5%
D1.8	0	0.0%	13	2.1%	232	38.3%	361	59.6%
D1.9	2	0.3%	9	1.5%	256	41.9%	344	56.3%
D1.10	4	0.7%	11	1.8%	244	39.9%	353	57.7%
D1.11	2	0.3%	21	3.4%	254	41.6%	334	54.7%
D1.12	4	0.7%	6	1.0%	255	41.7%	347	56.7%

Table 6.15 specifies the highest response is related to procurement that creates value when is able to promote local support. Of the respondents, 59.6% and 38.3% strongly agreed and agreed with the statements. Some 2.1% disagreed with the statements. The second highest response was relating to procurement that creates value when is able to uplift local infrastructure. Of the respondents, 57.7% and 39.9% strongly agreed and agreed with the statements. Some 1.8% and 0.7% disagreed and strongly disagreed. The third highest response was related to procurement that creates value when is able to improve ordering accuracy, where 57.4% and 40% of the respondents

strongly agreed and agreed with the statements, and 2.1% and 0.5% disagreed and strongly disagreed with the statement.

According to the findings, procurement practice in the SA clothing industry adds value and it is able to maintain TQM and TCO, improve resource capability and order accuracy, reduce lead times, and adopt clear policies and standards. Also, the procurement practice adds value where the industry adheres to the code of conduct and promotes local support, local economic development, local infrastructure upliftment, improved working conditions, and compliance with environmental sustainability. The literature (Chapter 3) noted that the value of procurement in the SA clothing industry is achieved when competitiveness is improved (Jenkin & Hattingh, 2022:17; Braglia *et al*., 2020:187; Mai & Phong, 2020:1229). Adherence to monetary, social, and ecology, adds value to procurement (Singh & Chan, 2022:2). The aforementioned authors also revealed that ethical behaviour should be promoted, local sourcing should be performed, a there should be a pleasant working environment and clear practices and standards. The literature maintained that the value of procurement is achieved when clothing organisations maintain TCO (Joorst, 2021:22) and enhanced quality fabrics (TQM) (Jin & Cendrola (2019:5). Therefore, improvement in procurement practices in clothing organisations adds value to procurement in the industry.

The descriptive statistics related to social sustainability are discussed in the next section.

6.6   SUSTAINABILITY OF PROCUREMENT

This section discusses the results regarding the sustainability of procurement. It discusses the composite scores of each construct and the distribution of each item of the constructs.

6.6.1   Distribution of scores on sustainability of procurement

This section discusses the composite scores of the constructs of sustainable procurement, namely, environmental sustainability, and social sustainability. Table 6.16 presents the results of the composite scores of these constructs.

Table 6.16: Distribution of scores on sustainability of procurement

Constructs	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
Environmental sustainability	613	1.00	4.00	3.243	.512	-.647	.901
Social sustainability	613	1.00	4.00	3.531	.461	-.775	.997

As shown in Table 6.16, many respondents strongly agreed with the statements about social sustainability (mean=3.53, std dev=.461). They also strongly agreed with the statements related to environmental sustainability (mean=3.24, std. dev=.512).

The discussion of results related to each item of sustainable procurement is presented below.

6.6.2 Distribution of items on sustainability of procurement

This section presents the results of the sustainability of procurement in the SA clothing industry. There are two variables of sustainable procurement, namely, social sustainability and environmental sustainability. There were 618 responses to these questions. This sub-section tests how sustainable procurement is viewed and understood in the SA clothing industry. The respondents were asked to indicate their level of agreement on a four-point Likert scale format, which ranged from 1 = strongly disagree, 2 = disagree, 3 = agree, and 4 = strongly agree.

6.6.2.1 *Social sustainability*

This section presents the results related to social sustainability, and it consists of six statements. Table 6.17 below presents the results related to social sustainability.

Table 6.17:   Responses to social sustainability

		E1.1	E1.2	E1.3	E1.4
SD	Count	6	3	5	3
	Column %	1.0%	0.5%	0.8%	0.5%
D	Count	15	11	8	7
	Column %	2.5%	1.8%	1.3%	1.1%
A	Count	295	267	234	215
	Column %	48.3%	43.6%	38.4%	35.1%
SA	Count	295	331	362	387
	Column %	48.3%	54.1%	59.4%	63.2%

As shown in Table 6.17, the highest response was related to the type of procurement that is able to promote healthy working conditions, where 63.2% and 35.1% of the respondents strongly agreed and agreed with the statements. Some 1.1% and 0.5% disagreed and strongly disagreed. This was followed by the statement about sustainable procurement that is able to incorporate safety measures in the organisation. Of the respondents, 59.4% and 38.4% strongly agreed and agreed with the statements. Some 1.3% and 0.8% disagreed and strongly disagreed. The third highest response was related to sustainable procurement that is able to enforce the recognition of employees, where 54.1% and 43.6% of the respondents strongly agreed and agreed with the statements. Some 1.8% and 0.5% disagreed.

Based on the results, it is noted that procurement is sustainable when it adheres to social sustainability aspects such as promoting fair remuneration and rewards and enforcing recognition of employees. Also, it is necessary to incorporate safety measures in the organisation and promote healthy working conditions. The literature study by Jenkin and Hattingh (2022:40) noted that in the case of the SA clothing industry clothing, retailer shops have multiple suppliers, putting pressure on suppliers regarding lead-time reduction, order cancellations, relative power in the negotiation process, and design of the unjustifiable contract. From the results, it can be summed up that even though there are issues regarding working conditions and low labour costs, there is a need for change in that area. For the industry to become socially sustainable, it still needs to invest in employee reward and recognition and improve

health and safety in the working conditions. The following section discusses the distribution of items related to environmental sustainability.

6.6.2.2 *Environmental sustainability*

This sub-section aims to determine if the procurement practice in the clothing industry complies with a sustainable environment, and it consists of six statements.

Table 6.18 presents the findings related to environmental sustainability.

Table 6.18:   Responses to environmental sustainability

		SD	D	A	SA
E2.1	Count	72	98	273	169
	Column %	12%	16%	45%	27%
E2.2	Count	8	40	312	253
	Column %	1.3%	6.5%	51%	41%
E2.3	Count	12	54	332	215
	Column %	2%	8.8%	54%	35%
E2.4	Count	11	36	322	243
	Column %	1.8%	6%	53%	40%
E2.5	Count	5	22	316	270
	Column %	1%	3.6%	53%	44%
E2.6	Count	6	45	295	266
	Column %	1%	7.3%	48%%	44%

From the results in Table 6.18, the highest response was related to the importance of subscribing to SAC. Of the respondents, 54% and 35% agreed and strongly agreed that it is important to subscribe to SAC, which assesses the environmental, social, and labour impacts across the supply chain. Some 8.8% and 2% disagreed and strongly disagreed. The second highest response was related to preventative measures in terms of increased carbon emission, where 53% and 40% of the respondents agreed and strongly agreed that preventative measures should be in place for increased carbon emissions. Some 6% and 1.8% disagreed and strongly disagreed. The third highest response was related to the effect of SC towards the environment, where 53% and 44% of the respondents strongly agreed and agreed that it is important to consider

the clothing supply chain process's effect on the environment. Some 3.6% and 0.1% disagreed and strongly disagreed with the statements.

The respondents of the study agreed that fast fashion contributes to increasing pollution. Also, that clothes should be manufactured in an eco-friendly manner. They agreed that it is important to subscribe to the SAC, which assesses environmental, social, and labour impacts across the supply chain. They recognised that preventative measures should be in place for increased carbon emissions. They also considered the effect of the clothing supply chain process on the environment, and that it is important to manage the use of insecticides on fabrics. However, according to Fung *et al.* (2019:1), Perry and Wood (2019:2) and CottonSA (2019:3), the clothing industry makes a high contribution to pollution. Also, Moloi (2019:71) and Fung *et al.* (2019:1) argued that quick fashion production constantly compromises social and environmental sustainability, and this results in high carbon emissions. The aforementioned authors also noted that fabrics that contain insecticides destroy ecosystems. Even though the respondents agreed that preserving the environment is important, it is still considered one of the industries making the highest contribution to polluting the environment. The next section discusses the descriptive statistics related to the challenges of procurement.

6.7   CHALLENGES OF PROCUREMENT

This section presents the results related to procurement challenges and discusses the composite scores of each construct and the distribution of each item of the constructs. The distribution of scores related to procurement challenges are presented in the next section.

6.7.1   Distribution of items on procurement challenges

This section discusses the composite scores of the constructs' complexity and lack of support. Table 6.19 presents the distribution of scores related to the challenges of procurement.

Table 6.19: Distribution of scores related to the challenges of procurement.

Construct	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
Complexity	613	1.00	4.00	3.46	.482	-.784	1.078
Lack of support	613	1.00	4.00	3.38	.585	-1.065	1.801

Table 6.19 shows that there were 613 responses to the questions. Most respondents strongly agreed with the statements about complexity and lack of support as challenges to procurement in the clothing industry. Complexity had the highest mean of 3.46, and std dev. of .482, followed by the lack of support with the mean of 3.38 and std dev of .585.

The next section discusses each item regarding procurement challenges.

6.7.2 Complexity of the clothing industry

This sub-section tests if the complexity of the clothing industry is a procurement challenge, and it consists of three statements. Table 6.20 presents the findings related to complexity in the clothing industry.

Table 6.20: Responses to complexity in the clothing industry as a challenge

		F1.2	F1.3	F1.4
SD	Count	13	11	7
	Column %	2.1%	1.8%	1.1%
D	Count	43	39	40
	Column %	7%	6.4%	6.5%
A	Count	264	271	270
	Column %	43.2	44.4%	44.%
SA	Count	291	290	296
	Column %	47.6%	47.5%	48.3%

Table 6.20 shows that of the respondents, 48.3% and 44% strongly agreed and agreed that the production process of clothes is complex, whereas 6.5% and 1.1% disagreed and strongly disagreed. Also, 47.6% and 43.2%, strongly agreed and agreed that there are too many standards in the production of clothes, while 7% and 2.1% disagreed

and strongly disagreed with the statements. Of the respondents, 47.5% and 44.4% strongly agreed and agreed that fashion is complex, and 6.4% and 1.8% disagreed and strongly disagreed. From the responses in the study, it was discovered that the challenges being experienced are related to too many standards in the production of clothes, fashion complexity and complex clothing production processes. The work of Shen *et al.* (2019:2) confirmed that there are too many standards and processes in producing clothes, which is a detriment to procurement processes. Jacobs and Karpova (2020:364) concurred that this industry is complex, and that there are multiple manufacturing stages and fashions. Based on the results, it is noted that fashion and manufacturing are complex, resulting in too many standards in the production process. The following section discusses the results related to the lack of support.

6.7.3 Lack of support

This sub-section tests challenges relating to the lack of support in the industry, and it consists of five statements. The results are presented in Table 6.21 below.

Table 6.21: Responses to lack of support as a challenge in procurement

		F1.1	F1.6	F1.7	F1.8	F1.11
SD	Count	11	11	7	9	14
	Column %	1.8%	1.8%	1.1%	1.5%	2.3%
D	Count	33	27	27	19	35
	Column %	5.4%	4.4%	4.4%	3.1%	5.7%
A	Count	243	230	242	217	272
	Column %	39.7%	37.6%	39.7%	35.5%	44.4%
SA	Count	325	343	334	367	292
	Column %	53.1%	56.1%	54.8%	60.0%	47.6%

As shown in Table 6.21, of the respondents, 60% and 35.5% strongly agreed and agreed that a procurement challenge is the limited funding from the SA government. However, some 3.1% and 1.5% of the respondents disagreed and strongly disagreed with this statement. Of the respondents, 56.1% and 37.6%, strongly agreed and agreed that there are challenges relating to the flooding of clothing imports from other countries. Some 4.4% and 1.8% disagreed and strongly disagreed. The study's findings also confirmed limited support from local clothing retail buyers, for example,

54.8% and 39.7% of the respondents strongly agreed and agreed that there is limited support from local clothing retail shops, while some 4.4% and 1.1% disagreed and strongly disagreed. 53.1% and 39.7% strongly agreed and agreed that the challenges relating to procurement include a lack of resources, while 5.4% and 1.8% disagreed and strongly disagreed. Of the respondents, 47.6% and 44.4% strongly agreed that local retail shops have dominant power during the negotiation process, while some 5.7%% and 2.3% disagreed and strongly disagreed.

From the study's findings, the respondents noted a lack of support, resources and government funding. Furthermore, SA clothing buyers opt for global suppliers, and the low tariff agreements on imports compromise their industry competency. Also, clothing retail shops dominate the negotiation process. The findings are in line with the literature. The study by Netshishivhe (2021:3) noted that there is a lack of resources, and technological capabilities, and there are minimal skills to compete in the SA clothing industry. In addition, Dos Santos (2020:33) and Worku (2019:98) noted that a lack of local support and that an influx of imports have compromised procurement practices in the SA clothing industry and have resulted in job losses and the closure of many clothing manufacturers. The IPAP policy report states that the IPAP policy offers monetary funding and capital and resource support. However, the funding is insufficient, and it is available only to registered clothing manufacturers (InvestSA, 2020:4). In addition, the issue of bargaining power in the SA clothing industry is noted by the study of Perry and Wood (2019:8), who stated that clothing retailer buyers have the upper hand over suppliers as they dominate the industry, which is costly to clothing suppliers.

Based on the findings, it can be concluded that government support is needed to fund the industry financially, along with resources, infrastructure, technology, and skills. It is evident that more investment is needed in the clothing industry. Government needs to revise restrictions on clothing imports, as lower restrictions cripple the industry. Also, the dominance of retail buyers during negotiation contributes to issues of incapability in this industry's manufacturing and competencies. The next section discusses how the research instrument was validated.

6.8 VALIDATION OF THE MEASURING INSTRUMENT

Prior to proceeding statistics analyses of the study, it is imperative to ensure that the research instrument is validated. This requires a discussion of the EFA and reliability test to showcase how the instrument was validated, and which factors were retained. The research instrument was validated to ensure accuracy, and only the factors that passed this validation were analysed using descriptive and inferential statistics. This section shows how the measuring instrument for the study was validated. It presents the results for each of the sixteen (16) factors, namely: (1) DP, (2) SSC, (3) SSRC, (4) CMA, (5) CN, (6) CPS, (7) ESD, (8) TCO), (9) strategic partnerships, (10) procurement policies and regulations, (11) NEMA, (12) the value of procurement, (13) environmental sustainability,(14) social sustainability, (15) lack of resources, and (16) complexity. The measuring instrument was examined based on the reliability and validity of the model's constructs. EFA was employed, and reliability tests were calculated. The following section discusses exploratory factor analysis.

6.8.1 Exploratory factor analysis

Exploratory factor analysis (EFA) was conducted upon collecting, capturing, and cleaning data. EFA was conducted to test the validity of the measuring instrument. Factor analysis was carried out using JASP 0.16.4 (2022). EFA evaluates the underlying patterns and structures revealed by the data. EFA attempts to find structures in a greater set of constructs by extracting factors (Hair *et al.*, 2020:425; Eisend & Kuss, 2019:144). EFA is a vital step in developing scales as it helps explore the underlying structure of observed variables. Moreover, several variables for constructs or concepts should be correlated (Eisend & Kuss, 2019:138). EFA techniques explore data patterns to identify the factors for factor analysis. According to Eisend and Kuss (2019:138), EFA is a technique used to analyse the fundamental structure of a group of measured variables and is an essential aspect of developing a scale.

As there was no standard instrument available to verify the construct in the study, a structured survey had to be developed to justify the EFA's choice. Firstly, the sample size of the study (n=621) was considered suitable for factor analysis. EFA was also performed to test the validity of constructs. EFA provided association among the variables in Sections B, C, D, E and F of the questionnaire (see Appendix B, the

research questionnaire). The relationship amongst the variables that was measured with a Likert scale in Section B1, B2.2, B2.3, B3.1, B3.2, B3.3, B4.1, B4.2, B5.1, C1, C2, C3, D, E1, E2, and F of the questionnaire was confirmed.

The software program, JASP 0.16.3 (2022) was used to run EFA tests, and the following criteria were applied to determine the number of factors in the study:

- The cumulative percentage explained by the factor >60%;

- Eigen values>1 (also called Kaiser Guttman rule); and

- Look at a significant decline in the Scree plot.

The factor loading was used to determine which items (Likert scale statement) reside together to form a factor. Hair *et al.* (2020:444) noted that each factor loading should be greater than 0.3, and factors less than that or with items loading on more than two factors, also with the eigenvalue less than one (1), should not be retained. A loading of 0.40 is considered meaningful. For the purposes of the study, some items were dropped during the analysis due to factor loading <.30 and cross-loading items (items loading on more than two factors). Factor loading of 0.4 was retained. Factors were chosen based on the eigenvalue greater than one (1) of the factors that were retained. To confirm the adequacy of the sample for factor analysis in the study, the Kaiser-Meyer-Olkin (KMO) measure was computed. The KMO measures sample size adequacy. A KMO between 0.8 and 1 indicate sampling adequacy. Bartlett's sphericity test was conducted to compare an observed correlation matrix, check the adequacy of variables/ items, and sum them up with several items. Commonalities should be greater than 0.2. Factors were chosen based on the eigenvalue greater than one (1) (see Appendix A), and factors were retained for further analysis.

The research questionnaire had 114 items, and 96 items were retained. Sixteen (16) factors were extracted with an eigenvalue greater than one (1), representing 84% of the total variance in the study. KMO measure of sample adequacy on factors in the study was above 0.5 and considered acceptable. The KMO and Bartlett's test of sphericity test results related to procurement practice are presented below.

6.8.1.1 *Procurement practice in the SA clothing industry*

This section discusses EFA of procurement practices in the clothing industry. To guarantee the precision of the factor analysis outcomes for procurement practice,

initial tests are conducted on the sample adequacy and correlation. This was done using the KMO measure of sampling adequacy and Bartlett's test of sphericity, as indicated in Table 6.22.

Table 6.22:   KMO and Bartlett's Test for procurement practices

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.947	
Bartlett's Test of Sphericity	Approx. Chi-Square	1431
df		17094
Sig.		p<0.001).

For the purpose of this study, nine items/ factors were extracted and factors with loadings <0.4 were suppressed. As a result, three items with commonalities <0.3 were excluded. The factorability of procurement practise factors consisted of eleven (11) factors, and nine (9) factors were extracted with an eigenvalue greater than one (1). The research questionnaire in this section consisted of 79 items on and 54 items were retained. Therefore, the final model consisted of 54 items. As indicated in Table 6.22, the KMO measure of sample adequacy on factors of procurement practice in the SA clothing industry is 0.947, is acceptable as it is above the value of 6. Bartlett's test of sphericity is significant ($\chi2(17094) =1431$, p<0.001. Lastly, the communalities (the total amount of variance a variable share with all factors) were above 0.3 (see Table 6.22), showing that each item shared the same variance with other items.

Given these overall values, factor analysis was considered seemly with all 54 items, and the factors extracted were named as presented in Table 6.22. The mathematical approach for extracting factors from the dataset is the initial methodology option for factor analysis. The most frequent options are maximum likelihood (ML), principal axis factoring (PAF), and principal components analysis (PCA). According to Hair *et al.* (2020:429), the rotation of factors may be interpreted by either orthogonal, oblique, or Promax factor solutions. This study ran the principal axis factoring extraction method using the PROMAX applied rotation method to validate rotating factors. The next section explains how factors were extracted using the rotation method.

- **Method of rotation**

This section explains how each factor of procurement practice was extracted using the rotation method. The method of rotation with factor characteristics of procurement practices is presented in Table 6.23 below.

Table 6.23:   Factor characteristics: Procurement practice in the SA clothing industry

Constructs	Unrotated solution			Rotated solution			Initial Eigenvalues		
	Total	% Proportion variance	Cumulative %	Total	% Proportion variance	Cumulative %	Total	% of variance	Cumulative %
Strategic partnerships	15.776	29.215	29.215	5.600	10.371	10.371	15.776	29.215	29.215
CMA	4.685	8.676	37.892	5.356	9.919	20.290	4.685	8.676	37.892
TCO	2.755	5.102	42.994	4.962	9.188	29.478	2.755	5.102	42.994
DP	2.246	4.160	47.154	4.391	8.132	37.610	2.246	4.160	47.154
CPS	1.491	2.760	49.914	2.409	4.461	42.070	1.491	2.760	49.914
SSC	1.368	2.533	52.447	2.370	4.389	46.459	1.368	2.533	52.447
SSR	1.328	2.459	54.906	2.345	4.342	50.801	1.328	2.459	54.906
CN	1.127	2.087	56.993	2.286	4.234	55.035	1.127	2.087	56.993
ESD	1.101	2.038	59.031	2.158	3.996	59.031	1.101	2.038	59.031
Note. Applied rotation method is Promax.									

As shown in Table 6.23, the factor characteristics constitute 59% of the nine (9) factors of procurement practice in section B of the research questionnaire were extracted. Table 6.24 presents commonalities of these factors.

Table 6.24:   Commonalities between nine factors

Constructs		Factor loadings	Commonalities
Strategic partnership	B5.1.3	0.801	0.465
	B5.1.1	0.790	0.433
	B5.1.2	0.770	0.505
	B5.1.4	0.649	0.570
	B5.1.7	0.646	0.494
	B5.1.9	0.583	0.507
	B4.1.12	0.567	0.546
	B5.1.6	0.537	0.583
	B4.1.11	0.512	0.566
	B4.1.1	0.438	0.564
CMA	B3.1.2	0.833	0.396
	B3.1.5	0.801	0.416
	B3.1.3	0.796	0.415
	B3.1.4	0.729	0.453
	B3.1.1	0.660	0.477
	B3.1.7	0.565	0.412
	B3.1.6	0.548	0.405
TCO	B4.2.7	0.776	0.459
	B4.2.3	0.694	0.516
	B4.2.6	0.675	0.419
	B4.2.8	0.675	0.465
	B4.2.5	0.656	0.485
	B4.2.2	0.633	0.534
	B4.2.9	0.592	0.526
	B4.2.1	0.584	0.637
	B4.2.4	0.487	0.594

Constructs		Factor loadings	Commonalities
DP	B1.5	0.836	0.467
	B1.6	0.778	0.453
	B1.4	0.655	0.504
	B1.3	0.607	0.516
	B1.2	0.601	0.483
	B1.1	0.588	0.482
	B1.7	0.568	0.631
	B1.8	0.444	0.667
CPS	B3.3.2	0.694	0.428
	B3.3.1	0.559	0.466
	B3.3.5	0.536	0.479
	B3.3.3	0.505	0.401
	B3.3.4	0.484	0.457
SSC	B2.2.3	0.707	0.417
	B2.2.2	0.628	0.484
	B2.2.4	0.517	0.476
	B2.2.1	0.501	0.655
	B2.1.2	0.344	0.796
SSRC	B2.3.5	0.786	0.383
	B2.3.3	0.640	0.375
	B2.3.6	0.519	0.405
	B2.3.2	0.457	0.530
CN	B3.2.5	0.646	0.449
	B3.2.4	0.631	0.451
	B3.2.3	0.503	0.623
ESD	B4.1.5	0.915	0.915
	B4.1.4	0.686	0.686
	B4.1.6	0.540	0.540
Note. Applied rotation method is Promax.			

Source: Researcher's own compilation

As indicated in Table 6.24, commonalities were above 0.3, confirming that each item shared some common variance with the other items. This implies that all these constructs determine procurement practices in the SA clothing industry, and they should be practised concurrently to improve procurement practices in the industry.

The next section discusses procurement policies and regulations and NEMA.

6.8.1.2 *Government policies and regulations*

This section discusses the EFA of government policies and regulations which constitute of procurement policies and regulations, and NEMA. To guarantee the precision of the factor analysis outcomes for procurement policies and regulations and NEMA, initial tests are conducted on the sample adequacy and correlation. This was done using the KMO measure of sampling adequacy and Bartlett's test of sphericity, as indicated in Table 6.25, sample adequacy and correlation tests KMO and Bartlett's Test.

Table 6.25: **KMO and Bartlett's Test for procurement policies and regulations and NEMA**

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.789	
Bartlett's Test of Sphericity	Approx. Chi-Square	21
df	1765	
Sig.	p<0.001	

Seven factors were extracted to test the hypotheses' theoretical constructs with an eigenvalue greater one (1). Items with loadings <0.4 were suppressed, as a result one (1) item with commonalities <0.3 was excluded. The research questionnaire consisted of (5) items on procurement policies and regulations. The items were examined in Section C of the questionnaire, and four (4) items were retained. The factorability of three (3) factors on NEMA was examined, and all factors were retained. As shown in Table 6.25, the KMO measure of sample adequacy on factors of government policies and regulations in the SA clothing industry is 0.789 which is acceptable as it is above the value of 0.7. Bartlett's test of sphericity is significant ($\chi 2(1765) =21$, p<0.001. The next discussion is about the method of rotation of factors.

- **Method of rotation**

This section explains how the factors, namely, NEMA and procurement policies and regulations were extracted. Table 6.26 presents the rotation and characteristics of factors.

Table 6.26:   Factor characteristics: NEMA and procurement policies and regulations

Constructs	Unrotated solution			Rotated solution			Initial Eigenvalues		
	Total	% Proportion variance	Cumulative %	Total	% Proportion Variance	Cumulative %	Total	% of variance	Cumulative %
NEMA	2.709	45.150	45.150	2.434	45.150	45.150	3.050	50.828	50.828
Procurement policies and regulations	.919	15.316	60.467	1.939	15.316	60.467	1.238	20.626	71.453
Note. Applied rotation method is Promax.									

As shown in Table 6.26, the rotation of factors on NEMA and procurement policies and regulations were calculated. The factor characteristics constitute 60% of the variance of all factors on NEMA (Section C4 of the questionnaire) and procurement policies and regulations (Sections C1 and C2 of the questionnaire) that were extracted.

Table 6.27 presents the commonalities of NEMA and procurement policies and regulations.

Table 6.27:   Commonalities of NEMA and procurement policies and regulations and NEMA

Constructs		Factor loadings	Uniqueness
NEMA	C4.1	0.865	0.284
	C4.2	0.842	0.307
	C4.3	0.802	0.323
Procurement policies and regulations	C1.2	0.856	0.372
	C1.1	0.696	0.513
	C2.2	0.524	0.713
	C2.3	0.523	0.613
Note. Applied rotation method is Promax.			

As indicated in Table 6.27, commonalities were above 0.2, confirming that each item shared some common variance with the other items. This implies that for this industry to be sustainable, it must conform to procurement policies and regulations and the National Environmental Management Act regulations.

6.8.1.3 *Value of procurement practices in the SA clothing industry*

This section discusses the EFA of the value of procurement practice. To guarantee the precision of the factor analysis outcomes for value of procurement practices, initial tests are conducted on the sample adequacy and correlation. This was done using the KMO) measure of sampling adequacy and Bartlett's test of sphericity. The results are presented in Table 6.28 below.

Table 6.28:   KMO and Bartlett's Test for the value of procurement practices

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.943	
Bartlett's Test of Sphericity	Approx. Chi-Square	66
df		3559.55
Sig.		p<0.001.

Twelve items related to the value of procurement were extracted to test the hypotheses' theoretical constructs with an eigenvalue greater than one (1). The research questionnaire in this section consisted of twelve (12) items, and all items were retained. As reflected in Table 6.28, the KMO measure of sample adequacy on factors the value of procurement in the SA clothing industry is 0.943 is acceptable. Bartlett's test of sphericity is significant ($\chi2$ (3559.55) =66, p<0.001. The next section explains how the factors were extracted using the rotation method.

- **Method of rotation**

This section explains the rotation method for the value of procurement. The rotation method is presented below in Table 6.29, which shows how the rotation of factors of the procurement value was calculated.

Table 6.29:   Factor characteristics: The value of procurement

Constructs	Unrotated solution			Rotated solution			Initial Eigenvalues		
	Total	% Proportion variance	Cumulative %	Total	% Proportion Variance	Cumulative %	Total	% of variance	Cumulative %
The value of procurement	5.729	47.738	47.738	5.729	47.738	47.738	6.247	52.062	52.062
Note. Applied rotation method is Promax.									

The factor characteristics constitute 48% of all factors related to the value of procurement (Section D of the questionnaire) that were extracted.

Table 6.30 below presents the commonalities.

Table 6.30:   Commonalities for the value of procurement practices

Constructs		Factor loadings	Uniqueness
The value of procurement	D1.6	0.739	0.453
	D1.12	0.736	0.458
	D1.10	0.707	0.500
	D1.4	0.705	0.503
	D1.11	0.698	0.513
	D1.2	0.695	0.517
	D1.7	0.694	0.518
	D1.8	0.681	0.536
	D1.9	0.681	0.536
	D1.3	0.672	0.548
	D1.1	0.642	0.588
	D1.5	0.622	0.613
Note. Applied rotation method is Promax.			

As indicated in Table 6.30, commonalities were above 0.3, confirming that each item shared some common variance with the other items. This means that procurement practice in the SA clothing industry adds value when all these factors are executed.

The EFA on environmental and social sustainability is discussed below.

6.8.1.4 *Environmental and social sustainability*

This section discusses the EFA of environmental and social sustainability. To guarantee the precision of the factor analysis outcomes for environmental and social sustainability, initial tests were conducted on the sample adequacy and correlation. This was done using the KMO measure of sampling adequacy and Bartlett's test of sphericity, as indicated in Table 6.34, sample adequacy and correlation tests KMO and Bartlett's Test.

The results are presented in Table 6.31 below.

Table 6.31:   KMO and Bartlett's Test for environmental and social sustainability

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.854.	
Bartlett's Test of Sphericity	Approx. Chi-Square	45
df	2247	
Sig.	p<0.001	

Ten items consisting of two constructs: environmental and social sustainability, were extracted to test the hypotheses' theoretical constructs with an eigenvalue greater than one (1). The research question on social sustainability had four (4) items and six (6) on environmental sustainability, and all ten (10) items were retained. As indicated in Table 6.31, the items' factorability on environmental and social sustainability was examined. The KMO measure of sample adequacy on environmental and social sustainability in the SA clothing industry of 0.854 is acceptable. Bartlett's test of sphericity is significant ($\chi 2$ (2247) =45, p<0.001.

The next section explains how the factors were extracted using the rotation method.

- **Method of rotation**

This section explains the rotation method used for social and environmental sustainability. The rotation method of these constructs is presented below in Table 6.32.

Table 6.32: Factor characteristics: Social and environmental sustainability

Constructs	Unrotated solution			Rotated solution			Initial Eigenvalues		
	Total	% Proportion variance	Cumulative %	Total	% Proportion variance	Cumulative %	Total	% of variance	Cumulative %
Environmental sustainability	3.381	33.811	33.811	2.686	33.811	33.811	3.871	38.712	38.712
Social sustainability	1.603	16.027	49.838	2.336	16.027	49.838	2.102	21.015	59.727
Note. Applied rotation method is Promax.									

Of the factor characteristics of environmental and social sustainability, 50% of all the factors in environmental sustainability (Section E2 of the research questionnaire), and social sustainability (Section E1 of the research questionnaire) were retained. Commonalities are presented in Table 6.33 below.

Table 6.33: Commonalities for the environmental and social sustainability

Constructs		Factor loadings	Uniqueness
Environmental sustainability	E2.2	0.707	0.514
	E2.3	0.682	0.542
	E2.5	0.681	0.439
	E2.4	0.668	0.492
	E2.1	0.627	0.646
	E2.6	0.622	0.542
Social sustainability	E1.3	0.818	0.351
	E1.2	0.739	0.457
	E1.1	0.700	0.472
	E1.4	0.700	0.523
Note. Applied rotation method is Promax.			

Communalities were above 0.3. This implies commonalities between environmental and social sustainability in the SA clothing industry. Environmental and social sustainability in the SA clothing industry depends on compliance with these factors.

The next section discusses the EFA on the lack of support and complexity.

6.8.1.5 *Lack of support and complexity as challenges to procurement practice*

This section discusses the EFA of lack of support and complexity. To guarantee the precision of the factor analysis outcomes for lack of support and complexity, initial tests were conducted on the sample adequacy and correlation. This was done using the KMO measure of sampling adequacy and Bartlett's test of sphericity.

The results are presented in Table 6.34 below.

Table 6.34:   KMO and Bartlett's Test for Lack of support and complexity

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.857	
Bartlett's Test of Sphericity	Approx. Chi-Square	28
df	1636	
Sig.	p<0.001.	

Eleven (11) items, consisting of two constructs: lack of support and complexity, were extracted to test the hypotheses' theoretical constructs with an eigenvalue greater than one (1). Eight (8) items were retained. As presented in Table 6.37, the KMO measure of sample adequacy on factors of procurement challenges in the SA clothing industry of 0.857 is acceptable. Bartlett's test of sphericity is significant ($\chi 2$ (1636) =28, p<0.001. The next section explains how factors were extracted using the rotation method.

- **Method of rotation**

This section explains the rotation method used for lack of support and complexity. The rotation method of these constructs is presented below in Table 6.35.

Table 6.35:   Factor characteristics: Lack of support and complexity

Constructs	Unrotated solution			Rotated solution			Initial Eigenvalues		
	Total	% Proportion variance	Cumulative %	Total	% Proportion variance	Cumulative %	Total	% of variance	Cumulative %
Lack of support	4.213	42.128	42.128	2.081	0.260	0.260	4.717	47.169	47.169
Complexity	.637	6.366	48.494	1.840	0.230	0.049	1.099	10.990	58.159
Note. Applied rotation method is Promax.									

As indicated in Table 6.35, the rotation of factors of procurement challenges was calculated, and 48% of the factor characteristics of all factors in the section on lack of support and complexity (Section F of the research questionnaire) were extracted.

Commonalities are presented in Table 6.36 below.

Table 6.36:   Commonalities of lack of support and complexity

Constructs		Factor loadings	Commonalities
Lack of support	F1.7	0.826	0.393
	F1.8	0.689	0.557
	F1.6	0.608	0.617
	F1.1	0.569	0.660
	F1.11	0.440	0.650
Complexity	F1.3	0.883	0.312
	F1.4	0.778	0.414
	F1.2	0.630	0.476
Note. Applied rotation method is Promax.			

Communalities were above 0.3. This implies commonalities between the challenges impacting the procurement practice in the SA clothing industry. The clothing industry will continue to experience challenges in implementing procurement practices if the identified challenges still exist.

The next section presents the analysis of the reliability of the measuring instrument.

6.8.2 Reliability of the measuring instrument

The study performed reliability tests using Cronbach's alpha, composite reliability and average variance extracted (AVE) tests. The study evaluated the reliability of the concept by measuring the Cronbach's alpha coefficient for internal consistency. Higher Cronbach's alpha values indicate a higher internal consistency of the items in the scale (Parry, 2020). According to Wan *et al.* (2021:5), when testing the reliability of data using the values of Cronbach's alpha and composite reliability (CR), if both the values of Cronbach's alpha and CR is greater than 0.7, then the data indicates good reliability. Fornell and Larcker (1981) and Parry (2020) noted that average variance extracted (AVE) can be used as a measure for assessing convergent validity. Convergent validity relates to the degree to which various methods of measuring factors or constructs lead to similar results. When evaluating the convergent validity according to factor loading and AVE values, it is supposed that both factor loading and AVE are higher than 5. In that case, data can show good convergent validity (Hair *et al.*, 2020:44). The reliability test of the procurement practice construct is discussed in the next section.

6.8.2.1 Reliability analysis for procurement practices

This section discusses reliability as related to procurement practices. Table 6.37 presents the results of the reliability test of the constructs.

Table 6.37: Reliability of the constructs of procurement practices

Factors/ Construct	Number of items	Cronbach's alpha	Composite reliability	Average variance extracted (AVE)
Strategic partnership	8	0.864	0.870	0.410
CMA	7 (9)	0.886	0.876	0.508
TCO	9	0.877	0.864	0.417
DP	8	0.863	0.847	0.416
CPS	5	0.835	0.692	0.314
SSC	5 (4)	0.740	0.677	0.306
SSRC	4 (6)	0.809	0.698	0.377
CN	3 (7)	0.760	0.622	0.356
ESD	3 (12)	0.805	0.766	0.533

Notes: N=; CR= composite reliability, AVE= average variables extracted, α value=Cronbach's alpha value

As indicated in Table 6.37, the results of the reliability of the research instrument are presented in terms of Cronbach's alpha, composite reliability and average variable extracted (AVE).

- **Cronbach's alpha test**

As indicated in Table 6.37, the values of Cronbach's alpha of the construct are greater than 0.7. The data indicates good reliability. This shows that the measures used in this study are reliable. The next section discusses the composite reliability of procurement practice constructs.

- **Composite reliability**

Table 6.37 indicates that all CR of the construct is greater than 0.6, and that the data then indicates adequate internal consistency. The next section discusses the AVE of procurement practice constructs.

- **Average variance extracted (AVE)**

According to Fornell and Larcker (1981) and Lam (2012), convergent validity is also achieved if AVE is less than 0.5, but the CR is greater than 0.6. Therefore, convergent validity of the construct was achieved. The discriminant validity of procurement practice constructs is discussed in the next section below.

- **Discriminant validity tests**

According to Fornell and Larcker (1981), to guarantee discriminant validity, the square root of the AVE measures must be greater than all the constructs' correlations. In this study, each research construct's square roots of AVE values were compared against the inter-construct correlation coefficients to measure discriminant validity. All correlations greater than AVE's square root suggest poor discriminant validity.

Table 6.38 presents the discriminant validity results for procurement practice.

Table 6.38:   Discriminant validity results of procurement practice constructs

	Strategic Partnership	CMA	TCO	DP	CPS	SSC	SSRC	CN	ESD
Strategic partnership	**0.640**								
CMA	0.357	**0.713**							
TCO	0.447	0.508	**0.646**						
DP	0.674	0.287	0.403	**0.645**					
CPS	0.598	0.598	0.474	0.37	**0.560**				
SSC	0.385	0.584	0.474	0.436	0.452	**0.553**			
SSRC	0.502	0.554	0.456	0.521	0.45	0.491	**0.614**		
CN	0.395	0.084	0.264	0.539	0.134	0.199	0.314	**0.597**	
ESD	0.613	0.47	0.341	0.498	0.574	0.367	0.442	0.191	**0.730**

The AVE values for procurement practice constructs' square root is higher than their inter-construct correlation coefficient values. This confirms that the measurement items for these constructs are unique and not correlated. Thus, confirming discriminant validity.

Reliability test results for procurement policies and regulations and NEMA are discussed in the next section.

6.8.2.2   Reliability test results for procurement policies and regulations and NEMA

The reliability of analysis test results for government policies and regulations and NEMA is presented in Table 6.39 below.

Table 6.39:   Reliability analysis for procurement policies and regulations and NEMA

Factors/ Construct	Number of items	Cronbach's alpha	Composite Reliability	The average variance extracted (AVE)
Procurement policies and regulations	4 (5)	0.645	0.751	0.442
NEMA	3	0.872	0.875	0.700

Notes: N=; CR= composite reliability, AVE= average variables extracted, α value= Cronbach's alpha value

As indicated in Table 6.39, the results of the model reliability are presented in terms of Cronbach's alpha, composite reliability and average variable extracted (AVE).

- **Cronbach's alpha test**

As indicated in Table 6.39, the values of Cronbach's alpha of the construct are greater than 0.6. The data indicates good reliability. This proves that the measures used in this study are reliable. The Cronbach's alpha values of the construct NEMA showed a high Cronbach's alpha which means its items measuring NEMA are extremely reliable. Also, the Cronbach's alpha values of the construct procurement policies and regulations showed a high Cronbach's alpha, which means that items measuring government policies and regulations are extremely reliable. The next section discusses composite reliability.

- **Composite reliability**

Table 6.39 indicates that if all the CR of the construct is greater than 0.6, then the data indicates adequate internal consistency. The next section discusses the AVE.

- **The average variance extracted (AVE)**

This section achieves convergent validity since the AVE for NEMA above 0.6. Also, convergent validity on procurement policies and regulations is achieved. According to Fornell and Larcker (1981) and Lam (2012), convergent validity is also achieved if AVE is less than 0.5, but the CR is greater than 0.6. Convergent validity of the construct was achieved. Discriminant validity is presented in the next section.

- **Discriminant validity tests**

According to Fornell and Larcker (1981), to guarantee discriminant validity, the square root of the AVE measures must be greater than all the constructs' correlations. In this study, each research construct's square roots of AVE values were compared against the inter-construct correlation coefficients to measure discriminant validity. All correlations greater than AVE's square root suggest poor discriminant validity. The AVE for the constructs is presented in Table 6.40 which presents the discriminant validity results related to the procurement policies and regulations, and NEMA constructs.

Table 6.40: Discriminant validity results of procurement policies and regulations and NEMA constructs

Constructs	NEMA	Policies and regulations
NEMA	**0.837**	
Procurement policies and regulations	0.554	**0.665**

Table 6.40 shows that the square root of AVE values for the research constructs NEMA and procurement policies and regulations are 0.837 and 0.665, respectively. These values are higher than their inter-construct correlation coefficient value of 0.554, indicating that the items used to measure these constructs are distinct and not correlated with each other. This confirms the discriminant validity of constructs.

The next section discusses reliability test results for the value of procurement.

6.8.2.3 Reliability results of the value of procurement

The reliability of analysis test results for the value of procurement is presented in Table 6.41 below.

Table 6.41: Reliability of the value of procurement

Factors/ Construct	Number of items	Cronbach's alpha	Composite reliability	Average variance extracted (AVE)
Procurement value	12	0.915	0.916	0.476

Note: N=; CR= composite reliability, AVE= average variables extracted, α value= Cronbach's alpha value

- **Cronbach's alpha test**

As indicated in Table 6.41, if the values of Cronbach's alpha of the construct are greater than 0.6, then the data indicates good reliability. This ascertains that the measures used in this study are reliable. The next section discusses composite reliability.

- **Composite reliability**

Table 6.41 indicates that all CR of the construct is greater than 0.8, then the data indicates adequate internal consistency. The next section discusses the AVE.

- **The average variance extracted (AVE)**

To achieve convergent validity, Fornell and Larcker (1981) and Lam (2012) suggested that AVE should be less than 0.5, and CR should be greater than 0.6. Therefore, convergent validity of the construct was achieved.

Reliability results of environmental and social sustainability are presented below.

6.8.2.4   Reliability results of Environmental and social sustainability

The reliability of analysis test results for the environmental and social sustainability is presented in Table 6.42 below.

Table 6.42:   Reliability of environmental and social sustainability

Factors/ Construct	Number of items	Cronbach's alpha	Composite reliability	Average variance extracted (AVE)
Environmental sustainability	6	0.814	0.826	0.443
Social sustainability	4	0.774	0.829	0.549

As indicated in Table 6.42, the results of the model reliability are presented in terms of Cronbach's alpha, composite reliability and average variable extracted (AVE).

- **Cronbach's alpha test**

Table 6.42 shows that if the Cronbach's alpha values of the construct are above 0.7, which ascertains that the measures used in this study are reliable. Therefore, the data indicates good reliability. The Cronbach's alpha values of the construct environmental sustainability showed a high Cronbach's alpha, meaning that the items measuring environmental sustainability are extremely reliable. Similarly, the Cronbach's alpha values of the construct social sustainability showed a high Cronbach's alpha, meaning that the items measuring social sustainability are extremely reliable. The section below discusses composite reliability.

- **Composite reliability**

Table 6.42 indicates that all CR of the construct is greater than 0.8, indicating adequate internal consistency. The next section discusses the AVE.

- **The average variance extracted (AVE)**

Fornell and Larcker (1981) and Lam (2012) stated that convergent validity is achieved if AVE is below 0.5, but the CR is above 0.6. Therefore, convergent validity of the construct was achieved. The results related to discriminant validity are presented in the section below.

- **Discriminant validity tests**

This section discusses the results of the discriminant validity tests conducted on environmental and social sustainability. Table 6.46 presents the discriminant validity test results.

Table 6.43:   Environmental and social sustainability

Constructs	Environmental sustainability	Sustainable procurement
Environmental sustainability	**0.67**	
Social sustainability	0.321	**0.74**

According to Table 6.43, the AVE values for the research constructs (environmental social sustainability) are 0.67 and 0.74, respectively. These values are higher than their inter-construct correlation coefficient of 0.321, indicating that the items used to measure these constructs are distinct and not correlated with each other. This confirms the discriminant validity of constructs.

The next section discusses the reliability tests for lack of support and complexity.

6.8.2.5   Reliability test result for lack of support and complexity

This section discusses the reliability test results for lack of support and complexity. The results are presented in Table 6.44 below:

Table 6.44:   Reliability lack of support and complexity

Factors/ Construct	Number of items	Cronbach's alpha	Composite reliability	Average variance extracted (AVE)
Lack of support	5	0.776	0.768	0.409
Complexity	3	0.872	0.812	0.594

As indicated in Table 6.44, the results of the model reliability are presented in terms of Cronbach's alpha, composite reliability and average variable extracted (AVE).

- **Cronbach's alpha test**

As indicated in Table 6.44, if the values of Cronbach's alpha of the construct for lack of support and complexity are greater than 0.7, then the data indicates good reliability. This attests that the measures used in this study are reliable. The section below discusses composite reliability.

- **Composite reliability**

Table 6.44 indicates that all CR of the construct is greater than 0.6, and that the data indicates adequate internal consistency. The next section discusses the AVE.

- **Average variance extracted (AVE)**

Fornell and Larcker (1981) and Lam (2012) noted that if AVE is less than 0.5, but the CR is greater than 0.6, convergent validity is achieved. Therefore, convergent validity of the construct was achieved. Discriminant validity is presented next.

- **Discriminant validity tests**

This section presents the discriminant validity test results for lack of support and complexity. Table 6.45 presents the discriminant validity results for procurement practice.

Table 6.45: Discriminant validity procurement challenges

Constructs	Squared AVE values	Squared AVE values
Lack of support	**0.640**	
Complexity	0.654	**0.771**

In Table 6.45, the square root of the AVE values for lack of support and complexity are shown as 0.640 and 0.771, respectively. Discriminant validity is achieved when the square root of the AVE measures to be larger than the correlations of all the constructs, as stated by Fornell and Larcker in 1981. In this study, each research construct's square roots of AVE values were compared against the inter-construct correlation coefficients to measure discriminant validity. All correlations greater than AVE's square root suggest poor discriminant validity. Since the research construct lack of support is less than the inter-construct correlation coefficient value of 0.654, discriminant validity was not achieved.

The next section presents the conclusion of the chapter.

6.9   CONCLUSION

This chapter presented the results of the descriptive statistics of the study. The SA clothing industry's demographics were analysed based on organisation type, size, and years of business experience. Descriptive statistics results related to procurement practices, government policies and regulations, the value of procurement, the sustainability of procurement and the challenges of procurement were discussed. The mean and standard deviation for each section of the questionnaire were stated. The discussion about the validating the research instrument was also presented. The next chapter presents the results of inferential statistics.

CHAPTER 7:
INFERENTIAL STATISTICS

7.1   INTRODUCTION

This chapter discusses the inferential data analysis of the study, and the outcome of the procurement practice performance model is presented. The study had multiple independent and dependent variables, which needed a powerful statistical tool to simultaneously estimate the research model hypotheses. Hence, SAS 9.4 (2020) was used to perform the Structural equation model (SEM). SEM statistics tests were performed exclusively on the validated factors to validate the model and hypotheses. The SEM model assessed the structural relationships of variables in the hypothesised model. The section below presents a discussion of the structural model and hypotheses of the study.

7.2   VALIDATING THE STRUCTURAL MODEL AND HYPOTHESIS

To analyse complex connections between variables, multivariate statistical methods are necessary (Hair, 2020:458). These approaches can predict multiple outcomes through various pathways. SEM, according to Peugh and Feldon (2020:1), is also relevant when dealing with non-normality data. However, it is important to first validate the model fit of the structural model before assessing the model hypothesis. The next section presents the results of the structural model test for procurement practice regarding the goodness-of-fit indices.

7.2.1   Structural model test for procurement practice in terms of the goodness-of-fit indices

To test how a hypothesised model appropriately describes the mutual connections among its variables, researchers must assess the "fit" between the SEM model and the sample's data (Peugh & Feldon, 2020:2). Before testing the relationship stated in the study's hypothesis, the model's structural fit was tested. The conceptual model presented in Section 4.3 (Figure 4.4) was tested for goodness-of-fit using SEM. The conceptual model is presented in Figure 7.1 below.
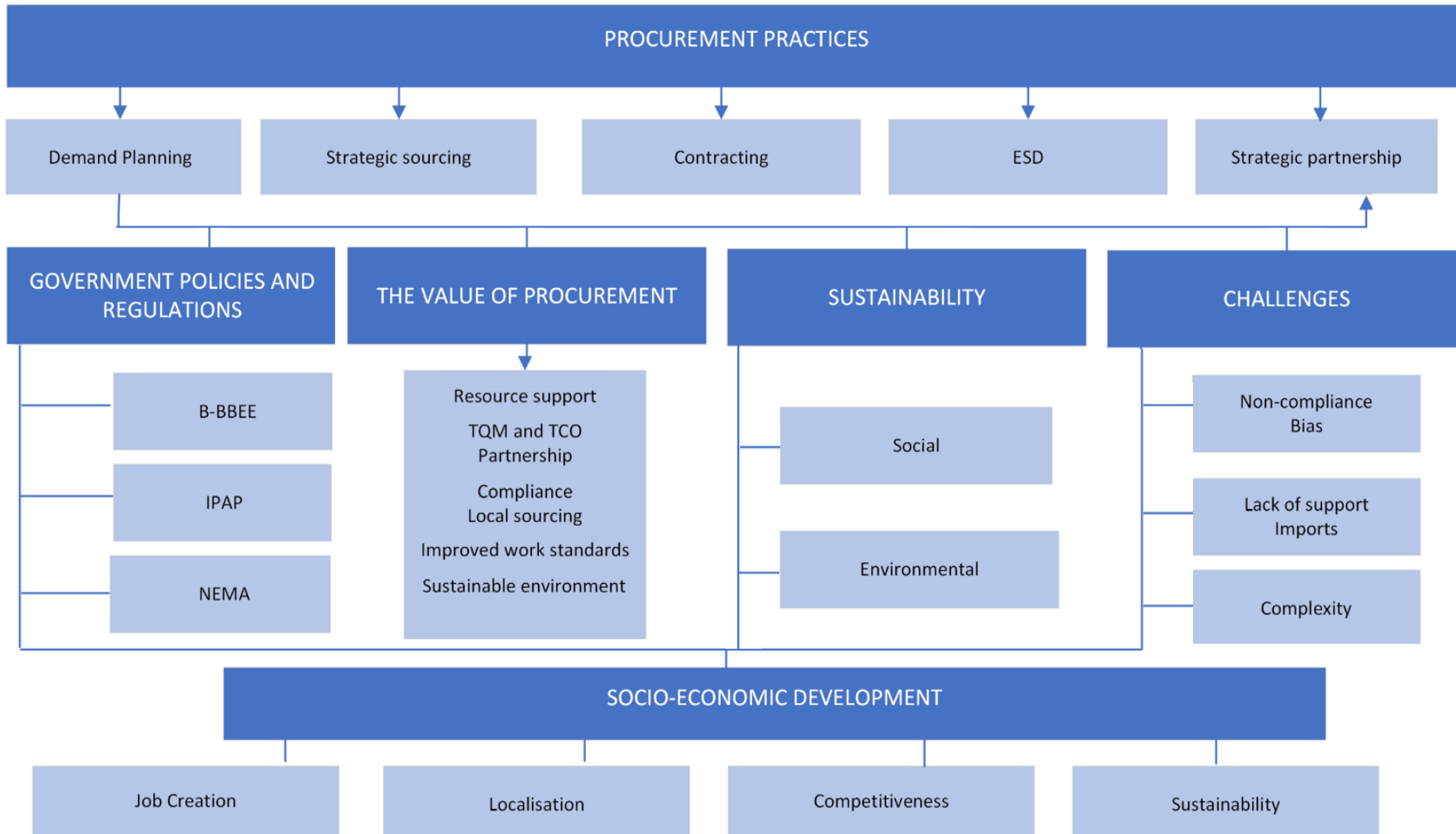
Figure 7.1:   Conceptual framework of the study

Source: Researcher's own compilation

7.2.1.1 Conceptual model analysis

Figure 7.1 presents the conceptual framework for the study (as presented in Chapter 4, Figure 4.4). As discussed, the initial model was tested for goodness-of-fit. Also, the relationship between variables within the model was tested. According to Perry and Wood (2020), Rex and Kline (2015), and Hooper *et al.* (2008), when evaluating the goodness-of-fit for the study, the model Chi-Square, Root Mean-Square Error of Approximation (RMSEA) Comparative Fit Index (CFI), and Standardised Root Mean-Square Residual (SRMR) should be tested and reported. Also, the probability value (p) should be reported in the discussion. Therefore, the SEM was calculated to determine whether the proposed model emulates the sample covariance matrix.

Table 7.1 provides the goodness-of-fit indices for the model reported.

Table 7.1: Goodness-of-fit indices of the SEM model

	Chi-square	Df	Cmin /df	CFI	Tucker Lewis Index	RMSEA	SRMR
Model 1	12597.7	47	268.0	.762	0.391	0.205	0.111
Model 2	98.9	31	3.2	0.987	0.9483	0.060	0.027
Fit indices	≥ 0.05		<5	≥ .90	≥.90	< 0.08	< 0.80

As seen in Table 7.1, the structural model was fitted to the data. The fit indices for the first model are reported.

7.2.1.2 Model 1 (All paths)

The model Chi-square assesses the model fit and discrepancies between the sample and fitted covariance matrices. The cut-off for model fit is p> 0.05, and the Chi-square =12597.7, Df=47 shows a good fit. The RMSEA values closer to zero (0) represent a good fit, the cut-off for a good fit is <0.08. RMSEA (0.205) with the 90% lower and upper confidence intervals ranging between (0.1956) and (0.2152) shows a **poor fit**. The Comparative Fit Index (CFI) compares the fit of a target model to the fit of an independent or null model. The fit cut-off fit index is >.90, and the CFI is (0.762), showing a **poor** fit. The SRMR is the standardised root mean square residual. The cut-off for a good fit of the SRMR is <0.08. The SRMR is 0.111 showing a **poor fit**.

Module 2 below shows the significant paths. Model 2 is an improved model, where the fit indices were improved by removing non-significant paths.

7.2.1.3 Model 2 (Significant paths only)

The model Chi-square assesses the model fit and discrepancies between the sample and fitted covariance matrices. The cut-off for model fit is p> 0.05, and the Chi-square = 98.8762 shows a good fit. The RMSEA values closer to zero (0) represent a good fit, the cut-off for a good fit is <0.08. RMSEA (0.06) with the 90% lower and upper confidence intervals ranging between (0.0468) and (0.0733) shows a **good fit**. The Comparative Fit Index (CFI) compares the fit of a target model to the fit of an independent or null model. The fit cut-off fit index is ≥.90, and the CFI is (0.987), showing a **good** fit. The SRMR is the standardised root mean square residual. The cut-off for a good fit of the SRMR is <0.08, the SRMR is 0.027 showing **a good fit**. Model 2 showed a good fit for the conceptual model, and the path coefficient results validate the research hypotheses. The research hypotheses presented below are based on model 2.

7.3 HYPOTHESES TEST RESULTS

This section presents the structural relationships of the variables specified in the conceptual model based on model 2, which fitted the data, and the goodness-of-fit, which supported the structural model. The magnitude and significance of causal connections between multiple variables can be estimated using the SEM method. The section outlines the process followed to understand the constructs and the structural relationship among multiple constructs. The SEM was assessed by measuring the model (assigning indicator variables to the construct they should represent). For this model, the measurement included sixteen (16) constructs, namely, procurement practice constructs (strategic partnership, DP, SSC, SSRC, CMA, CPS, CN, ESD and TCO, NEMA, government policies and regulations, procurement value, environmental sustainability, social sustainability, lack of support, and complexity. SEM also tested the study's hypotheses to understand the role and relationship of each construct in the proposed conceptual model, the relationship within and across each section towards the final model was tested. The SAS 9.4 (2020) output on the path's standardised coefficient with relevant critical ratios was examined to test the study's hypotheses. To respond to Research question 6, which is whether there are differences in the

application of procurement practices by the clothing industry stakeholders, hypotheses were formulated as presented in Table 7.2.

The hypotheses of the study are presented in Table 7.2 below.

Table 7.2: The study's hypotheses

No	Null hypothesis		Positive hypothesis
H01a	Procurement practices are not affected by NEMA.	H1a	Procurement practices are affected by NEMA.
H01b	Procurement practices are not affected by procurement policies and regulations.	H1b	Procurement practices are affected by procurement policies and regulations.
H02	Procurement practices do not affect the value of procurement.	H2	Procurement practices affect the value of procurement.
H03	Procurement practices do not affect environmental sustainability.	H3	Procurement practices effect environmental sustainability.
H04	Procurement practices do not affect social sustainability.	H4	Procurement practices affect social sustainability.
H05	Procurement practices are not affected by lack of support.	H5	Procurement practices are affected by lack of support.
H06	Procurement practices are not affected by complexity.	H6	Procurement practices are affected by complexity

7.4   RESULTS OF THE STRUCTURAL MODEL HYPOTHESIS

SEM was performed to assess the conceptual model in this study, and the relationship between multiple variables and constructs as well as the hypothesis. In a structural model, a hypothesis is generated for each path that connects two latent variables. SAS 9.4 (2020) software calculates standardised coefficients, which range from +1 to -1, to represent relationships in both measurement and structural models (Hair *et al.*, 2020). As stated by Hair *et al.* (2020:79), when a relationship is close to +1, it means that it is strongly positive. Conversely, when it is near -1, it indicates a significant negative correlation. Coefficients with a value of zero are considered unrelated. For optimal results, it is recommended that the standardised path coefficients be a minimum of 0.2, but preferably greater than 0.3. Figure 7.2 below presents the final SEM model linking procurement practices with NEMA, government policies, procurement value, environmental sustainability, social sustainability, lack of support,

and complexity. It is important to note that all standard coefficient path estimates were significant at p≤0.05 and p≤ 0.001.
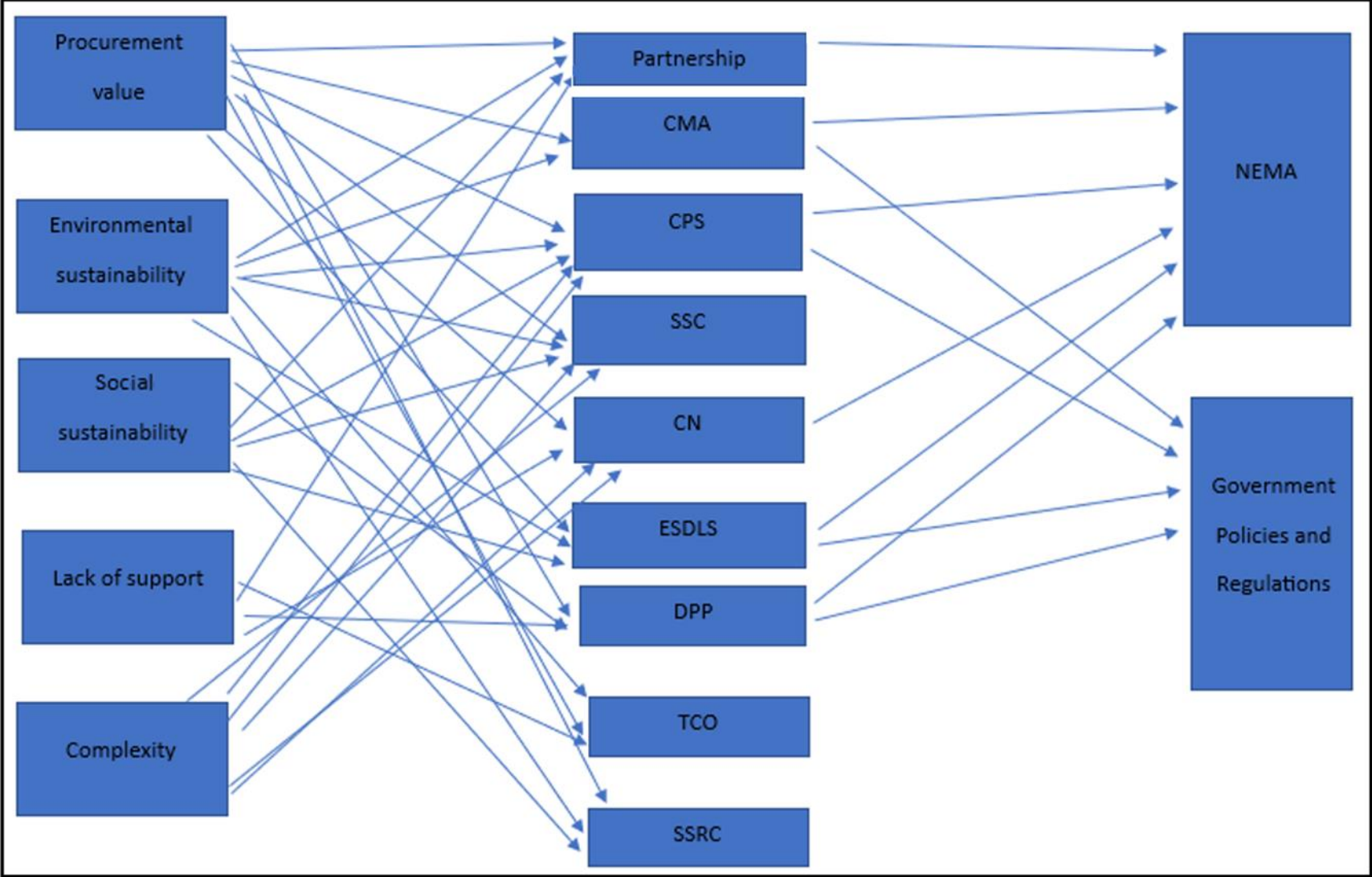
Figure 7.2:   SEM model for procurement practice.

Figure 7.2 shows the SEM model linking procurement practices with NEMA, procurement policies and regulations, environmental sustainability, sustainable procurement, lack of support and complexity. The next section presents the results of the effect of procurement practice on NEMA and procurement policies and regulations.

7.4.1 Assessing the relationship between procurement practice on NEMA and procurement policies and regulations

This section tested the relationship between procurement practices and NEMA and procurement policies and regulations. The variables of procurement practice were tested against the following constructs: NEMA and procurement policies and regulations. The variables of procurement practice are as follows: strategic partnership, CMA, CPS, SSC, CN, ESD and DP. The result of the study shows an association between the variables of procurement practices and NEMA and procurement policies and regulations.

The outcome is presented in Table 7.3 below.

Table 7.3:   Relationship between procurement practice with the constructs: NEMA and procurement policies and regulations

	Path			Parameter	Beta coefficient/ estimate	Standard Error	t Value	Pr > |t|
H1a	**Procurement practice**	**===>**	**NEMA**					
	Strategic partnership	===>	NEMA	_Parm01	-0.104	0.044	-2.341	0.019
	CMA	===>	NEMA	_Parm02	0.264	0.043	6.176	<0.001
	CPS	===>	NEMA	_Parm03	0.136	0,049	2.778	0.006
	SSC	===>	NEMA	_Parm04	0.076	0,039	1.966	0.049
	CN	===>	NEMA	_Parm05	-0.104	0.037	-2.779	0.006
	ESD	===>	NEMA	_Parm06	0.206	0.040	5.123	<0.001
H1b	CMA	===>	Procurement policies and regulations	_Parm07	0.193	0.042	4.577	<0.001
	DP	===>	Procurement policies and regulations	_Parm08	0.122	0.037	3.335	0.001
	CPS	===>	Procurement policies and regulations	_Parm09	0.229	0.047	4.907	<0.001
	ESD	===>	Procurement policies and regulations	_Parm10	0.194	0.041	4.795	<0.001

Research hypothesis 1a and 1b was tested in Table 7.3, which examined the relationship between procurement practices and NEMA and procurement policies and regulations in the SA clothing industry. The variables of procurement practice were tested against procurement policies and regulations and NEMA, and the results are indicated below:

- **Relationship between procurement practice and the construct: NEMA**

The results show a relationship between the procurement practice constructs (strategic partnership, CMA, CPS, SSC, CN, ESD) and NEMA. CPS and NEMA have a strong positive association (β=0.136, std error=0.049, t=2.778, p= 0.006). This is followed by the strongest negative relationship between strategic partnership and NEMA (β=-0.104, std error= 0.044, t=-2.341, p=0.019). Also, ESD and NEMA show a strong relationship (β=0.206, Std error=0.040, t=5.123, p=<0.001). The coefficient of SSC and CN variables and the construct NEMA were greater than 0.3, representing an evident relationship. These results imply that when clothing organisations engage in legally binding contracts, they agree on standards and comply with procurement policies. This will make them compliant with the National Environmental (NEMA) Act of 107 of 1998, which forces organisations to protect the environment and have ISO and SAC certifications. Also, it may become easy to comply with environmental regulations set in the country when a strategic partnership is formed with local suppliers. The consideration of social upliftment when designing contracts is highlighted as necessary.

The results also show an association between the SC partners in terms of NEMA requirements, and compliance is essential. Also, during contracting, partners must have a mutual agreement regarding ISO 14000 and SAC compliance. From the results, it can be confirmed that if clothing organisations fail to manage TCO, compliance with NEMA may be compromised. Having enough resources and funding for finances and infrastructure might assist the industry to improve compliance with NEMA. Designing legally binding agreements that support NEMA compliance when contracting may improve compliance with NEMA. Supporting local suppliers in terms of infrastructure, resources, funding, and finances might improve compliance with NEMA. When issues of bargaining powers are managed well, the chances that other businesses may run at a loss due to contract flaws may be limited. Thus, improving

compliance with NEMA, which has cost implications. The findings of the study relate to the work of Fung *et al.* (2019:1) and that of Perry and Wood (2019:2) and CottonSA (2019:3), which confirmed that the clothing industry contributes to high pollution. The aforementioned authors also stated that the clothing industry needs to be examined in terms of its compliance with social and environmental standards, and suppliers need to be verified in terms of social and environmental compliance when contracting.

In addition, there are issues of biasness, bargaining powers, and opportunistic behaviour if compliance with NEMA is compromised. When these issues are addressed, there is a greater possibility of compliance with NEMA. The results also mirror the findings by Perry and Wood (2019:8) who concurred that clothing retailer buyers have the upper hand over suppliers because they dominate the industry, and that this is costly to clothing suppliers. Furthermore, the study by Jack (2020:24) and Chen *et al.* (2021:1237) noted that in the retail industry, as the volume of retail organisation increases, their bargaining powers over suppliers (clothing manufacturers) increases, and the suppliers are compelled to lower prices. This may affect compliance, as Netshishivhe, (2021:34) and Moloi (2019:71) explained that obtaining NEMA and SAC certification, and ensuring compliance has cost implications for the organisation. From the results, it is also noted that improvement in strategic partnership leads to improvement in compliance with NEMA, whereas lack of strategic partnership compliance leads to lack of compliance with NEMA.

The literature also confirmed that it is important for all partners in the SA clothing industry to comply with the policies relating to environmental compliance (Majeis *et al.*, 2019:145), and that a lack of conformance leads to non-compliance with NEMA. The literature noted the importance of engaging in legally binding contracts to improve environmental and social compliance (Twyg, 2020:50; CottonSA, 2019:3), Also, ESD leads to compliance with NEMA, and when local suppliers are supported in terms of infrastructural development, funding, and finances, they will be able to conform to environmental standards and obtain NEMA certification. Moloi's (2019:71) study which was based in SA, also confirmed that there are other costs, such as carbon tax payments, which compel the industry to combat carbon and energy savings through green initiatives and joint actions. CottonSA (2019:1) and Jack (2020:23) noted that the lack of a proper government system to support the industry, high income tax, competition, and corruption continue to cripple the industry.

Therefore, Hypothesis H1a: Procurement practices are affected by NEMA, is supported, and the null hypothesis H01b is rejected. This confirms that the conceptualised model fits the specified sample data well.

- **The relationship between procurement practice and the construct: procurement policies and regulations**

The results show a relationship between the procurement practice constructs (CMA, DP, CPS and ESD) and the procurement policies and regulations. The highest coefficient (and thus strongest relationship) was evident between CPS and other government policies and regulations (β =0.229, std error=0.047, t=4.907, p=<0.001). This was followed by a strong positive relationship between ESD and procurement policies and regulations (β=0.194, std error=0.041, t=4.795, p=<0.001). A strong association is evident between CMA and procurement policies and regulations (β=0,193, std error=0.042, t=4.577, p=<.001). The coefficient of DP and the construct government policies and regulations was greater than 0.3, representing an evident relationship. The results show that procurement policies and standards are adopted when an SA clothing organisation considers social upliftment and when local suppliers are contracted and supported. This is also evident when the SA industry engages in legal contract agreements and is empowered by the B-BBEE and IPAP policies. B-BBEE compliance regarding local support is critical in the SA clothing industry. DP should support B-BBEE compliance to adhere to procurement policies, and SA retail buyers should buy from local clothing manufacturers.

There should also be a mutual agreement between partners on standards that reform the industry regarding infrastructure, resources, technology, finance, and skills support. Government support is needed to fund the industry both financially, and with resources, infrastructure, technology, and the necessary skills. According to studies conducted by Dos Santos (2020:40) and the DTIC (2020:40), it has been confirmed that local suppliers in South Africa lack the necessary resources and capabilities to handle global challenges in the industry. Kaplan (2020:116) noted that the IPAP also highlighted that SA domestic suppliers lack the necessary resources and capabilities to tackle global threats in the clothing industry. According to the literature, the B-BBEE policy encourages organisations to support black entrepreneurs and suppliers (Ekurhuleni, 2019), and local suppliers should be preferred during supplier selection

and contracting in the SA clothing industry. Therefore, hypothesis H1b: Procurement practices are affected by procurement policies and regulations, is supported, and the null hypothesis Ho1b is rejected. This confirms that the conceptualised model fits the specified sample data well.

7.4.2 Assessing the relationship between the value of procurement and procurement practices

This section discusses the relationship between the value of procurement and procurement practice. Procurement value as a construct was tested with the following procurement practices variables: strategic partnership, CMA, TCO, DP, CPS, SSC, SSRC, CN, and ESD. The outcome is presented in Table 7.4 below:

Table 7.4: **Relationship between the value of procurement and procurement practices**

H2	Path			Parameter	Beta coefficient/ estimate	Standard Error	t Value	Pr > |t|
	Procurement value	===>	Strategic partnership	_Parm11	0.270	0.037	7.310	<0.001
	Procurement value	===>	CMA	_Parm12	0.245	0.036	6.749	<0.001
	Procurement value	===>	TCO	_Parm13	0.259	0,039	6.711	<0.001
	Procurement value	===>	DP	_Parm14	0.202	0.038	5.264	<0.001
	Procurement value	===>	CPS	_Parm15	0.395	0.041	9.731	<0.001
	Procurement value	===>	SSC	_Parm16	0.230	0.046	4.974	<0.001
	Procurement value	===>	SSRC	_Parm17	0.167	0.045	3.704	0.000
	Procurement value	===>	CN	_Parm18	0.312	0.037	8.435	<0.001
	Procurement value	===>	ESD	_Parm19	0.272	0.047	5.733	<0.001

Research hypothesis 2 was tested in Table 7.4. The relationship between the value of procurement as a construct and procurement practice (strategic partnership, CMA, TCO, DP, CPS, SSC, SSRC, CN and ESD) were tested, and this construct shows an association with the value of procurement. The research findings show the following

association below: The strongest positive relationship between procurement value and ESD (β=0.272, Std error= 0.047, t = 5.733, p<.001) is observed. Also, a strongest positive relationship is confirmed between procurement value and SSC (β=0.230, Std error=0.046, t=4.974, p<.001). This is followed by a strongest positive association between procurement value and SSRC (β=0.167, Std error=0.045, t=3.704, p<0.002). The variables of strategic partnership, CMA, TCO, DP and CN with the construct procurement value have a coefficient greater than 0.3, representing an evident association.

The results show that procurement practice in the SA clothing industry adds value when it can maintain TQM and TCO, improve resource capability, and order accuracy, reduce lead time, and adopt clear policies and standards. Also, the procurement practice adds value when the industry adheres to the code of conduct and promotes local support, local economic development, local infrastructure upliftment, improved working conditions and compliance with environmental sustainability. Furthermore, the findings confirmed that procurement suffers when there are issues of bargaining power. Preventing biasness and opportunistic behaviour during contract negotiation and managing TCO improve the value of procurement. The literature review of the study also noted that procurement practice in the SA clothing industry adds value when there is a strategic partnership with local suppliers, global competency, local economic development, and compliance with environmental sustainability (Fung *et al.*, 2019:1; Perry & Wood, 2019:8; CottonSA, 2019:3).

Procurement will also add value when there are improvements in TCO, improvement with resource capability, improvement in DP, and the adoption of clear policies and standards (Kuture, 2022:72; Veitch, 2021:32). Local support and legal and clear contracts with the prevention of biasness add value to procurement (Perry & Wood, 2019:8; Moloi, 2019: 71). In addition, value is added to procurement where there is local economic development, local infrastructure upliftment, improved working conditions (Dos Santos, 2020:8; Netshishivhe, 2021:3; Veitch, 2021:5; DTIC, 2020:40). The findings confirm that Research hypothesis 2: Procurement practices affect the value of procurement in the SA clothing industry, is supported in the study, and the null hypothesis H02 is rejected, indicating that the conceptualised model fits the specified sample data well.

7.4.3 Assessing the relationship between environmental sustainability and procurement practice

This section presents the relationship between the construct of environmental sustainability and the variables of procurement practice, namely, strategic partnership, CMA, TCO, CPS, SSC, SSRC and ESD. The results are represented in Table 7.5 below.

Table 7.5: Relationship between environmental sustainability and procurement practice

H3	Path			Parameter	Beta coefficient/ estimate	Standard Error	t Value	Pr > |t|
	Environmental sustainability	===>	Strategic partnership	_Parm20	0.133	0.027	4.920	<0.001
	Environmental sustainability	===>	CMA	_Parm21	0.340	0.035	9.772	<0.001
	Environmental sustainability	===>	TCO	_Parm22	0.300	0.034	8.956	<0.001
	Environmental sustainability	===>	CPS	_Parm23	0.238	0.033	7.250	<0.001
	Environmental sustainability	===>	SSC	_Parm24	0.204	0.035	5.793	<0.001
	Environmental sustainability	===>	SSRC	_Parm25	0.261	0.035	7.374	<0.001
	Environmental sustainability	===>	ESD	_Parm26	0,148	0,036	4,100	<0.001

Research hypothesis 3 was tested in Table 7.5. The association between the environmental sustainability construct was examined with the variables of procurement practice. The results show that procurement practice constructs (strategic partnership, CMA, TCO, CPS, SSC, SSRC and ESD) are associated with the environmental sustainability constructs. The results show a high association level between ESD (β=1.48, Std error= 0.036, t= 4.100, p<0.001). This is followed by the association between environmental sustainability and SSC (β=0.204, Std error= 0.035, t=0.793, p<0.001), and the association between environmental sustainability and SSRC (β=0.261, Std error= 0.035, t=7.374, p<0.001). Also, the association between environmental sustainability and CMA is high (β=0.340, Std error= 0.035,

t=9.772, p<0.001). Associations between the construct of environmental sustainability and variables of procurement practices, namely: strategic partnership, ESD and CPS, are evident with a coefficient greater than 0.3. There is also an observed relationship between the construct of environmental sustainability and variables of a strategic partnership with a coefficient greater than 0.2.

From the results, it is observed that environmental sustainability may improve through a strategic partnership, local ordering, compliance with policies about environmental standards, legally binding contracts, managing TCO, funding and resource availability. It is also observed that to promote a sustainable environment fast fashion production should be prevented as it contributes to increasing pollution, and clothes should be manufactured in an eco-friendly manner. Also, the importance of subscribing to SAC, which assesses environmental, social, and labour impacts across the supply chain, is noted to improve a sustainable environment. In addition, preventative measures should be in place for increased carbon emissions.

It is crucial for the clothing supply chain to consider the effect of their processes on the environment, for example, the management of the use of insecticides on fabrics is seen as crucial to promoting a sustainable environment. Similarly, ESD in terms of technical support and integration, infrastructure, and local buying, is crucial. Also, support in terms of finance, resource and skills are deemed essential.

The results indicate that environmental compliance may be compromised if clothing organisations fail to manage TCO. It is noted that accurate order specification may prevent manufacturing rework and reduce pollution, thus improving compliance. The findings by Fung *et al.* (2019:1) and Perry and Wood (2019:2) also confirmed that fast fashion production, increase carbon emission and results in pollution. Also, the literature attested that mismanagement of the use of insecticides on fabrics compromises the environment (Majumda *et al.*, 2020:2).

The literature also validated environmental sustainability requirements and suggested that clothing organisations should be compelled to engage in legally binding contracts. They should also agree on standards and be compliant with procurement policies, manage the TCO, establish contracts with local suppliers, and avoid opportunistic behaviour during contract negotiation. In addition, it is also regarded as crucial to be resourceful to obtain funding. These findings are confirmed by the work of Fung *et al.*

(2019:1), Perry and Wood (2019:2), CottonSA (2019:3) and Moloi (2019:71). The findings confirm that Research hypothesis 3: Procurement practices affect environmental sustainability, is supported in the study, and the null hypothesis H03 is rejected, indicating that the conceptualised model fits the specified sample data well.

7.4.4 Assessing the relationship between social sustainability and procurement practice

This section assesses the relationship between social sustainability and procurement practice. The section tests social sustainability as a construct with the variables of procurement practices (strategic partnership, DP, CPS, SSC, SSRC and ESD). The results are presented in Table 7.6 below:

Table 7.6:   Relationship between social sustainability and procurement practice

H4	Path			Parameter	Beta coefficient/ estimate	Standard Error	t Value	Pr > |t|
	Social sustainability	===>	Strategic partnership	_Parm27	0.350	0.037	9.501	<0.001
	Social sustainability	===>	DP	_Parm28	0.269	0.039	6.987	<0.001
	Social sustainability	===>	CPS	_Parm29	0.142	0.038	3.727	0.000
	Social sustainability	===>	SSC	_Parm30	0.145	0.044	3.285	0,001
	Social sustainability	===>	SSRC	_Parm31	0.195	0.041	4.825	<0.001
	Social sustainability	===>	ESD	_Parm32	0.195	0.047	4.137	<0.001

Research hypothesis 4 was tested in Table 7.6 as follows: social sustainability was tested with the variables of procurement practices (strategic partnership, DP, CPS, SSC, SSRC and ESD), and these variables of procurement practices were found to have an association with sustainable procurement. The strongest positive association was observed between social sustainability and ESD (β=0.195 Std error= 0.0471, t=4.137, p<0.001). This was followed by social sustainability and SSC (β=0.145, Std error= 0.044, t=3.285, p<0.001). Also, social sustainability and SSRC (β=0.195, Std error=0.041, t=4.825, p<0.001). In addition, the relationship between social

sustainability construct and variable of strategic partnership, DP and CPS was evident with the value of a coefficient greater than 0.3. The results show that social sustainability in terms of the recognition and fair remuneration of employees, corporate safety measures, and healthy working conditions lead to an improved strategic partnership, DP, CPS, SSC, SSRC and ESD. It also indicates that employee remuneration, health, and safety may improve when a relationship is built with capable local manufacturers. Also, adhering to policies and social standards improves sustainable procurement. Being resourceful, skilful, and having finances and local support can improve social sustainability and thereby lead to sustainable procurement. In addition to managing the TCO, bargaining powers enhance social sustainability.

It is also evident that strategic partnerships that promote local support may lead to social sustainability. Compliance with social standards, social upliftment and resource, funding and technical support may improve social sustainability. The literature also confirmed the findings as it noted that sustainable procurement is achieved through the type of procurement practice that considers the social upliftment of the community and strives to reform the local economic sector and adhere to social standards (Jin & Cedrola, 2019:5). To achieve this, local suppliers need funding in terms of finance, technology, infrastructure, and other supporting resources (Dos Santos, 2020:40).

The literature attested to the fact that the clothing industry needs to strive to treat workers well and to ensure the environmental safety of the clothing supply chain (Fung *et al.*, 2019:2). SA clothing organisations are subjected to higher manufacturing costs than other countries, such as China, where employees engage in a low-wage agreement with workers (Netshishivhe, 2021:32; Mokwana, 2021:16). The findings confirm that Research hypothesis 4: Procurement practices affect social sustainability, is supported in the study, and the null hypothesis H04 is rejected, indicating that the conceptualised model provides a good fit for the specified sample data.

7.4.5 Assessing the relationship between lack of support and procurement practices

In this section, the relationship between lack of support as a challenge in procurement practice is tested with the variables of procurement practices, namely, strategic partnership, TCO, DP and CN. The results are represented in Table 7.7 below.

Table 7.7:   Relationship between lack of support and procurement practices

H5	Path			Parameter	Beta coefficient /Estimate	Standard Error	t Value	Pr > |t|
	Lack of support	===>	Strategic partnership	_Parm33	0.19376	0.030	6.548	<0.001
	Lack of support	===>	TCO	_Parm34	0.18336	0.036	5.081	<0.001
	Lack of support	===>	DP	_Parm35	0.26122	0.036	7.265	<0.001
	Lack of support	===>	CN	_Parm36	0.26584	0.042	6.394	<0.001

Research hypothesis 5 was tested in Table 7.7. The results presented in Table 7.7 show the association between lack of support and the variables of procurement practices. The strongest hypothesised positive relationship between lack of support and CN (β=0.266, Std error=0.042, t=6.392, p<0.001) is evident. This is followed by the connection between lack of support and TCO (β= 0.183, Std error=0.036, t= 5.081, p<0.001). Also, the association between lack of support and DP (β= 0.261, Std error=0.036, t=7.265, p<0.001). The findings show that challenges to procurement are created by lack of local support, environmental compliance, resources, skills, finance and technical support, and opportunistic behaviour, and consideration of social needs. Lack of government funding, the influx of imports, and the dominating power buying of local clothing buyers during contract negotiation impact strategic partnerships, TCO, DP and CN. As per the results, procurement becomes challenging when local clothing buyers do not buy from local suppliers/ manufacturers. When local suppliers are not contracted, strategic partnerships that strive towards reforming the local economic sector and global competency are compromised.

In addition, it will not be easy to manage the TCO, as costs that are managed properly may lead to reduced marketing, reduced product manufacturing, transport, and storage costs. Also, it is crucial that social needs are considered. Accurate orders, the prevention of order specification errors, and adherence to industry carbon emission policies may reduce the TCO. These findings were supported by Dos Santos (2020:40) and Netshishivhe (2021:34), who revealed that the industry needs more funding in terms of finances, resources, infrastructure, and local support. Also, the

study by Worku (2019:98) revealed that the flooding of clothing imports in SA affects the industry's ability to compete globally. Dos Santos (2020:30) confirmed that SA is rapidly de-industrialising as it has undergone an extended period of de-industrialisation, mainly due to a lack of local support. Also, it is because clothing retailers have the upper hand over suppliers who dominate the industry, which is costly to clothing suppliers (Perry & Wood, 2019:8). For example, according to a study conducted by Netshishivhe in 2021, the local textile industry in Ekurhuleni is facing significant challenges and 55% of textile producers, manufacturers, and retailers in the area have been forced to downsize and lay off employees. As a result, the industry is struggling to remain viable. The findings confirm that Research hypothesis 5: Procurement practices are affected by lack of support, is supported in the study, and the null hypothesis H05 is rejected. This confirms that the conceptualised model fits the specified sample data well.

7.4.6 Assessing the relationship between complexity and procurement practices

In this section, the relationship between complexity, as a construct, is tested with the variables of procurement practices, namely: DP, SSC, CPS and CN. The results are presented in Table 7.8 below:

Table 7.8: Assessing the relationship between complexity and procurement practices

H6	Path			Parameter	Beta coefficient/ estimate	Standard Error	t Value	Pr > |t|
	Complexity	===>	DP	_Parm37	0.199	0.031	6.431	<0.001
	Complexity	===>	SSC	_Parm38	0.125	0.033	3.798	0.001
	Complexity	===>	CPS	_Parm39	-0.096	0.0272	-3.534	0.000
	Complexity	===>	CN	_Parm40	0.144	0.038	3.812	0.000

Research hypothesis 6 was tested in Table 7.8. The results show the association between the complexity and variables of procurement practices (DP, SSC, CPS and CN). The results showed an evident relationship between complexity and CN (β=0,144, Std error=0.038, t= 3.812, p<0.001). Also, between complexity, and SSC (β= 0.125, Std error=0.033, t=3.798, p<0.001). Followed by complexity and DP (β=

0.199, Std error=0.031, t= 6.431, p<0.001). Also, a hypothesised negative relationship between complexity and CPS was evident. The coefficient level showed the relation between the complexity construct and variables of CPS and was above 0.2. The findings confirm that challenges, such as complex production, fashion complexity and too many standards in manufacturing clothes, affect procurement. When there are too many standards in the clothing production process, lack of resources, fashion complexity and complex production processes, DP, SSC, CPS and CN are affected. Hence, the accuracy of demand planning becomes affected. The lack of resources harms the industry's capacity to perform and achieve global competency.

Issues related to biasness during contract negotiation might complicate manufacturing processes. Therefore, it calls for partners in the industry to set rules and standards and comply with set standards. Supporting local manufacturers and strategic partnerships might improve processes and reduce fashion complications. From the results, it is noted that when clothing buyers have dominant power, they may pressure manufacturers regarding order changes and encourage fast fashion production, which may complicate the manufacturing process and result in ordering errors. Moreover, the support and authentication of local manufacturers during the sourcing and contracting stage may assist retail buyers to ensure that standard specifications will be met, and that errors will be prevented. When parties have a legal agreement on specific standards, this may prevent complications in manufacturing and production. Swaminathan and Venkitasubramony (2023:3) and Peters *et al.* (2021:2) agreed that this industry is complex, and that there are multiple manufacturing stages which may compromise the accuracy of the ordering system.

Various authors, such as Shen *et al.* (2019:2), asserted that the procurement process of the industry is affected by the complexity of fashion trends. It may be challenging to adhere to social standards and environmental standards, as there is a lack of resources in the industry (Dos Santos, 2020:40). This results in issues of non-compliance with social standards and environmental standard policies that have cost implications (Moloi, 2019:71). For example, local suppliers may not qualify when rating and authenticating them for compliance due to a lack of resources. It is documented in the literature that fast fashion leads to environmental pollution (Šajn, 2019:10). Because of the complexity of the industry and competitive pressure, issues of biasness arise (Moloi, 2019:71). The findings confirm that Research hypothesis 6: Procurement

practices are affected by complexity as a challenge, is supported in the study. The null hypothesis H06 is rejected, indicating that the conceptualised model fits the specified sample data well.

7.5   CONCLUSION

This chapter presented the inferential data analyses of the study, which included the SEM where the conceptual model fit was tested using the model good-fit indices. The path coefficient was statistically calculated for the relationship between multiple constructs, which assisted in testing the study's hypothesis. To prove the existence of the related variables of procurement practice, such as strategic partnerships, CMA, CPS, SSC, CN, SSRC, TCO, DP, CPS and ESD were tested against NEMA, government policies and regulations, procurement value, environmental sustainability, sustainable procurement, lack of support and complexity. All six hypotheses examined were supported and consistent with the theory, and the null hypotheses were rejected.

The next chapter (Chapter 8) presents the conclusion and recommendations of the study.

CHAPTER 8:
CONCLUSION AND RECOMMENDATIONS

8.1   INTRODUCTION

This chapter presents the study's conclusion and recommendations. The chapter starts by revisiting the research questions and objectives and explaining how they were accomplished. The chapter also discusses the results of the research hypotheses that were formulated to address the main research objective, namely, to develop a procurement framework for promoting socio-economic objectives in the SA clothing industry. The chapter concludes with the theoretical and managerial contributions of the study, as well as the limitations of both the literature review and empirical results. Lastly, recommendations are made for the practical application of the findings and future research studies.

8.2   RESEARCH QUESTIONS AND OBJECTIVES

The primary objective of the study was to develop a procurement framework in the South African clothing industry to enhance socio-economic objectives. The research question is, therefore, "What kind of procurement framework can the SA clothing industry use to promote socio-economic objectives?"

To answer the main research question, the following secondary research questions needed to be answered:

1. How is procurement conducted in the SA clothing industry?
2. What are the relevant policies and regulations governing procurement in the SA clothing industry?
3. What is the value of procurement in the SA clothing industry?
4. How sustainable is procurement in the clothing value chain?
5. What are the procurement challenges faced by the SA clothing industry?
6. Are there differences in the application of procurement practices by the clothing industry stakeholders?

To achieve the main objective, which is to develop a procurement framework for promoting socio-economic objectives in the SA clothing industry, the following secondary objectives needed to be achieved:

1. To determine how procurement is conducted in the SA clothing industry.
2. To determine relevant policies and regulations governing procurement in the SA clothing industry.
3. To investigate the value of procurement in the SA clothing industry.
4. To investigate the extent of sustainability in the procurement clothing value chain.
5. To determine procurement challenges faced by the SA clothing industry.
6. To determine the differences in the application of procurement practices by the clothing industry stakeholders.

In addition, to address Research question 6, the following hypotheses were formulated, as indicated in Table 8.1.

Table 8.1: The study's hypotheses

No	Null hypothesis		Positive hypothesis
H01a	Procurement practices are not affected by NEMA.	**H1a**	Procurement practices are affected by NEMA.
H01b	Procurement practices are not affected by procurement policies and regulations.	**H1b**	Procurement practices are affected by procurement policies and regulations.
H02	Procurement practices do not affect the value of procurement.	**H2**	Procurement practices affect the value of procurement.
H03	Procurement practices do not affect environmental sustainability.	**H3**	Procurement practices affect environmental sustainability.
H04	Procurement practices do not affect social sustainability.	**H4**	Procurement practices affect social sustainability.
H05	Procurement practices are not affected by lack of support.	**H5**	Procurement practices are affected by lack of support.
H06	Procurement practices are not affected by complexity.	**H6**	Procurement practices are affected by complexity

8.3   DISCUSSION OF THE RESEARCH FINDINGS

This section discusses the research results as presented in Chapters 6 and 7. The secondary research questions are answered first to answer the main research question.

8.3.1 Secondary research question 1

- *How is procurement conducted in the SA clothing industry?*

To answer the first research question, various literature sources were explored to determine how procurement is practised in the SA clothing industry. Nine (9) constructs of procurement practice in the study were revealed and discussed in the literature in Chapter 3. The respondents were asked questions about these constructs. The constructs were analysed descriptively in Chapter 6, namely: demand planning (DP), strategic sourcing compliance (SSC), strategic sourcing resource capability (SSRC), contract mutual agreement (CMA), contract negotiation (CN), contract policy and standards (CPS), TCO, enterprise supplier development (ESD) and strategic partnership. The results were presented in Chapter 6 (Section 6.3)

The following outcomes were established in the literature and the findings of the study:

8.3.1.1 *Demand planning (DP)*

The descriptive statistics results revealed that the overall mean value score of 3.49 confirmed that when preparing to produce clothing, it is essential to have precise information on the number of orders received. It is also crucial to manage forecasting errors in clothing orders, as order specification errors result in significant costs. It is vital to manage these costs, and partners should share them. Additionally, DP should consider customers' cultural and social needs and promote local purchasing. Participation in international trade shows can help the industry stay up to date on new fashion trends. This was also confirmed in Chapter 3 (Section 3.4.1).

Contrarily, the literature confirmed that DP is associated with inaccurate orders and that there are costs associated with inaccurate orders, which result in additional costs on overtime, sampling, production, delays, and monetary loss. Hence, the literature states that business partners should share costs from errors when ordering clothes (Yue, 2020:147), and SA retail clothing shops should consider buying locally and pay attention to social, and environmental standards and be compliant (Mejías *et al.* 2019:145; Barnes & Higginson, 2019:14).

8.3.1.2 *Strategic sourcing compliance (SSC)*

The descriptive statistics results showed an overall mean value of 3.31, indicating that the following statements are significant in SSC: (1) seasonal ordering, (2) adhering to social and (3) environmental standards, (4) having structured ratings on suppliers, and (5) verification is significant in strategic sourcing in the industry. This is confirmed in the Chapter 3 (Section 3.4.2). Although the respondents noted that seasonal ordering and compliance with environmental and social standards are important, it seems difficult to manage that when it comes to fashion clothes as they are produced constantly and increase pollution in the industry (Jenkin & Hattingh, 2020:40; Fung *et al.*, 2019:1). Hence, suppliers are rated and verified based on their compliance with social and environmental standards (Mejías *et al.*, 2019: 145).

8.3.1.3 *Strategic sourcing resource capability (SSRC)*

It was discovered in the descriptive statistics of the study that resource availability, funding, financial stability, and employee skills are extremely significant with an average mean score of 3.49. The findings were confirmed in Chapter 3 (Section 3.4.2). Resource availability, finance, funding, and employee skills are the key pillars associated with resource capability in the industry, and the industry needs all these to compete (Netshishivhe, 2021:3; Do Santos, 2020:40). Partners should assist each other with knowledge transfer when developing products to improve the output and quality of products.

8.3.1.4 *Contracting mutual agreement (CMA)*

The descriptive statistics results reported an overall mean score of 3.28, confirming that the establishment of formal contracts, legal involvement, resources, and infrastructure support are extremely significant. Also, considerations of economic, political and market behaviour when designing contracts were deemed to be important. This supported the findings that were confirmed in Chapter 3 (Section 3.4.3). However, issues of immoral practice were noted where retail clothing buyers establish and control price settings during contracting and late payments, and which place suppliers in a financial predicament (Nabee & Swanepoel, 2021:4). Industry partners must agree on legally binding contracts, considering market, political, and economic behaviours. They should also determine how to assist each other during business transactions and include the agreement in the contract.

8.3.1.5 Contract negotiation (CN)

The descriptive statistics showed the highest mean score of 3.41, meaning that all respondents strongly agreed that bias, bargaining powers, and opportunistic behaviour should be prevented during contract negotiations, as confirmed in Chapter 3 (Section 3.4.3). It has been noted that clothing retail shops dominate the negotiation process and underpay local clothing suppliers/manufacturers when doing business (Moloi, 2019:89; Perry & Wood, 2019:8). Bias, opportunistic behaviour and bargaining powers can be prevented if a business lawyer is present when contracts are drawn up to ensure fairness.

8.3.1.6 Contracting policies and standards (CPS)

The descriptive statistics results show an overall mean score of 3.40, indicating that the respondents strongly agreed with policies and standards adoption in relation to: (1) designing legally binding contracts, (2) being compliant to agreed standards and (3) procurement policies, (4) considering social upliftment, and (5) having clear and understandable contracts. This was confirmed in Chapter 3 (Section 3.4.3). Issues of non-compliance with standard policies and regulations have been noted in the SA clothing industry (Mejías *et al.*, 2019:150). It is important that local development, the building of social capital and growth in the clothing industry of SA receive attention, as the industry is crumbling (Moloi, 2019:89). To succeed in the South African clothing industry, business partners should prioritise improving the local community and economy. It is also key to consult a business attorney for contract drafting and compliance.

8.3.1.7 Local support in ESD

The descriptive statistics results disclosed that the average mean score was 3.53, endorsing that all the following statements were regarded as extremely important in local support in ESDL: (1) technological advancement and (2) integration and (3) infrastructure development. This was confirmed in Chapter 3 (Section 3.4.4), where it was reported that the technological landscape in the industry has been affected and that there are challenges in terms of the lack of infrastructure and technology in local clothing manufacturing organisations (Dos Santos, 2020: 40). When entering business deals, it is important for partners to support each other in acquiring the necessary technology, sewing machines, and infrastructure. This will improve the performance

and capabilities of their supplies. Additionally, connecting their systems will enhance information efficiency and productivity in the manufacturing process.

8.3.1.8   Managing total cost of owning (TCO)

The descriptive statistics results for the management of TCO showed an overall mean score of 3.29, indicating that most respondents agreed with the statements that TCO should be managed as it can lead to surplus, product cost, marketing cost and lead time reduction. Managing TCO can also lead to high profits and reduced transport and storage costs. This was also confirmed in Chapter 3 (Section 3.4.4). Local supplier development in terms of training, resource support and sustainable compliance and TCO improvement is seen as significant, particularly in developing countries (Perry & Wood, 2019:17). The high costs associated with labour and production, tax, finance, and electricity in the industry were also revealed (Netshishivhe, 2021:39). The cost of doing business and productivity in the clothing industry is significantly affected by the lack of finance. Clothing manufacturers have a range of expenses to consider when conducting their business. As a result, managing these costs is challenging without adequate funding.

8.3.1.9   Strategic partnerships

The descriptive statistics for strategic partnerships revealed an overall mean score of 3.54, indicating that retail clothing buyers establish solid relationships with local manufacturers/suppliers, Partners are also encouraged to aim for global competency and to revamp the local economic sector by building trust, setting clear standards, complying with agreed-upon codes of conduct and environmental policies, and fostering relationships with capable suppliers. The findings are confirmed in Chapter 3 (Section 3.4.5). There is still lack of local support in the SA clothing industry, as clothing retail shops do not buy locally (Netshishivhe, 2021:3). Industry partners can create customised products by forming strategic partnerships. To ensure compliance and sustainability, both parties must establish standards and agreements. Each partner is accountable for educating their employees about these policies.

8.3.2   Secondary research question 2

What are the relevant policies and regulations governing procurement in the SA clothing industry?

The study sought to determine the relevance of policies and regulations supporting procurement in the SA clothing industry. This research question was achieved theoretically, descriptively and through SEM path analysis results. The results related to the relevance of procurement policies and regulations and the National Environmental Act (NEMA) and the procurement practice in the industry are discussed in this section, starting with procurement policies and regulations.

8.3.2.1 *Procurement policies and regulations*

The descriptive results in Chapter 6 (Section 6.4.2) showed an overall mean score of 3.33, confirming that the respondents agreed that B-BBEE policy encourages clothing retail buyers to do business with them and that they need that support. They also agreed that they should apply for government funding and obtain support in the form of capital from the PIP programme. These findings were confirmed in Chapter 3 (Section 3.5.1). However, it was noted that there is little local support, as the industry is globalised and local clothing buyers prefer trading with global suppliers (Netshishivhe, 2021:3). The IPAP policy offers monetary funding and capital and resource support. However, more funding in terms of finance and infrastructure is needed, and another challenge is that only registered clothing manufacturers are qualified to apply for such funding (Dos Santos, 2020:104). The study revealed that B-BBEE is a set of guidelines that encourages retail stores to support local clothing producers. These guidelines are part of the National Development Plan for the Clothing Textile Leather and Footwear (CTLF) industry. As a result, clothing sellers are required to support domestic manufacturers.

Nevertheless, local clothing manufacturers lack the capacity to enforce these regulations on their own, and they require governmental intervention and support. According to the IPAP, the government provides resources such as infrastructure, raw materials, and financial aid to the industry. Despite this funding, the industry still has room for improvement, since many companies are closing down their operations. Also, the SEM path analysis of the empirical results in Chapter 7 (Section 7.4.1) showed an association between the procurement practice constructs (CMA, DP, CPS and ESD) with government policies. The findings were also confirmed Chapter 3 (Section 3.6). The alignment between government policies and regulations and CPS was deemed to have a high practical effect. Similarly, the alignment between government policies

and CMA was deemed to have a high practical effect. South African clothing organisations prioritise social upliftment and local suppliers, comply with B-BBEE and IPAP policies, and need government support to thrive. DP should align with government policies, retail buyers should prioritise local manufacturers, and partnerships should enhance industry infrastructure and skills support. Also, finance resources and technology are key in this industry. Therefore, Research hypothesis H1b: Procurement practices are affected by procurement policies and regulations, is supported, and the null hypothesis H01b is rejected. This confirms that the conceptualised model fits the specified sample data well.

The results relating to the NEMA are presented below.

8.3.2.2   The National Environmental Management Act (NEMA)

The descriptive statistics presented in Chapter 6 (Section 6.4.2.2) revealed the overall mean score of 3.12 confirming that there is a need for clothing manufacturers to have the ISO14001 and SAC certification, and that compliance with ISO14001 is crucial. This was confirmed Chapter 3 (Section 3.6). It was also noted that clothing organisation need to calculate the effect of clothing SC on the environment and adhere to the SAC guidelines (Shen *et al.*, 2019:12). The industry must follow environmental regulations and reduce pollution by using green technology and recycling waste. The prevention of water pollution is vital, and government support is required for compliance. SEM was performed to assess if procurement practices are affected by NEMA. The SEM path analysis empirical results in Chapter 7 (Section 7.4.1) revealed that strategic partnerships, CMA, CPS, SSC, CN and ESD are affected by NEMA. Partnering with local suppliers helps with environmental regulations. Social upliftment should be included in contracts. Compliance with NEMA, ISO 14000, and SAC is crucial, and TCO management is important for NEMA compliance. Funding and binding agreements improve compliance. Similarly, supporting local suppliers improves compliance. Proper bargaining power management prevents contract flaws. It was also found that improving compliance with NEMA has cost implications.

Therefore, Hypothesis H1a: Procurement practices are affected by NEMA, is supported, and the null hypothesis H01a is rejected. This confirms that the conceptualised model fits the specified sample data well.

8.3.3   Secondary research question 3

What is the value of procurement in the SA clothing industry?

To answer the third research question, various literature sources were viewed to determine the value of procurement in the clothing industry. The respondents were asked questions about the procurement practices that add value to the SA clothing industry, and the results are presented below. This research question was achieved theoretically, descriptively, and through SEM path analysis results. The results are presented below.

8.3.3.1   The value of procurement practice in the SA clothing industry

The descriptive statistics revealed an overall mean score of 3.50, confirming that procurement can add value when it is able to maintain TQM and TCO, improve resource capability and order accuracy, reduce lead time, and adopt clear policies and standards. Also, when the industry adheres to the code of conduct and promotes local support, local economic development, local infrastructure upliftment, improved working conditions and compliance with environmental sustainability. This was confirmed by the literature discussed in Chapter 3 (Section 3.6). It is noted that ethical standards are not maintained in the industry as there needs to be more local support, resources, and compliance with social and environmental standards. Also, clothing manufacturers are subjected to sudden order changes from retail shops (Jenkin & Hattingh, 2022:5,17; Braglia *et al*., 2020:187; Shen *et al*., 2019:76; Jin & Cendrola, 2019:5). Improving TCO and TQM can cut expenses and generate return on investment (ROI). Supporting local businesses can boost the economy and create jobs.

It is crucial for procurement to prioritise sustainability and socio-economic goals. Procurement practices can also impact the value of procurement. The SEM path analysis empirical results presented in Chapter 7 (Section 7.4.2) indicated the relationship between the value of procurement as a construct and procurement practice (strategic partnership, CMA, TCO, DP, CPS, SSC, SSRC, CN and ESD). The SEM results also confirmed that procurement practice in the SA clothing industry adds value when it is able to maintain TQM and TCO, improve resource capability and order accuracy, reduce lead time, and adopt clear policies and standards. The findings confirm that Research hypothesis 2: Procurement practices affect the value of

procurement, is supported in the study, and the null hypothesis H02 is rejected, indicating that the conceptualised model fits the specified sample data well.

The variables of procurement practice were also tested against environmental sustainability, and the results are presented below.

8.3.4 Secondary research question 4

How sustainable is procurement in the clothing value chain?

The study sought to determine the sustainability of procurement in the clothing value chain. To answer this fourth research question, questions were answered theoretically, descriptively and through SEM path analysis results. The following two constructs were assessed to determine the sustainability of procurement: environmental and social sustainability. The results of environmental sustainability are presented below:

8.3.4.1 Environmental sustainability

The descriptive results in Chapter 6 (Section 6.7.2) revealed an overall mean score of 3.24, confirming that fast fashion contributes to pollution. Also, clothes should be manufactured in an eco-friendly manner. The importance of subscribing to the SAC was also acknowledged. Preventative measures should be in place relating to increased carbon emissions, and the clothing supply chain process's effect on the environment was considered as crucial. Also, the use of insecticides on fabrics should be carefully managed. This was confirmed in Chapter 3 (Section 3.7).

Even though the respondents agreed that preserving the environment is important, the literature confirms that the industry is still the highest contributor to environment pollution (Fung *et al.*, 2019:1; Perry & Wood, 2019:2; CottonSA, 2019:3). From the results, the industry should note that compliance with environmental sustainability is a requirement and non-compliance is regarded as an offence by the government policy. They should note that the government of SA has the authority to shut down their operation if they notice non-compliance issues. Caring for the environment assists in reducing global warming that may destroy people's lives.

In addition, the SEM path analysis results in Chapter 7 (Section 7.4.3) confirm the association between procurement practices and environmental sustainability, as follows: strategic partnership, CMA, TCO, CPS, SSC, SSRC and ESD. The findings were also confirmed Chapter 3. To improve environmental sustainability, strategic

partnerships should be formed, and partners should comply with environmental policies, and manage the TCO. Fast fashion should be avoided, and clothes should be made in an eco-friendly way. It is important to subscribe to the SAC to assess the impacts throughout the supply chain, reduce carbon emissions, and manage insecticide use. Local manufacturers require technical support, infrastructure, and local buying. In addition, accurate order specifications can prevent rework and reduce pollution. The findings confirm that Research hypothesis 3: Procurement practices effect environmental sustainability, is supported in the study, and the null hypothesis H03 is rejected, indicating that the conceptualised model fits the specified sample data well.

The results of social sustainability are discussed below:

8.3.4.2 Social sustainability

The descriptive statistics Chapter 6 (Section 6.8) showed that an overall mean score of 3.53, which confirmed that procurement is sustainable when it adheres to social sustainability aspects, such as promoting fair remuneration and rewards and enforcing the recognition of employees. This also applies when safety measures in the organisation and the promotion of healthy working conditions are incorporated. These findings were confirmed in Chapter 3 (Section 3.7). However, for the industry to become socially sustainable, it still needs to invest in employee reward and recognition programmes, and they need to improve the health and safety of working conditions. In addition, the study sought to assess whether procurement affects social sustainability. The SEM path analysis empirical results presented in Chapter 7 (Section 7.4.4) shows the association between social sustainability and strategic partnership, DP, CPS, SSC, SSRC and ESD. To improve social sustainability and compliance local suppliers, financial, technological, infrastructural, and resources support is needed. It is important for the industry to prioritise the fair treatment of workers and the environmental safety of the clothing supply chain. The findings confirm that Research hypothesis 4: Procurement practices affect social sustainability, is supported in the study, and the null hypothesis H04 is rejected, indicating that the conceptualised model provides a good fit for the specified sample data.

8.3.5 Secondary research question 5

What are the procurement challenges faced by the SA clothing industry?

The study sought to determine the procurement challenges that affect the clothing industry. To answer this fifth research question, questions were answered theoretically, descriptively and through SEM path analysis results. Two constructs were assessed to determine the challenges of the procurement: lack of support and complexity. The respondents were presented with eight (8) statements relating to procurement challenges. The results related to the lack of support are presented below.

8.3.5.1 *Lack of support*

The descriptive results in Chapter 6 (Section 6.8.3) reported an average mean score of 3.46, confirming that there is a need for more support regarding resources and government funding. Also, the fact that SA retail clothing shops opt for global suppliers, and that the low tariff agreements on imports compromise the competency of the industry. In addition to that, if clothing retail shops are contracted, they dominate the negotiation process. The findings were also confirmed in Chapter 3 (Section 3.8). The clothing industry of SA is not supported locally (Perry & Wood, 2019:11). Clothing manufacturers struggle to compete in the industry and rejoice when local clothing buyers decide to give them a contract (Dos Santos, 2020:33; Moloi, 2019:121; Perry & Wood, 2019:8). The clothing industry needs financial support, resources, technology, and skilled labour. Unregistered businesses should be encouraged to register. Also, the dominance power of the retail buyers during negotiation contributes to issues of the incapability in this industry's manufacturing and competencies.

The SEM path analysis empirical results in Chapter 7 (Section 7.4.5) showed an association between lack of support and strategic partnership, TCO, DP and CN. It is difficult for local suppliers to manage costs and support the local economy when they are not supported by local buyers. The findings were also confirmed by the discussion in Chapter 3. The reduction of costs, accurate ordering and compliance with carbon emission policies are key. The findings confirm that Research hypothesis 5: Procurement practices are affected by lack of support, is supported in the study, and the null hypothesis H05 is rejected. This confirms that the conceptualised model fits the specified sample data well. The results related to complexity in the SA clothing industry are presented below.

8.3.5.2   Complexity

The descriptive analysis results in Chapter 6 (Section 6.8.2) reported an overall mean score of 3.38, confirming that fashion and manufacturing are complex, resulting in too many standards in the production process. This was also confirmed in Chapter 3 (Section 3.8). From the responses in the study, it can be concluded that fashion complexity and too many standards in the production of clothes may result in complexity and errors. This compromises the accuracy of the ordering system. This might also result in unnecessary costs and a loss in profit margins. The SEM path analysis results in Chapter 7 (Section 7.4.6) confirmed an association between complexity and DP, SSC, CPS and CN. The results also confirm that challenges such as complex production, fashion complexity, and too many standards in manufacturing clothes affect procurement. The results show that the alignment between complexity and DP is considered to have a high practical effect.

Where there are too many standards in the clothing production process, lack of resources, fashion complexity and complex production processes, DP, SSC, CPS, and CN are affected. Hence, the accuracy of demand planning gets affected. Lack of resources affects the industry's capacity to perform and achieve global competency. Issues of biasness during contract negotiation might complicate manufacturing processes. Therefore, it calls for partners in the industry to set rules and standards and comply with set standards.

Supporting local manufacturers and strategic partnerships might improve processes and reduce fashion complications. This is also confirmed in Chapter 3 (Section 3.8). However, local manufacturers should still be authenticated during the sourcing and contracting stage which may assist retail buyers to ensure that standard specifications will be met, and to prevent errors. When parties have a legal agreement based on specific standards, this may prevent complications in manufacturing and product delivery. The findings confirm that Research hypothesis H6: Procurement practices are affected by complexity, is supported in the study. The null hypothesis H06 is rejected, indicating that the conceptualised model fits the specified sample data well.

8.3.6   The main research question

The main research question was stated as: *What kind of procurement framework can the SA clothing industry use to promote socio-economic objectives?*

It can be concluded that the procurement practice that leads to the promotion of socio-economic objectives in the SA clothing industry should consist of the following nine (9) constructs: demand planning (DP), strategic sourcing compliance (SSC), strategic sourcing resource capabilities (SSRC), contract mutual agreement (CMA), contract negotiation (CN), contract policies and standards (CPS), enterprise supplier development (ESD), and strategic partnership. However, to develop a workable framework for the SA clothing industry other constructs needed to be considered, such as NEMA, procurement policies and regulations and NEMA, the value of procurement, social sustainability and environmental sustainability and support. The results presented in Chapters 6 and 7 indicated that the respondents acknowledged that these constructs are crucial in achieving competitiveness, localisation, and sustainable procurement. The framework for the study is presented in Figure 8.1. The framework builds on the conceptual framework in Figure 4.4. Items that were arose to prominence in the study were added to the framework for the study.

8.4   SUMMARY OF THE STUDY

This section summarises the research study and draws conclusions related to the study's main objective.

The main research objective of the study was to develop a procurement framework for promoting socio-economic objectives in the SA clothing industry.

Chapter 1: The chapter outlined the title of the study. It provided the introduction and background, problem statement, research design and methodology, and reasons for and contribution of the study.

Chapter 2: Provided the overview of the study and presented definitions and terminologies according to various authors. It also discussed the evolution of procurement over the years, followed by a broad literature review on the importance of procurement. The theories on procurement were also outlined with a detailed discussion of general procurement practices in organisations. The third section outlined procurement challenges, established the future of procurement in organisations, and summarised the conclusions of the discussions.

Chapter 3: This chapter presented an overview of the clothing industry globally and in South Africa, explored procurement practices, the value of procurement and

government regulations governing the clothing industry on procurement practices. The researcher deliberated on this chapter's procurement theories relevant to the clothing industry. This chapter also attempted to ascertain how sustainable procurement occurs in the clothing industry, and revealed the procurement challenges that affect the clothing industry.

Chapter 4: This chapter discussed contextualised theories relating to procurement practices and the instruments used by various scholars to address procurement practices in the clothing industry. The following conceptual frameworks/ models were deliberated on in this chapter: Su (2013) and Koprulu and Albayrakoglu (2007) adopted from Lasch and Janker (2005) and Early (2017). These conceptual frameworks/ models were identified, recognised, and supported the current study in the development of the hypothesised model of an instrument for developing procurement practices in the SA clothing industry. It identified the relationship between variables concerning procurement practices in the clothing industry and previous empirical evidence relating to these variables. The chapter focused only on theories that would assist in achieving the research objectives of the study. The chapter concluded by providing a summary of the conceptual framework for an instrument of procurement practice in the clothing industry of SA.

Chapter 5: Presented the research design and methodology. The chapter defined the research design and justification for the selected methods related to the research problem. It discussed the research design, research philosophies, research approach, research methodological choice, research strategy, demarcation of the population, sampling procedure, and data collection. The data techniques and procedures employed in testing the research instrument that would assess how procurement is practised in the clothing industry was presented. It summarised how factor analysis, reliability analysis, descriptive statistics, and SEM were performed in the current study. The chapter concluded with some ethical considerations concerning the research study.

Chapter 6: The chapter discussed the descriptive data analysis. The demographic details of the respondents were presented and analysed using pie charts and bar charts. The discussion of the results of procurement practices in the SA clothing industry was presented using frequency tables. The chapter discussed the descriptive statistics of key variables in this study, namely, demand planning (DP), strategic

sourcing compliance (SSC), strategic planning: resource capabilities (SSRC), contract mutual agreement (CMA), contract negotiation (CN), contract policy and standards (CPS), enterprise supplier development (ESD) (consisting of local support in ESD and TCO), strategic partnerships, government policies and regulations, the National Environmental Act (NEMA), the value of procurement, sustainable procurement, environmental sustainability, lack of support, and complexity. The chapter reported on how the validity and reliability of the measuring instrument were validated.

Chapter 7: This chapter presented the results and discussions of the structural equation model (SEM). The chapter validated the model and hypotheses. It also discussed the structural relationships of variables in the hypothesised and final SEM models linking procurement practices with NEMA, government policies, the value of procurement, environmental sustainability, social sustainability, lack of support and complexity.

Chapter 8: This chapter links the research objectives with the results. The research questions and the study results are discussed. The summary and conclusion of the chapter are drawn from the findings to inform the framework for improving procurement practices in the clothing industry of SA. The chapter concludes with a discussion of the study's contribution, and the limitations that were drawn from the study, and ends with a discussion of the scope for future research.

8.5   CONCLUSION OF THE STUDY

From the findings it can be concluded that the main research objective and secondary objectives of the study were achieved. It is evident that there is a need for more local support for the industry, and that there is an influx of foreign clothing in the country. It was also noted that when local suppliers are contracted, they are subjected to issues of bargaining power. During the contracting of local manufacturers and the establishment of informal contracts, there is minimal support from the SA government. To improve demand planning, order specifications should be accurate, and specification errors should be accounted for by the guilty party, especially when changes were not communicated or were communicated late. Strategic sourcing focuses on supplier authentication regarding their capabilities, and compliance to the environmental and social standards that should be practiced. However, for clothing

manufacturers to become competitive, they need to be supported with resources, technology, and finance.

The SEM results showed a strong association between ESD and government policies and regulations. Hence, government funding in terms of the B-BBEE and IPAP is crucial and needs to be revised to increase funding related to resources, green technologies, and the financing of local manufacturers. The SEM results showed a need for more support in the industry, and that local manufacturers are not contracted. As it was noted that the industry is associated with prohibitive costs, partners should determine how these costs can be managed and shared among supplier partners in the clothing industry. These costs should be discussed during negotiation and contract arrangements. From the SEM results it was noted that employee remuneration, health, and safety may improve when a relationship is built with capable local manufacturers. Also, adhering to policies and social standards improves sustainable procurement. Being resourceful, skilful, and having finances and local support improves sustainable procurement. Employees should be rewarded fairly and work in a safe and healthy environment.

Also, sustainable procurement should pay attention to pollution reduction. Hence, the industry should subscribe with NEMA and SAC, which will assist them with responsible buying that considers the environment. In addition to that, a reduction in fast fashion production will help to minimise pollution. The SEM results revealed that compliance with NEMA may improve in the industry when local manufacturers are contracted. Additionally, by sourcing locally, orders can be placed promptly, production can proceed seamlessly, and all social and environmental regulations can be monitored and met. However, it is crucial for the SA government to establish initiatives to minimise the influx of clothes from other countries into SA. According to the SEM results, the industry should note that complexity in procurement practices emanate from errors in forecasting and order specification, social and environmental compliance, and when contracts are negotiated. They should also note that lack of support occurs when they are not contracted or where there is unfair negotiation during contracting, and when they experience prohibitive costs during manufacturing. These costs should be discussed with partners during negotiation and should be shared equally. Therefore, the study saw a need to develop a procurement framework that may be used to promote competitiveness, localisation, sustainability, and local economic upliftment.

8.6 RECOMMENDATIONS OF THE STUDY AND DEVELOPMENT OF A PROCUREMENT FRAMEWORK FOR THE CLOTHING INDUSTRY

This section presents the recommendations of a procurement framework for the study. The study's main objective was to develop a framework for procurement practices in the South African clothing industry. Following the findings of the study, it has become evident that an understanding of procurement practices, the value of procurement, the relevant country procurement policies and regulations, as well as sustainability is fundamental. In developing the framework for the study, the following nine (9) pillars that were established in the findings of the study were considered: demand planning (DP), strategic sourcing, contracting, enterprise supplier development (ESD), strategic partnership, policies and regulations, the value of procurement, sustainable procurement, and support. These practices were supported by authors such as Su (2013); Koprulu and Albayrakoglu (2007); Lasch and Janker (2005), and Early (2017), who incorporated the variables of procurement and its sustainability in the design of procurement frameworks in the clothing industry.

Also, variables such as strategic sourcing and strategic partnership were adopted from the framework by Su (2013) and Koprulu and Albayrakoglu (2007). Also, in developing the framework, consideration was given to the national agenda and priority of the country (South Africa). Hence, a variable such as enterprise supplier development, is a national prerogative of the country towards developing emergent suppliers and the policies and regulations supporting the clothing industry. Figure 8.1 presents the framework for the study. It consists of variables of procurement practice that may assist the SA clothing industry in promoting socio-economic objectives. The framework reveals the policies aligned with procurement practices which support sustainability and local support. Also, it advises on social and environmental sustainability and the support needed by the industry to become resourceful, to be able to reduce complexity and survive negotiations and contractual prejudice. Figure 8.1 presents the framework for the study.

PROCUREMENT PRACTICES

Demand planning	Strategic sourcing	Contracting	ESD	Strategic partnership
80% local support Accurate order customer needs Current fashion trend	Compliance and ordering time Funding and resources support Standard labour rates Reduce fast fashion	Standards and formal contract Resource agreement Fair negotiation External factors consideration Legal involvement and funding	Local supplier contracting Registration Funding Manage TCO	Local partnership Community and economic Upliftment

GOVENMENT POLICIES AND REGULATIONS

B-BBEE — Contract local CMT

IPAP — Funding and infrastructure development / Registration assistance

NEMA — ISO and SAC certification / Compliance

THE VALUE OF PROCUREMENT

Resource support
TQM and TCO
Partnership

Compliance

Local sourcing

Improved work standards

Sustainable environment

SUSTAINABILITY

Social — Health and safety / Incentives and rewards / Working conditions / Standard wage

Environmental — Eco-friendly fabric / Green technology compliance

SUPPORT

Resource — Registration Funding Capital, technical, and infrastructure Legal support

Complexity — Fast fashion reduction / Reduce complex production / Revise tarrifs / Bias prevention

SOCIO-ECONOMIC OBJECTIVES

Job Creation	Localisation	Competitiveness	Sustainability
Local employment	Economic and community upliftment	Growth and profitabilty	Economic, social and environmental

Figure 8.1:   Framework for procurement in the South African clothing industry

270

As reflected in Figure 8.1, the framework is defined by nine (9) pillars.

A description of the pillars of the framework will now be presented in the section below dealing with procurement practices.

8.6.1 Procurement practices

As revealed in the study, the key fundamental procurement practices relevant to the clothing industry are discussed below.

8.6.1.1 Pillar 1: Demand planning (DP)

To improve demand planning in the SA clothing industry, it is important to focus on order accuracy during demand planning. This means that the accuracy of the specification order and forecasting are critical. Partners need to agree on the cost associated with order specification errors; they can either agree to share the cost or be the responsible party that carries such costs. Demand planning in the SA clothing industry should involve at least 80% local ordering. International trade exhibition platforms may be used to gain fashion ideas and to ensure being in line with current fashion trends, but they should not be used to source international suppliers. Localisation will happen in the industry only when local sourcing is practised fully. DP in the industry should consider the needs of local communities where the business is conducted, and the employees involved in fulfilling the trading agreement. From the conceptual framework developed in Chapter 4, the following aspects were added to the framework as they were deemed important in demand planning:

- Accurate specifications;

- 80% local support;

- Attention to customer needs; and

- Benchmarking on current fashion trends.

8.6.1.2 Pillar 2: Strategic sourcing

Strategic sourcing in the clothing industry should promote supplier certification to ensure compliance. Also, since the industry suffers from a lack of resources, resource support becomes a critical factor to consider in this industry. Below are the recommendations on how compliance and resource support should be administered in the industry.

- **Compliance**

Procuring clothing from certified suppliers can help to promote socio-economic objectives and environmental sustainability. The industry needs to comply with social and environmental standards. Both manufacturers and retail shops should comply with these standards, and authentication of partners in this aspect is essential. This means that working conditions must be improved, and employee wages should increase in accordance with SA labour rates for the clothing industry. Government funding and support are also needed to boost and improve compliance in the industry. A reduction in fast fashion production and pollution is important in the industry. Ordering on time for specific seasons will also assist the industry to follow manufacturing processes that prevent environmental pollution. Compliance to SA labour rates was added to the framework, as it was seen as a need in the industry.

- **Resource availability**

Strategic sourcing in terms of resource availability and the technical systems, is crucial to the industry. Hence, financial support is needed in the industry so that it may be resourceful. Also, supply chain partners in the clothing industry should support each other with material and technical systems to finalise business deals. In addition to the conceptual framework in Figure 4.4, the following items were seen as prominent and were added as improvements to the framework:

- Supporting local potential suppliers with resources;

- Technology and financial support;

- Comply to standards labour rates;

- Reducing fast fashion production; and

- Pay attention to on-time ordering per season.

8.6.1.3   *Pillar 3: Contracting*

Mutual agreement, negotiation and adherence to relevant policies and standards when contracting with partners in the industry are important. The study recommends the following in terms of contracting.

- **Contract mutual agreement (CMA)**

Contracts are to be formalised; formal contracts need to be established in the industry, and business lawyers should be consulted in designing formal legal contracts. Contracts should include economic, environmental and market factors affecting the business deal between parties. Partners must stipulate how they will assist each other regarding the necessary resources and infrastructure to finalise the deal and how partners will be remunerated from such agreements.

- **Contract negotiation (CN)**

Legal engagement and support are required to mitigate negative behaviour from partners. In addition, funding for legal assistance from the government is needed since the industry lacks finances. A contract deal should be supported by a copy of legal documentation signed by both partners. Each party should be presented with a signed copy of that legal document. During contract negotiations, the items listed below were regarded as crucial and were added to the framework as additions to the conceptual framework in Figure 4.4:

- Clear standards and formal contracts;
- External factors considerations; and
- Agreement on resource support.

- **Contract policy and standards (CPS)**

Designing clear and understandable contracts that are legally binding and agreeing on them is important in this industry, as it is generally subjected to bargaining powers and bias. This will also assist in improving compliance in the industry. In addition to the conceptual framework in Figure 4.4, items other items were added to contract policy and standards, these items were also seen as important and were added as improvements to the framework:

- Obtaining legal assistance;
- Government finances the cost relating to legal implications;
- Signed legal documents by parties; and
- Prevent elements of prejudice during the negotiation.

8.6.1.4 Pillar 4: Enterprise supplier development (ESD)

Enterprise supplier development (ESD) consists of the following two aspects:

- **Local support**

This refers to a procurement practice that gives preference to local manufacturers that have been historically disadvantaged. In this way, the industry can contribute to the economic empowerment of previously disadvantaged groups. Local industry support can help promote the local economic sector and create job opportunities. Most clothing organisations are small and medium manufacturers, and most agreed that they lack resources, advanced technology, support, and funding. According to the study, 93% of the respondents are small CMT manufacturers, with 72% of them having fewer than 10 employees. These findings highlight the need for local government and clothing retail shops to provide support and nurturing for the industry. If CMT manufacturers are aided in their growth to become full-fledged manufacturing factories, they have the potential to employ more workers and contribute to the improvement of the current economic status. Legal documents that cover resource allowances, technology, and funding can be used by partners to support one other in this industry. When sharing resources, partners may agree to proportioned profit from the highest contributing party to the lowest contributor. In this case, manufacturers will also get a share for their contribution. In terms of government funding, the industry needs to familiarise itself with state funding processes and ensure they become registered to qualify for such funding.

- **Total cost of ownership (TCO)**

The cost of manufacturing in the clothing industry can reduce costs and is funded by the government and contracted by local retail clothing shops. They may also improve in adhering to government policies on carbon emission, as they may be able to subscribe for NEMA and SAC certification, which has costs implications. Without funding in this industry, it becomes challenging to comply with social and environmental standards, to reduce the TCO and become profitable.

8.6.1.5 Pillar 5: Strategic partnership

It is crucial for retail clothing shops to support local suppliers as it creates local jobs. However, both manufacturers and retail shops first need to build trust with one

another. The partnership will also need to be established to improve competency and compliance. Partners should agree on how to contribute to the local economy and how to become involved in infrastructure development and engage in projects that uplift the local economy. By so doing, this industry will be practising a procurement practice that considers the local economy and upgrading the community. In addition to the conceptual framework in Figure 4.4, items other items were added to strategic partnership, these items were also seen as important and were added as improvements to the framework:

- Community upliftment;

- Local partnerships; and

- Economic upliftment.

8.6.1.6 *Pillar 6: Policies and legislation*

The study noted the following three policies that are critical to the industry: NEMA, IPAP and B-BBEE. Recommendations on how these policies should align with procurement practice to yield efficiency and compliance in the industry are discussed below:

- **National Environmental Management Act (NEMA)**

For the industry to comply with NEMA, there is a need to realign NEMA with strategic partnerships, CMA, CPS, SSC, CN and ESD in the SA clothing industry. The clothing organisations (retail buyers) should engage in legally binding contracts with local manufacturers, agree on standards and comply with procurement policies, as this industry is a high contributor to pollution. Compliance with the National Environmental (NEMA) Act of 107 of 1998, which forces organisations to protect the environment is critical. It is also crucial for suppliers to have ISO 14000/14001 certification, and certification from the SAC. Compliance with these certification requirements is important. SAC assists clothing organisation to work towards reducing their carbon footprint and ensures sustainability. The clothing industry needs to be assessed in terms of their compliance with social and environmental standards, and suppliers need to be verified in terms of social and environmental compliance when contacting. In addition, there are issues of biasness, bargaining powers, and opportunistic behaviour when compliance with NEMA is compromised. When these issues are addressed,

there is a greater possibility of compliance with NEMA. The literature confirms that all partners in the clothing industry should be abide with the policies relating to environmental compliance. Enterprise ESD leads to compliance with NEMA, and this may happen when local suppliers are supported in infrastructural development, funding, and finances, as they will be able to conform to environmental standards and obtain NEMA certification.

- **IPAP and B-BBEE**

In efforts to comply with government policies and regulations in the SA clothing industry, there is a need to align government policies with CMA, DP, CPS and ESD. Government policies and standards are adopted when SA clothing manufacturers consider social upliftment and are contracted as suppliers, and engage in legal contract agreements, and are empowered by the B-BBEE and IPAP policies and the PIP. Businesses in SA have been advised by B-BBEE to prioritise investments in skills development and training programmes for their employees, particularly those working in procurement. This investment is expected to lead to higher professionalism and efficiency in the procurement processes within the industry. The government of South Africa may also assist CMT organisations in registering their companies with the Intellectual Property Registration Office (CIPRO), now known as the Companies and Intellectual Property Commission (CIPC) through IPAP.

The assistance may be in a form of financial assistance and providing guidance on the registration process. The industry needs funding, resources, technical support, and integration, to be preferred by local retail buyers as supplying partners. It was noted that clothing organisations should consider registering their organisations which will enable them to apply for funding from the relevant bodies. In addition to the preliminary framework in Figure 4.4, some items relating to training local suppliers and investing in skills suppliers' development were also deemed prominent and added to the framework. IPAP assistance with company registration was also added to the conceptual framework in Figure 4.4. Company registration was seen as prominent because clothing manufacturers may obtain funding only when their organisations are registered with the Companies and Intellectual Property Commission (CIPC).

8.6.1.7 Pillar 7: The value of procurement

To improve the value of procurement in the SA clothing industry, it is recommended that the procurement value should be aligned with a strategic partnership, CMA, TCO, DP, CPS, SSC, SSRC, CN and ESD. According to the findings, these associations have a high practical effect. Procurement will also add value when there are improvements in TCO, improved resource capability, improvements to DP practices and the adoption of clear policies and standards. The value of procurement is added where there is local economic development, local infrastructure upliftment, and improved working conditions. Procurement practice in the SA clothing industry adds value when there is a strategic partnership with local manufacturers, global competency, and compliance with environmental sustainability.

8.6.1.8 Pillar 8: Sustainability of procurement

For the industry to remain sustainable, its procurement practices must consider environmental and social sustainability, as discussed below.

- **Environmental sustainability**

The SA clothing industry needs to align environmental sustainability with strategic partnerships, CMA, TCO, CPS, SSC, SSRC and ESD. It should be acknowledged that fast fashion production increases carbon emissions and results in pollution. This industry needs to consider the environment and comply with regulations and policies. It also calls for government funding for green technology, which will help the industry to buy eco-friendly fabrics that will help eliminate waste and pollution. Procurement practices in the SA clothing industry should lead to order specification accuracy, improved quality in manufacturing outputs and reduced ordering time. Where there are clear standards, local support, and compliance, the value of procurement improves. In terms of environmental compliance, the following aspects were also seen as prominent and were added to the framework:

- Green technology support;

- Eco-friendly fabrics; and

- Compliance with NEMA.

- **Social sustainability**

It is important for the clothing industry to comply with the type of social sustainability that promotes social compliance in the SA clothing industry. There is a need to realign social sustainability with strategic partnerships, DP, CPS, SSC, SSRC and ESD.

According to the SEM results, the alignment between social sustainability and strategic sourcing is seen to have a high practical effect. Also, the alignment between social sustainability and DP is considered to have a highly practical effect. In terms of social sustainability, the aspect regarding improving wage settlements was noted as important. Employee recognition and fair remuneration of employees, corporate safety measures, and healthy working conditions can lead to an improved strategic partnership, DP, CPS, SSC, SSRC and ESDLC. This can be achieved through community and infrastructure upliftment. Each SC partner in the industry is responsible for focusing on employee wellness and safety and ensuring environmental safety.

SA clothing organisations are subjected to high manufacturing costs when compared to other countries, such as China, and therefore, employers need to engage in a low-wage agreement with workers. Hence, this industry should be incentivised and supported to improve wage settlements. However, the industry also should note that employee wellness and compliance with social standards is a SA government requirement. Employee wellness may add value to procurement practices as job security, improved wages, health, and safe working conditions improve productivity. Also, failure to comply might lead to fines and even the closure of non-compliant clothing organisations. In addition, clothing manufacturers should ensure that their suppliers are authenticated and contracted based on their adherence to social standards. Therefore, they should take steps to become compliant, because partners that are not compliant are not contracted as they will detriment business deals.

8.6.1.9 Pillar 9: Support

Lack of resources and complexity were seen as challenges in the SA clothing industry. Therefore, support is needed to manage these challenges. The following aspects are recommended in terms of managing these challenges.

- **Lack of support**

In efforts to improve local support in the SA clothing industry, there is necessary to align the need for more support with strategic partnerships, TCO, DP and CN in the SA clothing industry. The findings reveal that the alignment between lack of support and DP is believed to have a high practical effect. Also, the results show that the alignment between the lack of support and CN is believed to have a high practical effect. It should be noted that lack of support impacts strategic partnerships, TCO, DP and CN.

The SA government must establish initiatives to minimise the overflow of clothes from other countries. In addition, manufacturers should be assisted with the cost of registering their companies. The act of bullying and abuse during contracting is noted in the industry. The law should prevent local clothing retail buyers from taking advantage of clothing manufacturers during negotiations because they have the dominant power. Legal advice and involvement are strongly recommended during contract establishment. The degree of power should be assessed within the partnership agreement. Local suppliers (clothing manufacturers) should be allowed to grow their business and supported by giving them fair deals when contracting.

Strategic partnerships can be improved by building relationships with local suppliers. Aligning the lack of support with the strategic partnership will assist the industry in supporting local suppliers. This is achieved through long-term contract partnerships. Increased government funding based on organisational needs will assist the industry in being competitive. The contract clause should include preventive measures on biasness, dominance, and bargaining power. The government could also support the industry by revisiting import duties and tariff policies as they burden the industry. In addition to the conceptual framework in Figure 4.4, the following key aspects were added to the framework as they were viewed as prominent:

- Government assisting small manufacturers with legal funding during contracting;

- Government assisting with the registration of small manufacturers; and

- Resource support.

- **Complexity**

In efforts to manage complexity in the SA clothing industry, the SA clothing industry needs to align complexity with DP, SSC, CPS and CN. Where there are too many standards in the clothing production process, lack of resources, fashion complexity and complex production processes, DP, SSC, CPS and CN are affected. It may be difficult to adhere to social and environmental standards, as there is a lack of resources in the industry. This results in non-compliance with social and environmental standards policies, as adhering to standards and policies have cost implications. Local suppliers may not qualify when being rated and authenticated to check their compliance due to a lack of resources. The complexity of the industry and competitive pressure gives rise to issues of biasness. The industry needs to be funded with resources to be able to compete. Local retail buyers need to contract local manufacturers and assist them with resource support. The form of agreement may be discussed in their contract clause so that both parties may benefit.

Too many standards in the production of clothes pose a challenge in the industry and may lead to additional costs. This may be managed through the formulation of a strategic partnership between local retail buyers and local manufacturers, where clear manufacturing standards are set. Both parties should be committed and accountable in terms of accurate orders and specifications. A detailed sample with precise specifications should be discussed. Overnight change of order specification should be avoided at all costs. More detail about fashion styles specification should be shared to avoid fashion complexity. It is important to revisit the fashion specifications that need to be clarified. It is necessary for critical brainstorming to be done regarding the pull and push manufacturing strategies, especially on fashion bands. This could help save the total procurement cost in terms of complex fashion and manufacturing. In addition, involving suppliers in the early stage of product development might assist in reducing complexity in manufacturing.

The following items were added to the framework in Figure 4.4, as they were also deemed important in terms of the support needed in the industry:

- Fast fashion reduction;
- Reduce complex production;

- Bias prevention; and

- Government revisiting import duties and tariff policies;

Each pillar discussed above contributes to the procurement practices that can promote socio-economic objectives and sustainable growth in the sector.

8.7 RESEARCH CONTRIBUTION

This section summarises the contribution of the study to the body of knowledge and practices and the implication to business in general.

8.7.1 Theoretical contribution

The literature review revealed in-depth information about implementing procurement practices in the clothing industry. Multi-theoretical perspectives were discussed to evaluate the connection or relationship between strategic sourcing, the buyer-supplier relationship, supplier evaluation and sourcing performance. Some authors designed the AHP model when choosing suppliers and building a supplier relationship management strategy. Some authors developed a theoretical model that concentrates on analysing the following six stages of the procurement practice: sourcing, forecasting, negotiation, contract, ordering and lead time in relation to social compliance. The study focused on the procurement practice that aims to achieve localisation through job creation and support of local suppliers. It also assessed the industry's compliance with social and environmental standards and SA government policies supporting procurement practice. This study reviewed the relevant literature and theories to establish a relationship between procurement practice, NEMA, procurement policies and regulations, social sustainability, environmental sustainability, lack of support and complexity, as challenges in procurement.

It linked the following variables of procurement practice: DP, CMA, CPS, CN, SSC, SSRC, ESD, TCO and strategic partnerships, to improve procurement practice in the SA clothing industry. The study's findings provide a new understanding of how the alignment of these variables with NEMA, procurement policies and regulations, social sustainability, environmental sustainability, lack of support, and complexity may enhance the procurement practice that leads to socio-economic objectives in the industry. The study contributes to the body of knowledge regarding the prominent role

of procurement practice in line with government policies and regulations, sustainable procurement, the value of procurement, support, and reducing complexity in the SA clothing industry. The study proposed a theoretical framework of procurement practice applicable to the SA clothing industry (Figure 8.1).

8.7.2   Contribution to practice

The study provides clothing industry managers, owners, and specialists in procurement with recommendations and a practical framework for procurement practice. The study indicates that implementing the procurement practice framework may enhance performance, revitalise the industry, and promote job creation and local economic development. This study can assist management, owners, and procurement specialists by identifying the procurement practice variables that may be aligned with policies, sustainable practices, and existing challenges to improve performance. Failure to align these variables might lead to a lack of resources, finance, technology, local buying, and policy compliance that may further cripple the industry.

The government can gain an understanding of the clothing industry's demographic makeup, including the different types and sizes of organisations struggling with funding, skills, resources, and technology. Additionally, the government should take note of the funding flaws, non-compliance issues, and government policies in the industry, which stem from a shortage of resources and financial support. The government may note that most clothing organisations do not have the required technical tools to compete and might not survive the fourth industrial revolution (industry 0.4), which requires digital solutions such as digital printing, robotics, blockchain, augmented virtual reality (AVR), and artificial intelligence (AI).

The government may also learn from the literature and empirical evidence of the study how imports have affected the industry's performance and may implement steps to eradicate the problem. The government may learn that some clothing organisations need to obtain funding because they are not registered and cannot afford the registration cost and assist them with registration fees, knowledge, and registration processes. Both the industry and the government should note that this industry contributes greatly to climate change, and climate change and environmental change occur mostly outside SA. Hence, the way to resolve this is through local sourcing. The relationships between concepts within the study were examined. The findings of this

study add new knowledge that may inform implementation programmes to promote procurement practices that may lead to job creation, competitive improvements, sustainability, and localisation in the industry.

8.8 LIMITATIONS OF THE STUDY AND SUGGESTIONS FOR FUTURE RESEARCH

At first, the study intended to adopt a random probability sampling on clothing manufacturers registered with the National Bargaining Council of SA. However, the study found that many clothing organisations had closed down operations, and the researcher experienced difficulties to access all the respondents. Some authors in the literature, for example, Jacobs and Karpova (2020:366) and Jenkin and Hattingh (2022:54) and Moloi (2019:74) confirmed that globalisation in the clothing industry resulted in this economic disaster. Most clothing organisations had to close operations due to the flood of imports, which has greatly affected the SA clothing industry and resulted in job losses. The study conducted by Netshishivhe (2020:423) also experienced a poor response rate from the participants, as most of the contacts were no longer in use due to the closing down of other organisations. The study by Mokwana (2021:12) also noted that the COVID-19 pandemic posed exceptional challenges to SMEs, especially in the textiles, clothing, and leather goods industry, and a large number of these SMEs had to temporarily or perhaps even permanently close. According to Netshishivhe (2021:2), 55% of the local SA textile producers, manufacturers and retailers in Ekurhuleni were forced to retrench and downsize their operations. However, Netshishivhe (2021:2). Worku (2019:97) and Veillard (2018:15) noted that intense global competition in the clothing industry, specifically from China, was also crippling other clothing industries in other countries.

Foreign nationals operate most cut-make and trim (CMT) clothing organisations in SA (Netshishivhe (2021:3; Veitch, 2021:2). However, they were excluded from the study as it focused on the socio-economic objectives and industrialisation as related to SA-owned clothing organisations. Hence, the researcher was compelled to revert to snowball sampling, and request SA clothing organisations that have completed the survey to refer them to other SA clothing organisations still operating. Even though there was a large sample of 621 respondents and was conducted on managers and procurement specialist in the clothing industry in Gauteng, Western Cape and

KwaZulu-Natal, the survey results cannot be generalised to the entire population. Since it is difficult to quantify the entire population in the SA clothing industry, the sampling method only supports generalising the findings to some of the population. A generalisation can only apply to the 621 clothing manufacturers participating in the study. Other clothing organisations who were not part of the study may adopt the framework of procurement practices based on aspects that best suits their operation. A quantitative study was deemed suitable for this study as the method assisted in examining the current application of procurement practice in the industry, and suggested the kind of procurement practice that supports socio-economic objectives. Further research can involve policymakers in the government spheres and management in the clothing industry to explore the effectiveness of the IPAP and B-BBEE policy in terms of accessing and improving funding. It may also be important to explore how restrictions on import tariffs may be revised to reduce the influx of imports. Also, further research can address measures to support the industry and enable registration of clothing organisations with CIPC.

8.9   CONCLUSION

This chapter summarised the study's findings, and presented the recommendations, conclusions, and limitations to the study, and recommended future research. The study's recommendations are in line with its research questions and hypotheses, which were all supported by the findings. The study's limitations were discussed in alignment with the extant literature. All the hypotheses in the study supported the research questions and the model developed by the study.

REFERENCE LIST

Abbate, S., Centobelli, P. & Cerchione, R. 2023. From fast to slow: An exploratory analysis of circular business models in the Italian apparel industry. *International Journal of Production Economics*, 260(2023): 1-14.

Acharyya, R. & Bhattacharya, N. 2020. *Research methodology for social sciences*. New York: Routledge.

Adams, K.A. & Lawrence, E.K. 2019. *Research methods, statistics, and applications*. 2nd edition. London: SAGE Publications Inc.

Adamkiewicz, J., Kochanska, E., Adamkiewicz, I. & Łukasik, R.M. 2022. Greenwashing and sustainable fashion industry. *Current Opinion in Green and Sustainable Chemistry*, 2022:1-8.

Argandoña, A. 1998. The stakeholder theory and the common good. *Journal of Business Ethics*,17: 1093-1102.

Åhlström, P., Danese, P., Hines, P., Netland, T.H., Powell, D., Shah, R., Thürer, M. & van Dun, D.H. 2021. Is lean a theory? Viewpoints and outlook. *International Journal of Operations & Production Management* (2021): 1-28.

Ahmad, M.T., Firouz, M. & Mondal, S. 2022. Robust supplier-selection and order-allocation in two-echelon supply networks: A parametric tolerance design approach. *Computers & Industrial Engineering*, 171(2022):1-22.

Altenburg, T., Chen, X., Lütkenhorst, W., Staritz, C. & Whitfield, L. 2020. Exporting out of China or out of Africa? Automation versus relocation in the global clothing industry (No. 1/2020). Discussion Paper.

Amahlathi Local Municipality. 2020. Amahlathi LM Integrated Waste: Management Plan Review. Available at: https://www.amahlathi.gov.za/wp-content/uploads/2022/11/AMAHLATHI-IWMP-2022-2027-SECOND-DRAFT.pdf [Accessed: 18 July 2022].

Argandoña, A. 1998. The stakeholder theory and the common good. *Journal of Business Ethics*, 17(1998): 1093-1102.

Arrigo, E. 2020. Global sourcing in fast fashion retailers: Sourcing locations and sustainability considerations. *Sustainability,* 12(2):1-22.

Bäckstrand, J., Suurmond, R., van Raaijc, E. & Chen, C. 2019. Purchasing process models: Inspiration for teaching purchasing and supply management. *Journal of Purchasing and Supply Chain*, 25(2019): 1-11.

Badenhorst-Weiss, H. 2019. Purchasing management in supply chain management. In C. Nieuwenhuizen (Ed.). *Business management: An African perspective*. Cape Town: Juta.

Badenhorst-Weiss J.A., Cilliers, J.O., Dlamini, W. & Ambe I.M. 2018. *Purchasing and supply management.* 7th edition. Hatfield, Pretoria: Van Schaik publishers.

Badenhorst-Weiss, H., Cook, G., Henkroodt, S., Howell, J., Jappie, A. & Strydom, J. 2022. *Supply Chain Management*. 2nd edition. Oxford University Press: South Africa.

Bag, S., Rahman, M.S., Rogers, H., Srivastava, G. & Pretorius, J.H.C. 2023. Climate change adaptation and disaster risk reduction in the garment industry supply chain network. *Transportation Research Part E: Logistics and Transportation Review*, 171(2023):1-22.

Bai, C., Zhu, Q. & Sarkis, J. 2022. Supplier portfolio selection and order allocation under carbon neutrality: Introducing a "Cool"ing model. *Computers & Industrial Engineering*, 170(2022): 1-15.

Baily, P., Farmer, D., Crocker, B., Jessop, D. & Jones, D. 2015. *Procurement Principles and Management.* 11th edition. United Kingdom: Pearson Education Limited.

Bajari, P. & Tadelis, S. 2001. Incentives versus transaction costs: A theory of procurement contracts. *Rand Journal of Economics,* 32: 387-407.

Bairagi, V. & Munot, M.V. 2019. *Research methodology: A practical and scientific approach.* London: New York: CRC Press, Taylor and Francis group.

Barnes, J. & Higginson, L. 2019. South African R-CTFL Value Chain Masterplan to 2030 Report 4 of 4: Policy, Regulation and Programme Recommendations. Compiled for The South African Department of Trade and Industry (the dtic) 16 May 2019. B & M Analysts empowering competitiveness.

Barney J.B. 1991. Firm resources and sustained competitive advantage. *Journal of Management,* 17(1): 99-120.

Barney, J.B. 2001. Is the resource-based "view" a useful perspective for strategic management research? Yes. *Strategic Management Journal*, 26(1): 41-56.

Barney J.B., Fuerst, W.L. & Mata F.J. 1995. Information Technology and Sustained Competitive Advantage: A Resource-based Analysis. *MIS Quarterly*, 19(4).

Barney, J.B., Hesterly, W.S. & Rosemberg, M. 2007. *Administração estratégica e vantagem competitiva.* Pearson Educación.

BEE Advisory Team. 2020. B-BBEE 2020 - the Codes reach adolescence. *TFM Magazine*, 18(2020): 1-4.

Bhuiyan, B.A. 2016. An overview of game theory and some applications. *Philosophy and Progress*, 59(2016): 111-128.

Blau, P.M. 1964. *Exchange and power in social life*. New York: Wiley.

Blau, P.M. 1964. Justice in Social Exchange. *Sociological Inquiry*, (34): 193-206.

Boateng, D. 2016. *Executive insight series: Compendium of supply chain management terms.* 2nd edition. South Africa: Panavest International & Partners.

Bowersox, D,J., Closs, D,J., Cooper, M.B. & Bowersox, J.C. 2020. *Supply Chain Logistics Management*. 5th edition. United States: McGraw-Hill.

Braglia, M., Marrazzini, L., Padellini, L. & Rinaldi, R. 2020. Managerial and Industry 4.0 solutions for fashion supply chains. *Journal of Fashion Marketing and Management: An International Journal*, 25(1): 184-201.

Buchel, S., Hebinck, A., Lavanga, M. & Loorbach, D. 2022. Disrupting the status quo: a sustainability transitions analysis of the fashion system. *Sustainability: Science, Practice and Policy,* 18(1): 231-246.

Bushe, B. 2019. The causes and impact of business failure among small to micro and medium enterprises in South Africa: Africa's Public Service Delivery and Performance. *Review,* 7(1): 1-26.

Byaruhanga, A., Muzaale, T. & Jarbandhan, D.B. 2020. Contractor selection, monitoring, and performance of road infrastructure projects in Uganda: synergies between Policy and Law. *Administratio Publica*, 28(2020): 229-245.

Carr, A.S. & Pearson, J.N. 1999. Strategically managed buyer-supplier relationships and performance outcomes. *Journal of Operations Management*, 17(5): 497-519.

Carter, C., Andersen, C., Stagg, A. & Gaunt, L. 2023. An exploratory study: Using adapted interactive research design and contributive research method. *The Journal of Academic Librarianship*, 49(2023): 1-11.

Certified Supply Chain Professional (CSCP). 2020. *Module 1 Supply Chain Design. Learning system Version 4.4. APICS*. Supply Chain Management.

Cetemen, D., Feng, F. & Urgun, C. 2023. Renegotiation and dynamic inconsistency: Contracting with non-exponential discounting. *Journal of Economic Theory,* 208(2023): 1-49.

Chan, T.C.T. & Chin, K.-S. 2007. Key success factors of strategic sourcing: an empirical study of the Hong Kong toy industry. *Industrial Management & Data Systems*, 107(9): 1391-416.

Chen, T., Shan, F., Yang, F. & Xu, F. 2023. Online retailer bundling strategy in a dual-channel supply chain. *International Journal of Production Economics*, 259(2023): 1-14.

Chen, Y., Zhong, Y. & Cheng, T.C.E. 2023. Impacts of the minimum quantity contract on an online retail platform. *European Journal of Operational Research*, 306(3):1236-1247.

Chen, Z. & Hall, N.G. 2022. *International Series in Operations Research & Management Science*. Switzerland: Springer.

Chiromo, F., Nel, A. & Binda, N.N. 2015. Supplier selection process at a South African clothing company. *International Association for Management of Technology, 2015 Conference Proceedings in Conjunction with the Clothing Industry in South Africa*.

Cole, R. & Aitken, J. 2019. Selecting suppliers for socially sustainable supply chain management: post-exchange supplier development activities as pre-selection requirements. *Production Planning & Control*, 30(14): 1184-1202. Doi: 10.1080/09537287.2019.1595208

Collier, D.A. & Evans, J.R. 2021. *Operations and Supply Chain Management.* 2nd edition. Boston, MA: Cengage.

Cooper, T. & Claxton, S. 2022. Garment failure causes and solutions: Slowing the cycles for circular fashion. *Journal of Cleaner Production*, 351(2022): 1-11.

Corbishley, K., Biyase, N. & Mason, R.B. 2021. Quick response and the supply chain in fast fashion in South Africa: A case study. *Expert Journal of Marketing*, 9(2): 66-81.

CottonSA. 2019. *Outlook on the South African Cotton Textile Industry. Cluster report 1/2019*. Available at: www.cottonsa.org.za. [Accessed: 1 October 2020].

Creswell, J.W. & Creswell, J.D. 2018. *Research design: Qualitative, Quantitative and Mixed method approaches*. 5th edition. Thousand Oaks, CA: SAGE Publications.

Crowther, D. & Seifi, S., 2018. Using Game Theory to Develop Sustainability Strategies in an Era of Resource Depletion. *Journal of Industrial Engineering and Management*, 7(240): 2169-0316.

Daniels, L. & Minot, N. 2020. *An introduction to Statistics and Data analysis Using Stata: An Introduction: From Research Design to Final Report*. London: SAGE Publications.

Deep, K., Jain, M. & Salhi, S. 2019. *Logistics, Supply Chain and Financial Predictive Analytics*. *Theory and Practices*. Singapore: Springer.

Delke, V.F. 2015. The resource dependence theory: Assessment and evaluation as a contributing theory for supply management. Unpublished Bachelor's thesis. University of Twente, Enschede, Netherlands.

De Villiers, G., Nieman, G & Niemann, W. Strategic logistics management: A supply management approach. 2ⁿᵈ edition. Hatfield, Pretoria: Van Schaik publishers.

Dlamini, W. 2016. Determining procurement best practices in South African comprehensive universities. Unpublished Master of Commerce degree in Business Management. University of South Africa, Tshwane, South Africa.

Dos Santos, P. 2020. The impact of manufacturing incentives in the clothing and textile industry in KwaZulu-Natal: a case study of Durban. Unpublished master's dissertation. Durban University of Technology, Durban, South Africa.

DTIC. 2019. Amended B-BBEE Codes 2013. Available at: http://www.thedti.gov.za. [Accessed: 19 February 2019].

DTIC. 2021. A guide to the dtic incentive schemes 2020/21. Available at: http://www.thedtic.gov.za/wp-content/uploads/the-dti-incentive-schemes-guide-2021.pdf. [Accessed 22 July 2023].

DTIC. 2022. Revised Programme Guidelines Clothing, Textiles, Footwear and Leather Growth Programme (CTFLGP) (Effective 12 January 2022).

Dusek, G., Yurova, Y. & Ruppel, C.P. 2015. Using social media and targeted snowball sampling to survey a hard-to-reach population: A case study. *International Journal of Doctoral Studies*, 10(2015): 279-299.

Early, K. 2015. *Living Wages in Global Supply Chains: A New Agenda for Business*. Joint Ethical Trading Initiative. UK/Norway/Denmark. Available at: https://www.ethicaltrade.org/sites/default/files/shared_resources/living-wages-in-global-supply-chains.pdf [Accessed: 5 February 2019].

Early, K. 2017. *Guide to Buying Responsibly*. Ethical Trading Initiative Norway. Available at: https://www.ethicaltrade.org/sites/default/files/shared_resources/guide_to_buying_responsibly.pdf [Accessed: 5 February 2019].

Edmonds, C.N., Cunha, B., Kemp, W. & Lindström, E. 2019. The future of work in textiles, clothing, leather and footwear (No. 995016293402676). International Labour Organisation.

Eisend, M. & Kuss, A. 2019. *Research methodology in marketing: theory development, empirical approaches, and philosophy of science considerations*. [Ebook]. Switzerland: Springer nature.

Ekurhuleni Metropolitan Municipality. 2019. Supply chain management policy 2019/2020. Review integrated development plan (IDP) and medium-term revenue and expenditure framework (MTREF): 2017/2018 to 2019/2020. Annexure D23. City of Ekurhuleni.

Available at: https://www.ekurhuleni.gov.za/wp-content/uploads/2022/07/Annexure-D23-Supply-Chain-Management-Policy-.pdf. [Accessed: 18 July 2020].

Emerson, R.M. 1962. Power-Dependence Relations. *American Sociological Review*, 27, 31-41. https://doi.org/10.2307/2089716.

Euratex. 2020. *Corona virus may cause a 50% drop in sales and production*. Available at: https://www.techtextrends.com/news/research-institutes-education/Euratex-Corona-virus-may-cause-a-50-drop-in-sales-and-production-20503. [Accessed: 5 August 2022].

Fornell, C.G. & Larcker, D.F. 1981. Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1): 39–50.

Foss, N.J. 1997. The Resource-Based Perspective: An Assessment and Diagnosis of Problems. *Scandinavian Journal of Management*, 14(3): 133-149.

Freeman, R.E. 1984. *Strategic Management: A Stakeholder Approach*. Boston: Pitman.

Freeman, R.E. 1999. Divergent stakeholder theory. *Academy of Management Review*, 24(2): 233-236.

Fung, Y.N., Choi, T.M. & Liu, R. 2019. Sustainable planning strategies in supply chain systems: proposal and applications with a real case study in fashion. *Production Planning & Control*, 31(11-12): 883-902. Doi: 10.1080/09537287.2019.1695913

Galtier, F. 2023. Take an inch for a mile. About an error of metrics in WTO rules and its impact on the ability of countries to build public stocks for food security. *Food Policy*, 116(2023): 1-20.

Garfamy, R.M. 2012. Supply Management: A Transaction. Supply Management: A Transaction Cost Economics Framework. *South East European Journal of Economics and Business*, 7(2):139-147.

Godfrey, S. 2015. Global, regional and domestic apparel value chains in Southern Africa: Social upgrading for some and downgrading for others. *Cambridge Journal of Regions, Economy and Society*, 8(3): 491-504.

Goffin, K., Szwejczewski, M. & New, C. 1997. Managing Suppliers: When Fewer Can Mean More. International *Journal of Physical Distribution & Logistics Management*, 27(7): 422-436.

Gornostaeva, G. 2023. The development of digital commerce in the fashion industry: The typology of emerging designers in London. *Technological Forecasting and Social Change*, 186(2023): 1-15.

Hair, J.H., Page, M. & Brunsveld, N. 2020. *Essential of Business Research Methods*. 4th edition. New York: Routledge.

Hajmohammad, S., Vachon, S., Klassen, R.D. & Gavronski, I. 2013. Lean management and supply management: their role in green practices and performance. *Journal of Cleaner Production*, 39(2012): 312-320.

Harrison, J.S., Bosse, D.A. & Phillips, R.A. 2010. Managing for stakeholders, stakeholder utility functions, and competitive advantage. *Strategic Management Journal*, 31(2010): 58-74. Doi: 10.1002/smj.801

Harrison, J.S., Freeman, R.E. & Abreu, M.C.S.D. 2015. Stakeholder theory as an ethical approach to effective management: Applying the theory to multiple contexts. *Revista brasileira de gestão de negócios*, 17(55): 858-869.

Hileman, J., Kallstenius, I., Häyhä, T., Palm, C. & Cornell, S. 2020. Keystone actors do not act alone: A business ecosystem perspective on sustainability in the global clothing industry. *Plos one*, 15(10): e0241453. Doi: 10.1371/journal.pone.0241453

Hillman, A., Withers, M.C. & Collins, B.J. 2009. Resource Dependence Theory: A Review. *Journal of Management*, 35(6) 1404–1427.

Hooper, D., Coughlan, J. & Mullen, M. 2008. Evaluating model fit: a synthesis of the structural equation modelling literature. In *7th European Conference on research methodology for business and management studies,* 195-200.

Hossain, W. 2019. Purchasing & Sourcing Management in Apparel Industry. *Bangladesh Supply Chain Review*, 2(16): 1-16.

Hosseini, S. & Khaled, A. 2019. A hybrid ensemble and AHP approach for resilient supplier selection. *Journal of Intelligent Manufacturing,* 30: 207–228.

Hosseini, Z.S., Flapper, S.D. & Pirayesh, M. 2022. Sustainable supplier selection and order allocation under demand, supplier availability and supplier grading uncertainties. *Computers & Industrial Engineering*, 165(1): 1-21.

Hugo, W.M.J. & Badenhorst-Weiss, J.A. 2011. *Purchasing and supply management*. 6th Edition. Van Schaik: Pretoria, South Africa.

Huttunen, S. 2022. Assessing the Reporting of Human Right Responsibilities in the Fashion Industry. Unpublished bachelor's report. Haaga-Helia University of Applied Sciences, Helsinki, Finland.

IDC. 2018/2019. Programme Guidelines Production Incentive Programme. IDC. FY2018/2019 FINAL. The DTIC (Department of trade, industry and competition).

ILO (International Labour Organisation). 2014. Wages and working hours in the textiles, clothing, leather and footwear industries. Paper presented at the *Global Dialogue Forum on Wages and Working Hours in the Textiles, Clothing, Leather and Footwear Industries, Geneva, 23-25 September 2014.* Available at: https://www.ilo.org/wcmsp5/groups/public/---ed_dialogue/---sector/documents/publication/wcms_300463.pdf [Accessed: 22 February 2019].

Inkpen, A.C. & Beamish, P.W. 1997. Knowledge, bargaining power, and the instability of international joint ventures. *Academy of Management Review*, 22: 177-202.

South African Market Insights. 2019. *South Africa's Manufacturing Industry*. Available at: https://www.southafricanmi.com/south-africas-manufacturing-industry.html. [Accessed: 16 September 2020].

InvestSA. 2020. *Investing in South Africa's Clothing, Textile, Footwear and Leather Sector*. Available at: http://www.investsa.gov.za/wp-content/uploads/2020/02/FACT-SHEET_ TEXTILES_2020.pdf [Accessed: 20 May 2020].

Ivanov, D. 2021. *Introduction to supply chain resilience management*, *modelling, technology*. Switzerland: Springer.

Jacobs, J. 1974. Quantitative measurement of food selection: a modification of the forage ratio and Ivlev's electivity index. *Oecologia*,14(1974): 413-417.

Jacobs, B. & Karpova, E. 2020. Clarifying the merchandising function: analysis of merchandising roles and responsibilities in the South African apparel retail industry. *International Journal of Fashion Design, Technology and Education*, 13(3):364-375.

Jachi, M., Makumbe, M. & Mandongwe, M.M.L. 2019. Public procurement and public service delivery in Zimbabwe local authorities. A non-systematic review. *Public Policy and Administration Research,* 9(12): 43-48.

Jack, S.T. 2020. The slow movement in the garment manufacturing industry of South Africa. Unpublished master's dissertation. University of Johannesburg, Johannesburg, South Africa.

Jenkin, N. & Hattingh, E. 2022. *Designing Climate-Compatible Industrial Strategies for South Africa: The Textiles Value Chain*. Trade and Industrial policy strategies (TIPS). Available at: https://www.tips.org.za/images/TIPS_Designing_climate-compatible_industrial_ strategies_for_South_Africa_-_The_textiles_value_chain_August_2022.pdf [Accessed: 19 May 2023].

Jestratijevic, I., Rudd, N.R. & Uanhoro, J. 2020. Transparency of sustainability disclosures among Luxury and mass-market fashion brands. *Journal of Global Fashion Marketing*. Doi: 10.1080/20932685.2019.1708774.

Jin, B. & Cedrola, E. 2019. *Product innovation in the global fashion industry*. USA: Springer.

Jin, B.E., Cedrola, E. & Kim, N.L. 2019. Process Innovation: Hidden Secret to Success and Efficiency. In B.E. Jin & E. Cedrola (Eds.). *Process innovation in the global fashion industry*. USA: Springer.

John, E.P. & Mishra, U. 2023. A sustainable three-layer circular economic model with controllable waste, emission, and wastewater from the textile and fashion industry. *Journal of Cleaner Production*, 388(2023): 1-24.

Johnson, P.F. & Flynn, A.E. 2015. *Purchasing and supply management*. 5th Edition. United States: McGraw-Hill education

Johnson, P.F. & Klassen, R.D. 2022. New directions for research in green public procurement: the challenge of inter-stakeholder tensions. *Cleaner Logistics and Supply Chain*, 3(2022): 1-7.

Joorst, G. 2021. Among petrochemical companies in South Africa. Unpublished Master's dissertation. University of Johannesburg, Johannesburg, South Africa.

Joshi, A.W. 2023. The effects of a manufacturer's actions on supplier performance: Insights from a contingent expectancy theory-based model. *Industrial Marketing Management*, 109 (2023): 106–120.

Kamau, G., van Biljon, E. & Arnolds, C. 2020. Critical success factors for achieving patient order fulfilment in Kenyan public hospital pharmacies. *African Journal of Business & Economic Research*, 15(2): 1-20.

Kaplan, D. 2020. *Industrial Policy Action Plan 2018/19-2020/21*. Economic sector, employment and infrastructure development cluster: Economic Analysis 10-year legacy review key constraints on industrial policy transversal & Sector focus areas with key action programmes 2018/19-2020/21. The DTIC.

Karabay, B. 2022. A new dimension in global value chains: Control vs. delegation in input procurement. *Journal of International Economics*, 137(2022): 1-38.

Katila, R., Rosenberger, J.D. & Eisenhardt, K.M. 2008. Swimming with sharks: Technology ventures, defense mechanisms and corporate relationships. *Administrative Science Quarterly*, 53(2): 295-332.

Kelly, A. 2009. *Decision Making Using Game Theory: An Introduction for Managers*. Cambridge: Cambridge University Press. Doi: 10.1017/CBO9780511609992.

Kembłowski, M.W., Grzyl, B. & Siemaszko, A. 2017. Game theory analysis of bidding for a construction contract. In *IOP Conference Series: Materials Science and Engineering*, 245(6): 1-6.

Khan, S.A.R. & Yu, Z. 2019. *Strategic supply chain management*. Switzerland: Springer.

Kholopane, P. & Vandayar, C. 2014. Lean application in student finance department within a learning institution can lead to high academic throughput: A case study. In *Proceedings of PICMET'14 Conference: Portland International Center for Management of Engineering and Technology; Infrastructure and Service Integration* (2014), 988-994.

Khouja, M. & Hammami, R. 2023. Optimizing price, order quantity, and return policy in the presence of consumer opportunistic behavior for online retailers. *European Journal of Operational Research,* 309(2): 683-703.

Khurana, K. 2022. The Indian fashion and textile sector in and post COVID-19 times. *Fashion and Textiles*, 9(1): 1-14.

Kirchherr, J. & Charles, K. 2018. Enhancing the sample diversity of snowball samples: Recommendations from a research project on anti-dam movements in Southeast Asia. *PloS one*, 13(8): 1-17.

Kline, R.B. 2015. *Principles and practice of structural equation modeling*. New York: Guilford publications.

Knappe, M. 2020. Changing structures: A look at textiles and clothing. Available at: http://www.intracen.org/covid19/Blog/Changing-structures-A-look-at-textiles-and-clothing/ [Accessed: 18 May 2020].

Koc, K., Ekmekcioğlu, Ö. & Işık, Z. 2023. Developing a probabilistic decision-making model for reinforced sustainable supplier selection. *International Journal of Production Economics*, 259(2023): 1-22.

Koprulu, A. & Albayrakoglu, M.M. 2007. Supply chain management in the textile Industry: A supplier selection model with an analytical hierarchy process. *ISAHP 2007*, Viña Del Mar: Chile.

Krzeminska, A. 2008. *Determinants and management of make-and-buy: an extension to transaction cost economics*. Berlin: Springer Science & Business Media.

Kuture, D.C. 2022. Protection of the environment from pollution emanating from offshore oil installations. Unpublished master's dissertation. Nelson Mandela University, Gqeberha, South Africa.

Lasch, R. & Janker, C.G. 2005. Supplier selection and controlling using multivariate analysis. *International Journal of Physical Distribution & Logistics Management*, 35(6): 409-425.

Lau, Y., Ng, A.K.Y & Alarid, J.A. 2019. *Principles of Global Supply Chain Management*. USA: Anthem Press.

Leedy, P.D. & Ormord, J.E. 2014. *Practical Research Planning and Design*. Pearson New.10th Edition. United States of America: Pearson Education Limited.

Lelala, R. 2019. Strategic management process review of revised B-BBEE requirements. Unpublished master's dissertation. University of Johannesburg. Johannesburg.

Levin, J.A., Fox, J.A. & Forde, D.R. 2017. *Elementary Statistics in Social Research*. 12th edition. New York: Pearson.

Levitt, T. 1972. Production-line approach to service. *Harvard Business Review*, 50(5): 20-31.

Li, W., Humphreys, P.K., Yeung, A.C.L. and Cheng, T.C.E. (2012), "The impact of supplier development on buyer competitive advantage: a path analytic model"*, International Journal of Production Economics*, 135 (1):353-66.

Lumineau, F., Jin, J.L., Sheng, S. & Zhou, K.Z. 2022. Asset specificity asymmetry and supplier opportunism in buyer–supplier exchanges. *Journal of Business Research*, 149(2022): 85-100.

Lysons, K. & Farrington, B. 2016. *Procurement and supply chain management*. U.K.: Pearson Higher Education Limited.

Madadizadeh, F. & Bahariniya, S. 2023. Tutorial on how to calculating content validity of scales in medical research. *Perioperative Care Operating Room and Management*, 31(2023): 1000315.

Madzimure, J., Mafini, C. & Dhurup, M. 2020. E-procurement, supplier integration and supply chain performance in small and medium enterprises in South Africa. *South African Journal of Business Management,* 51(1): 1-12.

Mai, N.T.N. & Phong, H.T. 2020. A Supplier Selection Model for Textile and Apparel Companies: An Analytic Network Process Approach. *International Journal of Supply Chain Management,* 9(5): 1-28.

Majumdar, A., Sinha, S.K., Shaw, M. & Mathiyazhagan, K. 2020. Analysing the vulnerability of green clothing supply chains in South an, d Southeast Asia using fuzzy analytic hierarchy process. *International Journal of Production Research*, 1-20. Doi: 10.1080/00207543.2019.1708988

Makinde, O., Selepe, R., Munyai, T., Ramdass, K. & Nesamvuni, A. 2022. Improving the Supply Chain Performance of an Electronic Product-Manufacturing Organisation Using DMAIC Approach. *Cogent Engineering*, 9(1): 1-29.

Malinverno, N., Schmutz, M., Nowack, B. & Som, C. 2023. Identifying the needs for a circular workwear textile management–A material flow analysis of workwear textile waste within Swiss Companies. *Resources, Conservation and Recycling*, 189(2023): 1-20.

Mamun, M.A. & Hoque, M.M. 2022. The impact of paid employment on women's empowerment: A case study of female garment workers in Bangladesh. *World Development Sustainability*, 1(2022): 1-11.

Mani, V. & Delgado, C. 2019. *Supply Chain Social Sustainability for Manufacturing Measurement and Performance Outcomes from India*. Singapore: Springer.

Maree, K. 2016. *First step in research*. 2nd edition. Pretoria: Van Schaik Publishers.

Maree, K. & Pietersen, J. 2020. *First steps in research*. 3rd edition. Braamfontein: Van Schaik.

Maria, G. 2021. Environmental and waste management in the garment industry in the Republic of Moldova. *Global Journal of Researches in Engineering: G Industrial Engineering*, 21(1): 1-7.

Mateo-Fornés, J., Soto-Silva, W., González-Araya, M.C., Plà-Aragonès, L.M. & Solsona-Tehas, F. 2023. Managing quality, supplier selection, and cold-storage contracts in agrifood supply chain through stochastic optimization. *International Transactions in Operational Research,* 30(4): 1901-1930.

Mavela, A. 2020. A framework for supplier selection in the Nelson Mandela Bay retail industry. Unpublished master's dissertation. Nelson Mandela University, Gqeberha, South Africa.

Mbanje, S. & Lunga, J. 2015. *Fundamental principle of supply chain management*. Pretoria: Van Schaik.

McIvor, R. 2009. How the transaction cost and resource-based theories of the firm inform outsourcing evaluation. *Journal of Operations Management*, 27: 45-63.

Mediavilla, M., Bernardos, C. & Martínez, S. 2015. Game theory and purchasing management: an empirical study of auctioning in the automotive sector. In *Advances in Production Management Systems: Innovative Production Management Towards Sustainable Growth: IFIP WG 5.7 International Conference, APMS 2015, Tokyo, Japan, September 7-9, 2015, Proceedings, Part II 0,* 199-206). Springer International Publishing.

Mejías, A.M., Bellas, R., Pardo, J.E. & Paz, E. 2019. Traceability management systems and capacity building are new approaches for improving sustainability in the multi-tier fashion supply chain. *International Journal of Production Economics*, 217(2019): 143-158.

Mercer, S. 2020. An investigation of employment outcomes in South African manufacturing. Unpublished master's dissertation, Faculty of Commerce. University of Cape Town, Cape Town.

Mertens, D.M. 2023. *Mixed Methods Research: Research Methods*. U.K.: Bloomsbury Publishing Plc.

Miocevic, D. & Crnjak-Karanovic, B. 2012. The mediating role of key supplier relationship management practices on supply chain orientation – the organizational buying effectiveness link. *Industrial Marketing Management*, 41(1): 115-24.

Mitterfellner, O. 2020. *Fashion Marketing and Communication: Theory and Practice Across the Fashion Industry*. London: Routledge.

Mkansi, M., McLennan, N. & de Villiers, G. 2019. *Contemporary issues in operations and supply chain*. Hatfield: Van Schaik.

Modi, S.B. & Mabert, V.A. 2007. Supplier development: improving supplier performance through knowledge transfer. *Journal of Operations Management*, 25(1): 42-64.

Mokwana, R.M. 2021. Exploring the sustainability of SMEs in the textile and clothing industry to create employment in South Africa. Unpublished mini master's dissertation. North-West University, Potchefstroom.

Moloi, M.J. 2019. Industrial clustering as a tool to enhance competitiveness of the economy of the KwaZulu-Natal Province, South Africa. Unpublished doctorate thesis. College of law and management studies. University of KwaZulu-Natal. Durban, South Africa.

Monczka, R.M., Handfield, R.B., Giunipero, L.C. & Peterson, J.L. 2016. *Purchasing and Supply Chain Management*, 6th edition. USA: Cengage Learning.

Morris, M. 2006. *Globalisation, China, and Clothing Industrialisation Strategies in Sub-Saharan Africa.* Bonn: Friedrich-Ebert-Stiftung, 2006: 36-53.

Morris, M., Barnes, J. & Kaplan, D. 2021. Value chains and industrial development in South Africa. Policy Research and International Manufacturing. *The Oxford Handbook of the South African Economy*, (2021): 1-17.

Muhwati, C. & Salisbury, R.H. 2017. Agility in a South African fashion industry supply chain. *Journal of Contemporary Management*, 14(1): 864-892.

Mukherjee, S.P. 2020. *A guide to research methodology: A review of research, problems, tasks and methods*. New York: Taylor and Francis Group.

Muthu, S.S. 2020. *The Textile Institute Book Series Assessing the Environmental Impact of Textile and clothing Supply Chain*. 2nd edition. Hong Kong: Elsevier.

Nabee, S.G. & Swanepoel, E. 2021. Exploring supply chain business bullying of small and medium-sized business suppliers by dominant buyers in the apparel retail sector in Gauteng. *The Southern African Journal of Entrepreneurship and Small Business Management*, 13(1): 11.

Němcová, J. & Tučková, Z. 2019. Corporate social responsibility (CSR) as a factor of the sustainable development of entrepreneurship. In *European Conference on Innovation and Entrepreneurship* (pp. 1193-XXVI). Academic Conferences International Limited.

Nattrass, N. & Seekings, J. 2012. *Differentiation within the South African clothing industry: Implications for wage setting and employment*. CSSR. Working Paper no. 307. Centre for Social Science Research, 1-29.

Nayak, R. & Padhaye, R. 2018. *Automation in garment manufacturing.* The Textile Institute. United Kingdom: Elsevier.

Němcová, J. & Tučková, Z. 2019, September. Corporate social responsibility (CSR) as a factor of the sustainable development of entrepreneurship. In *European Conference on Innovation and Entrepreneurship* (pp. 1193-XXVI). Academic Conferences International Limited.

Netland, T.H., Schloetzer, J.D. & Ferdows, K. 2015. Implementing corporate lean programs: the effect of management control practices. *Journal of Operations Management*, (36): 90-102.

Netshishivhe, T.C. 2021. The challenges impacting the growth of Small-, Micro- and Medium-Sized Textile Enterprises (SMMEs): Ekurhuleni Metropolitan Municipality. Unpublished mini dissertation in Master of Development Studies. University of the Free State, Bloemfontein.

Newsom, J.T. 2018. Minimum sample size recommendations (Psy 523/623 structural equation modeling). Available at: http:upa.pdx.edu/IOA/newsom/semrefs.html. [Accessed: 28 May 2021].

Ngulube, P. 2017. Trends in Research Methodological *Procedures Used in Knowledge Management Studies*, 25(2): 125-143.

Nolan, S. 2019. Major-B-BBEE Transactions. *TFM Magazine*, 16(2019): 40-41.

Norheim-Hansen, A. 2023. Green supplier development: What's in it for you, the buyer? *Business Horizons*, (2023) 66: 101-107.

Ntingi, A. 2020. Tender set-asides rather than B-BBEE. *finweek*, 2020(10):7-7.

Nunfam, V.F. 2021 Mixed methods study into social impacts of work-related heat stress on Ghanaian mining workers: A pragmatic research approach. *Heliyon*, 7 (2021):1-13.

Obeng, C.K., Boadu, M.T. & Ewusie, E.A. 2023. Deep preferential trade agreements and export efficiency in Ghana: Do institutions matter? *Research in Globalization*, 66(2023): 1-12.

Omuruyi, O. & Nwele, U.K. 2020. Factors influencing Buyer-Supplier commitment and competitive performance among small and medium enterprises in Southern Gauteng. *International Journal of Business and Management Studies*, 12(2): 501-516.

Prahinski, C. & Benton, W.C. 2004. Supplier evaluations: communication strategies to improve supplier performance. *Journal of Operations Management*, 22(1): 39-62.

Parry, S. 2020. Fit indices commonly reported for CFA and SEM. Cornell University, Corneii Statistical Consulting Unit. Available at: https://www.cscu.cornell.edu/news/ Handouts/SEM_fit.pdf. [Accessed: 29 October 2022].

Pereira, A.M., Moura, J.A.B., Costa, E.D.B., Vieira, T., Landim, A.R., Bazaki, E. & Wanick, V. 2022. Customer models for artificial intelligence-based decision support in fashion online retail supply chains. *Decision Support Systems*, 158(2022): 1-12.

Perry, P. & Wood, S. 2019. Exploring the International Fashion Supply Chain and Corporate Social Responsibility: Cost, Responsiveness and Ethical Implications. In J. Fernie & L. Sparks (Eds.). *Logistics and Retail Management*, 5th edition. London: Kogan Page.

Peters, G., Li, M. & Lenzen, M. 2021. The need to decelerate fast fashion in a hot climate - A global sustainability perspective on the garment industry. *Journal of Cleaner Production*, 295(2023): 1-10.

Petersen, K.J., Handfield, R.B., Lawson, B. & Cousins, P.D. 2008. Buyer dependency and relational capital formation: the mediating effects of socialization processes and supplier integration. *Journal of Supply Chain Management*, 44(4): 53-65.

Peugh, J. & Feldon, D.F. 2020. How well does your structural equation model fit your data?": Is Marcoulides and Yuan's equivalence test the answer? *CBE—Life Sciences Education*, 19(3):5.

Pooe, B. 2020. Development of an effective and sustainable Supply-Chain-Management Model for the South African Fashion Designers in the Retail Clothing Industry. Unpublished master's dissertation. Cape Peninsula University of Technology, Cape Town.

Pooe, R. & Pillay, P. 2019. Supply chain constraints in the South African construction industry–perspectives from Supply Chain practitioners. *Journal for New Generation Sciences*, 17(1): 35-47.

Prade, W. (wprade@cibc.co.za). 2023. Key manufacturing regions for Clothing manufacturing factories. National bargaining council (NBC). E-mail to N.J. Matsoma (matsonj@unisa.ac.za), 3 August 2023.

Priem, R.L. & Butler, J.E. 2001. Is the Resource-Based "View" a Useful Perspective for Strategic. Management Research. *Academy of Management Review,* 26(1): 22-40.

Provan, K.G., Beyer, J.M. & Kruytbosch, C. 1980. Environmental linkages and power in resource dependence relations between organizations. *Administrative Science Quarterly,* 25(1980): 200-225.

Radhakrishnan, S. 2021. Circular Economy in Textiles and Fashion. *Circular Economy: Assessment and Case Studies,* (2021): 163-202.

Rafn, J.H.T. 2017. Corporate Social Responsibility in the Garment Industry: A Cross-case analysis of three Norwegian organizations' approach to central challenges in improving working conditions for factory workers in developing countries. Unpublished master's thesis. University of Agder, Kristiansand, Norway.

Ramdass, K. & Kruger, D. 2011. An analysis into the impact of globalization on the clothing industry in conjunction with the clothing industry in South Africa. In *2011 Proceedings of PICMET'11: Technology Management in the Energy Smart World (PICMET) (1-10)*. IEEE.

Ramphoma, S.S. 2020. Supply Chain Management for Service Delivery in the Lejweleputswa Municipal District. Unpublished doctoral thesis. University of the Free State, Mangaung, South Africa.

Rathinamoorthy, R. & Balasaraswathi, S.R. 2023. Characterization of microfibers originated from the textile screen printing industry. *Science of the Total Environment*, 874(2023): 1-10.

Reinecke, J. & Donaghey, J. 2020. Political CSR at the coalface: The roles and contradictions of multinational corporations in developing workplace dialogue. *Journal of Management Studies,* 58(2): 457-486 Doi: 10.1111/joms.12585.

Reis, T.L. 2019. Validation of a scale to measure consumers' engagement in voluntary simplistic clothing consumption behaviour in South Africa. Unpublished master's dissertation. University of Pretoria, Pretoria, South Africa.

Republic of South Africa. 2004. No. 53 of 2003: Broad-Based Black Economic Empowerment Act, 2003. Government Gazette No. 25899. Available at: https://www.gov.za/sites/default/files/gcisdocument/201409/a53-030.pdf [Accessed: 22 May 2022].

Republic of South Africa. 2014. Act No. 46 of 2013: Broad-Based Black Economic Empowerment Amendment Act, 2013. Government Gazette No. 37271. Available at: https://www.gov.za/sites/default/files/gcis_document/201409/37271act46of2013.pdf [Accessed: 22 May 2022].

Republic of South Africa. 2017. Broad-Based Economic Empowerment Amendment Act (53/2003): Draft Statement 005 of 2017 for 60 Day Public Commentary. Government Gazette No. 40997. Available at: http://www.thedtic.gov.za/wp-content/uploads/BEE_40997.pdf [Accessed: 22 May 2022].

Riazi, A. & Saraeian, S. 2023. Sustainable production using a hybrid IPSO optimized SVM-based technique: Fashion industry. *Sustainable Computing: Informatics and Systems*, 37(2023): 1-13.

Rosenthal, R.W. 1981. Games of perfect information, predatory pricing and the chain-store paradox. *Journal of Economic theory*, *25*(1):92-100.

Šajn, N. 2019. Environmental impact of the textile and clothing industry: What consumers need to know, EPRS: European Parliamentary Research Service. Belgium. Available at: https://policycommons.net/artifacts/1335345/environmental-impact-of-the-textile-and-clothing-industry/1941806/ on 14 Jul 2023. CID: 20.500.12592/7q9h36 [Accessed: 14 July 2023].

Saputro, T.E., Figueira, G. & Almada-Lobo, B. 2022. A comprehensive framework and literature review of supplier selection under different purchasing strategies. *Computers & Industrial Engineering*, 167(2022): 1-20.

Saricam, C. & Yimlaz, S.M. 2022. An integrated framework for supplier selection and performance evaluation for apparel retail industry. *Textile Research Journal*, 92(17–18) 2947–2965.

Sarstedt, M. & Mooi, E. 2019. *A concise guide to market research: The process, data and methods using IBM SPSS Statistics*. 3rd edition. Germany: Springer.

Saunders, M.N.K, Lewis, P. & Thornhill, A. 2019. *Research methods for business students*. 8th edition. United Kingdom: Pearson Education Limited.

Saussay, A. & Zugravu-Soilita, N. 2023. International Production Chains and the Pollution Offshoring Hypothesis: An Empirical Investigation. *Resource and Energy Economics*, 73(2023): 1-16.

Schiele, H. 2019. Purchasing and supply management. In H. Zijm, M. Klumpp, S. Heragu & A. Regattieri (Eds.). *Operations, Logistics and Supply Chain Management: Definitions and Objectives*. Switzerland: Springer international publishing, 27-42.

Schmidt, M. 2015. Price determination in public procurement: a game theory approach. *European Financial and Accounting Journal*, 10(1): 49-62.

Seifi, S. & Crowther, D. 2018. Using game theory to develop sustainability strategies in an era of resource depletion. *Industrial Engineering & Management Journal*, 7(1):1-7.

Senapati, K., Chattopadhyay, A. & Chakrabarty, R. 2022. Market size estimation of domestic apparel retail in India using predictive analytics. *International Journal of Management and Development Studies*, 11(01): 1-9.

Shabangu, P. 2020. Supply Chain Practitioners Perceptions of Supply Chain Integration in FMCG Manufacturing firms. Unpublished master's dissertation. University of Pretoria, Tshwane, South Africa.

Shen, B., Gu, Q. & Yang, Y. 2019. *Fashion Supply Chain Management in Asia: Concepts, Models and Cases*. Singapore: Springer.

Shukla, M.K. 2016. Supplier evaluation and selection criteria in business performance of small and medium scale enterprise. *International Research Journal of Engineering and Technology*, 3(6): 70-76.

Shukla, V.K. & Gupta, R. 2019. Enhancing User Experience for Sustainable Fashion through QR code and Geo-Fencing. In *2019 International Conference on Automation, Computational and Technology Management* (ICACTM): 126-131. IEEE.

Sibiya, D.Z. & Barnard, B. 2019. Institutionalizing entrepreneurship: The case of B-BBEE Based Enterprise and Supplier Development in South Africa. *The IUP Journal of Business Strategy*, (2019): 1-66.

Simpson, P.M., Siguaw, J.A. & White, S.C. 2002. Measuring the performance of suppliers: an analysis of evaluation processes. *Journal of Supply Chain Management*, 38(1): 29-41.

Singh, P.K. & Chan, S.W. 2022. The impact of electronic procurement adoption on green procurement towards sustainable supply chain performance-evidence from Malaysian ISO organizations. *Journal of Open Innovation: Technology, Market, and Complexity*, 8(2): 1-27.

Siqueira, A.C.O., Honig, B., Mariano, S., Moraes, J. & Cunha, R.M. 2023. Creating economic, social, and environmental change through entrepreneurship: An entrepreneurial autonomy perspective informed by Paulo Freire. *Journal of Business Venturing Insights*, 19(2023): 1-9.

Staritz, C., Morris, M. & Plank, L. 2016. *Clothing Global Value Chains and Sub-Saharan Africa: Global Exports, Regional Dynamics and Industrial Development Outcomes*. International Trade Working Paper, No. 2016/16, Commonwealth Secretariat, London. Doi: 10.14217/5jlz4ft6f2nn-en

Statista. 2021. *Apparel Report 2021. Statista Consumer Market Outlook*. Available at: https://www.statista.com [Accessed: 17 May 2021].

Su, J. 2013. Strategic sourcing in the textile and apparel industry. *Industrial Management & Data Systems,* 113(1): 23-38.

Su, J. & Gargeya, V. 2012. Strategic sourcing, sourcing capability and firm performance in the US textile and apparel industry. *Strategic Outsourcing: An International Journal,* 5(2): 145–165. Doi: 10.1108/17538291211257592

Swaminathan, K. & Venkitasubramony, R. 2023. Demand forecasting for fashion products: A systematic review. *International Journal of Forecasting*, (2023): 1-21.

Symanowitz, S., Gengan, M., van der Walt, R., Ntsaluba, Y., Maharaj, B., Pretorius, A., Dubeni, T. & Sithebe, N. 2019. B-BBEE 2020: the codes reach adolescence. *TFM Magazine*, 18: 11-14.

Teke, A. 2022. An index for measuring corporate strategy and supply chain performance in the clothing retail sector. Unpublished master's thesis. College of Business and Economics. University of Johannesburg, Johannesburg.

Tortorella, G.L. & Fettermann, D. 2018. Implementation of Industry 4.0 and lean production in Brazilian manufacturing companies. *International Journal of Production Research*, 56(8): 2975-2987.

Truett, L.J. & Truett, D.B. 2019. Challenges in the Portuguese textile and industry: a fight for survival. *Applied Economics*, 51(26): 2842-2854.

Truijens, O. 2008. A Critical Review of the Resource-based View of the Firm". *All Sprouts Content,* 41. Available at: http://aisel.aisnet.org/sprouts_all/41 [Accessed: 31July 2023].

Tsolakis, N., Zissis, D. & Tjahjono, B. 2021. Scrutinising the interplay between governance and resilience in supply chain management: A systems thinking framework. *European Management Journal,* 41: 164-180.

Tukuta, M. & Saruchera, F. 2015. Challenges facing procurement professionals in developing economies: Unlocking value through professional international purchasing. *Journal of Transport and Supply Chain Management*, 9(1): 1-9.

Turker, D. & Altuntas, C. 2014. Sustainable supply chain management in the fast fashion industry: An analysis of corporate reports. *European Management Journal*, 32(5): 837-849.

Twyg. 2020. Assessing the economic value of the designer fashion sector in South Africa. Executive summary. Available at: https://twyg.co.za/wp-content/uploads/2020/08/SACC004-A-SACC-THE-ECONOMIC-VALUE-OF-THE-DESIGNER-FASHION-SECTOR-RESEARCH-REPORT11.pdf. [Accessed: 20 May 2021].

Utama, D.M., Maharani, B. & Amallynda, I. 2021. Integration Dematel and ANP for the supplier selection in the textile industry: A case study. *Jurnal Ilmiah Teknik Industri*, 20(1): 119-130.

Van Tilburg, M., Krikke, H. & Lambrechts, W. 2022. Supply Chain Relationships in Circular Business Models: Supplier Tactics at Royal Smit Transformers. *Logistics*, 6(4): 77.

Van Weele, A.J. 2005. *Purchasing and supply chain management: Analysis, strategy, planning and practice.* 4th edition. London, UK.: Thomson Learning.

Veillard, P. 2018. Fair Trade Textile and Decent Work: The impact of fair trade on the sustainability of Textile Supply Chain. Global context analysis. *OXFAM-Magasins du monde.* Bierges.

Veitch, C. 2021. *The clothing industry in South Africa. Who Owns Whom.* Available at: https://www.whoownswhom.co.za/store/clothing-industry-south-africa/ [Accessed: 26 May 2022].

Verma, J.P. & Abdel-Salam, G. 2019. *Testing Statistical Assumptions in Research.* Hoboken, NJ: Wiley & Sons, Inc.

Vlok, E. 2006. The future of the textile and clothing industry in sub-Saharan Africa: The textile and clothing industry in South Africa. Friedrich-Ebert-Stiftung, Bonn.

Wan, W. & Duffy, R.D. 2022. Decent work and turnover intention among new generation employees: the mediating role of job satisfaction and the moderating role of job autonomy. *Sage Open*, 12(2): 1-11.

Wang, C.H. 2022. Considering economic indicators and dynamic channel interactions to conduct sales forecasting for retail sectors. *Computers & Industrial Engineering*, 165: 107965. Doi: 10.1016/j.cie.2022.107965

WFTO (World Fair Trade Organisation). 2019. *World Trade Statistical Review.* Available at: www.wto.org/statistics. [Accessed: 15 May 2020].

Williams, M. 2022.The impact of consumers' sustainability consciousness on sustainable purchase intention amongst Gen Z in the South African fashion retail market Unpublished master's thesis, Faculty of Commerce, University of Cape Town.

Williamson, O.E. 1975. *Markets and hierarchies: Analysis and antitrust implications*. New York: Free Press.

Williamson, O.E. 1979, Transaction Cost Economics: The Governance of Contractual Relations. *Journal of Law and Economics*, 22(1919): 233–261.

Williamson, O.E. 1981. The modern corporation: origins, evolution, attributes. *Journal of Economic Literature*, 19: 1537–1568.

Williamson, O.E. 1985. *The economic institutions of capitalism: Firms, markets and relational contracting*. New York: Free Press.

Williamson O.E. 1999. Strategy research: governance and competence perspectives. Strategic. *Strategic Management Journal*, 20(12): 1087-1108.

Williamson, O.E. 1991. Comparative economic organization: The analysis of discrete structural alterna542 Academy of Management Journal June tives. Administrative Science Quarterly, 36: 269– 296.

Whitfield, L. & Mkhabela, V. 2023. *The Business Strategies of South African Textile Firms and Global Trends in 4IR and Sustainability Technologies*. SARChI Industrial Development Working Paper Series WP 2023-01, January 2023.

Wisner, J.D., Tan, K. & Leong, G.K. 2019. *Principles of supply chain management: A balanced approach*. 5th edition. UK: Cengage.

Worku, Z. 2019. Risk factors of failure in start-up textile enterprises. *African Journal of Science, Technology, Innovation and Development,* 11(1): 97-105.

Xue, Z., Li, Q. & Zeng, X. 2023. Social media user behavior analysis applied to the fashion and apparel industry in the big data era. *Journal of Retailing and Consumer Services*, 72(2023): 1-18.

Yao, C., Fan, B., Zhao, Y. & Cheng, X. 2023. Evolutionary dynamics of supervision-compliance game on optimal pre-positioning strategies in relief supply chain management. *Socio-Economic Planning Sciences,* 87(2023): 1-23.

Yang, Y. & Jiang, Y. 2023. Buyer-supplier CSR alignment and firm performance: A contingency theory perspective. *Journal of Business Research,* 154(2023): 1-14.

Yayla, A., Ilgin, V.E. & Özlü, Z.K. 2022. Development of the perioperative privacy scale: A validity and reliability study. *Journal of PeriAnesthesia Nursing*, 37(2): 227-233.

Yeo, S.F., Tan, C.L., Kumar, A., Tan, K.H. & Wong, J.K. 2022. Investigating the impact of AI-powered technologies on Instagrammers' purchase decisions in digitalization era–A study of the fashion and apparel industry. *Technological Forecasting and Social Change*, 177 (2020): 1-14.

Yin, Q., Song, D., Lai, F., Collins, B.J. & Dogru, A.K. 2023. Customizing governance mechanisms to reduce opportunism in buyer–supplier relationships in the digital economy. *Technological Forecasting and Social Change*, 190(2023): 1-14.

Yue, O. 2022. Conceptual model for effects of the buyer supplier relationship, purchasing process, and measures of performance in supply chains. *Journal of Enterprise and Business Intelligence,* 2(3): 142-152. Doi: 10.53759/5181/JEBI202202015.

Yuen, S.S. & Cheng, C. 2013. Purchasing strategy in Textile and Apparel Sourcing Companies in Hong Kong: A Practitioner's Perspective. *Journal of Business and Economics*, 4(11): 1148-1158.

Yülek, M.A., Natsuda, K., Akkemik, K.A. & Yağmur, M.H. 2019. The Textile and Clothing industrialization cycle. *Marmara University Journal of Economic & Administrative Sciences*, 41(1): 256-277.

Zajac, E.J. & Olsen, C.P. 1993. From transaction cost to transactional value analysis: Implications for the study of interorganizational strategies. *Journal of Management Studies,* 30(1993): 131–145.

Zhang, Q., Jiang, X. & Zheng, Y. 2023. Blockchain adoption and gray markets in a global supply chain. *Omega*, 115(2023): 1-14.

Zhao, D., Gu, F.F. & Wang, L. 2022. The impact of contractual governance on forms of opportunism. *Industrial Marketing Management*, 102: 89-103.

Zijm, W.H.M, Klumpp, M., Heragu, S. & Regattieri, A. 2019. Operations, logistics and supply chain management: Definitions and objectives. In W.H.M. Zijm, M. Klumpp, S. Heragu & A. Regattieri (Eds.). *Operations, Logistics and Supply Chain Management*. Switzerland: Springer international publishing.

Zsidisin, G.A. & Henke, M. 2019. *Revisiting Supply Chain Risk*. Volume 7. United States of America: Springer.

APPENDIX A:
EXPLORATORY FACTOR ANALYSIS GRAPHS WITH EIGENVALUES

Appendix A.1: Exploratory factor analysis (EFA) graphs, Procurement practices used in the clothing industry.
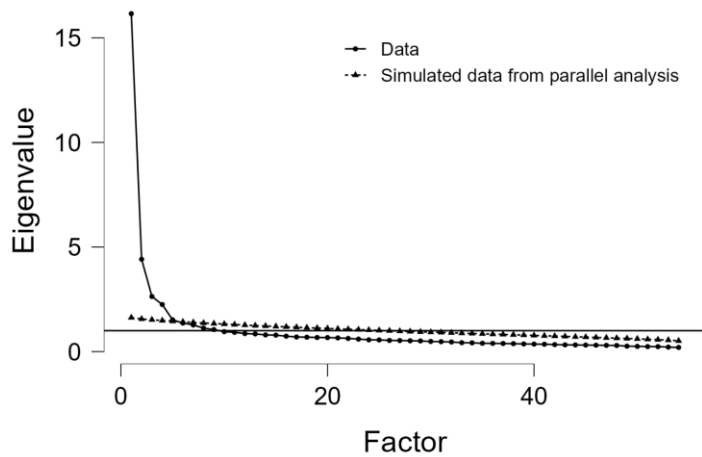
Scree plot

Appendix A.2: Procurement policies and regulation

Scree plot
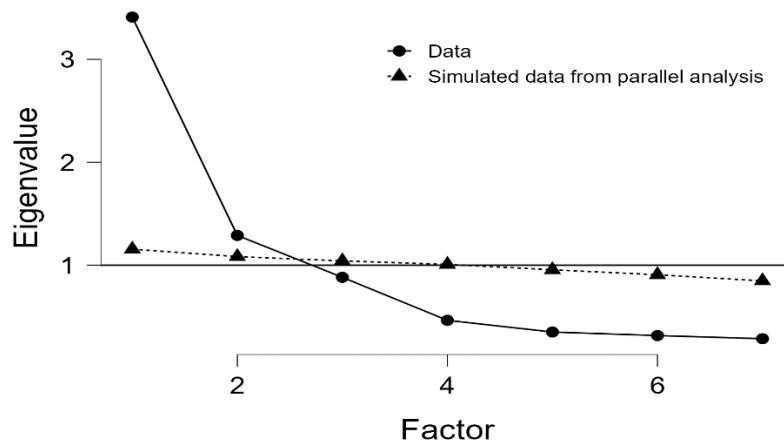
Appendix A.3: The value of procurement practices in the SA clothing industry
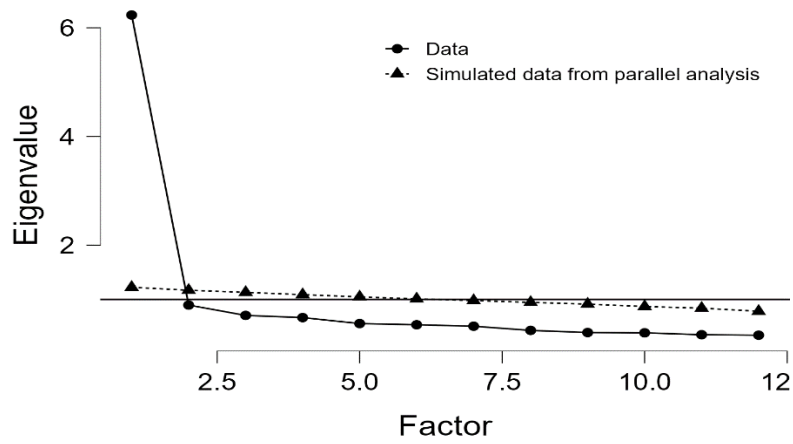
Scree plot

Appendix A.4: Sustainability of procurement in the clothing value chain

Scree plot
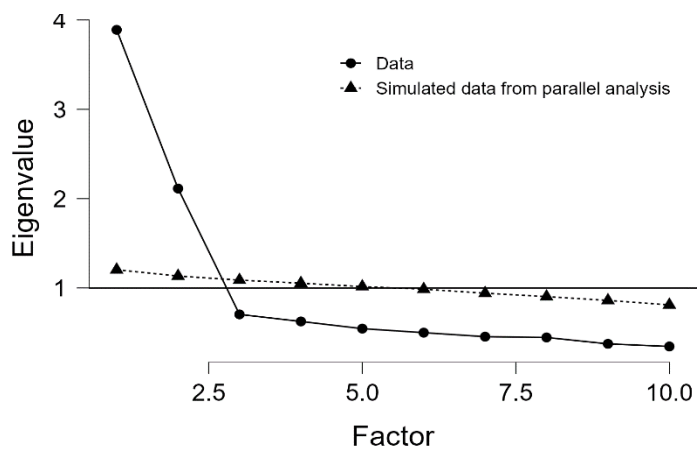
Appendix A.5: Procurement challenges in the clothing industry
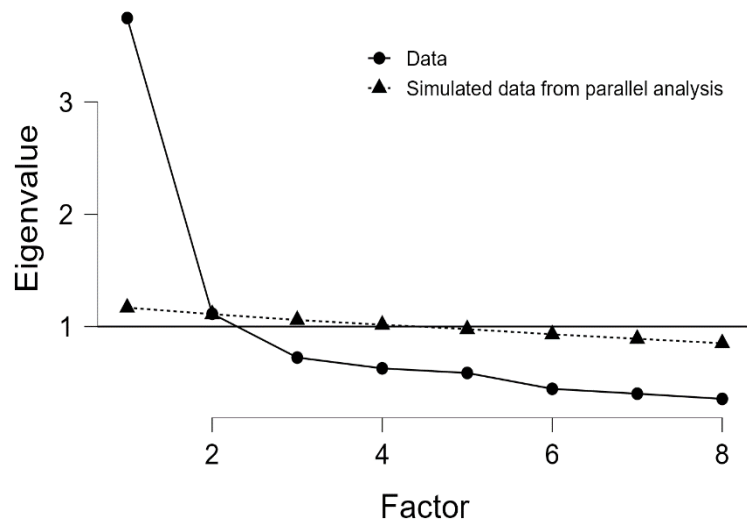
APPENDIX B:
RESEARCH QUESTIONNAIRE

UNISA | university of south africa

Department of Applied Management
☎: +27 (0)12 433 4669
✉: Matsonj@unisa.ac.za

RESEARCH QUESTIONNAIRE

PROCUREMENT FRAMEWORK FOR THE SOUTH AFRICAN CLOTHING INDUSTRY

Dear Participants,

I am currently conducting research for my PhD degree in Supply Chain. The focus of the study is to design a procurement framework for the South African clothing Industry. The questionnaire should take approximately 30 minutes.

Note the following important points:

- Participation is voluntary. Your responses will be treated as **strictly confidential** and the **anonymity** of one is assured.

- No person or operator will have access to your completed questionnaire.

Instructions on the completion of this questionnaire will be provided for each section.

The interview questionnaire comprises of six sections:
SECTION A: DEMOGRAPHIC INFORMATION
SECTION B: PROCUREMENT PRACTICES IN THE SOUTH AFRICAN CLOTHING INDUSTRY
SECTION C: GOVERNMENT POLICIES AND REGULATIONS
SECTION D: PROCUREMENT VALUE
SECTION E: SUSTAINABILITY
SECTION F: PROCUREMENT CHALLENGES

This If you have any queries or concerns, following the questionnaire, kindly email me at Matsonj@unisa.ac.za. A copy of the results will be provided to you after analysis if you are interested.

GUIDE FOR THE LEVEL OF AGREEMENT
Please indicate:
To what extent do you agree or disagree with the following statements? Make a tick (X) where it is applicable.
Please note: there are three forms of degrees used in this interview questionnaire, reflecting the following:
a) The degree of agreement;
b) The degree of significant, and
c) The degree of importance

1

Open Rubric

Guide for the level of agreement:

1 = Strongly disagree=SD, 2= Disagree= D, 3 = Agree = A, 4 = Strongly agree= SA
Guide for the level of significant:
1= Insignificant=I, 2= Less significant = LS, 3= Significant=S, 4= Extremely significant=ES

Guide for the level of agreement:
1= Not important at all (NIA), 2= Less important (LI), 3= Important(I), 4= Very important (VI)

SECTION A- DEMOGRAPHIC INFORMATION

A1. Which of the following best describes you within the organisation?

1	Cut, trim and make	
2	Full manufacturer	
3	Corporative business	
4	Other (specify)	

A2. Please indicate the size of your organisation, in terms of the number of permanently employed employees.

	Less than 10	10 to 50	50 to 249	250 to 500	Above 500
Number of permanent employees.					

A3. Please indicate the number of years, in terms of experience in the clothing industry.

	0-1 year	1 to 5 years	6 to 10 years	10 to 19 years	20 years and above
Please indicate number of years, in terms of experience in the clothing industry.					

2

SECTION B- PROCUREMENT PRACTICES USED IN THE CLOTHING INDUSTRY

The SA clothing industry procurement practices are discussed in this section, and it is subdivided into procurement practises in the SA clothing industry, the value of procurement in the SA clothing organisations, procurement policies regulating the SA clothing industry, sustainability of procurement in clothing value chain and procurement challenges the SA clothing organisations.

B1: EXPLORING DEMAND PLANNING PRACTICES

Please indicate your level of agreement with the following statements relating to sourcing, where1 = Strongly disagree=SD, 2= Disagree= D, 3 = Agree = A, 4 = Strongly agree= SA

	SD	D	A	SA
When planning to manufacture clothes, it is important to have an accurate number of clothing orders.				
Managing forecasting errors on clothing orders is crucial				
Order specification errors can result in significant costs. It is vital to manage these costs.				
It is important for partners to agree on costs associated with order specification errors.				
Dealing with international customers requires that you pay attention to cultural needs when planning for their needs.				
When planning for customer needs, it is important to consider social needs.				
Retail stores should give preference to local clothing manufacturers when ordering clothing.				
Taking part in international trade shows helps you learn about new fashion trends.				

B2: STRATEGIC SOURCING PRACTICES

B2.1. Which of this statement are familiar to ordering in your organisation? Where 1= Insignificant=I, 2= Less significant = LS, 3= Significant=S, 4= Extremely significant=ES

Statements	I	LS	S	ES
Buying locally.				
Seasonal ordering.				
Participation in global trade exhibitions.				
Point of Sale (POS) assist with ordering.				
Manufacturers and retail clothing systems are interconnected.				
High cost associated with global buying.				
Managing of fashion trends.				
manufacturers paying attention to accurate orders.				
manufacturing capability is essential.				

3

B2.2. Which of this statement defines compliance in your organisation? Where 1= Insignificant=I, 2= Less significant = LS, 3= Significant=S, 4= Extremely significant=ES

Statements	I	LS	S	ES
Adhering to social standards.				
Adhering to environmental standards.				
The design of structured rating for suppliers.				
Supplier authentication/ verification.				

B2.3. Which of this statement is associated with resource capability in your organisation? Where 1= Insignificant=I, 2= Less significant = LS, 3= Significant=S, 4= Extremely significant=ES

Statements	I	LS	S	ES
Technological advancement.				
Resource availability.				
Funding.				
Participation government in industrial upgrading projects.				
Financial stability.				
Employees skills improvement.				

B3: CONTRACTING IN THE CLOTHING INDUSTRY

B3.1. Where 1= Insignificant=I, 2= Less significant = LS, 3= Significant=S, 4= Which of these statements is important/significant in establishing a mutual agreement with partners in your organisation? Extremely significant=ES

Statements	I	LS	S	ES
Formal contract establishment.				
Legal involvements.				
Economic behaviour consideration when designing contracts.				
Political behaviour consideration when designing contracts.				
Market behaviour consideration when designing contracts.				
Resource support.				
Infrastructure support.				
Financial support.				
Technical support.				

B3.2. Which of these statements needs attention during a negotiation? where1 = Strongly disagree=SD, 2= Disagree= D, 3 = Agree = A, 4 = Strongly agree= SA

Statement	SD	D	A	SA
Vulnerability of partners (retail clothing stores dominating).				
Ethics.				
Biasness.				
bargaining powers.				
Opportunistic behaviour.				
Technical support needed.				
Technological integration (systems being linked together).				

4

B3.3. Which of these statements defines the adoption of policy and standards when designing contracts in your organisation? Where1 = Strongly disagree=SD, 2= Disagree= D, 3 = Agree = A, 4 = Strongly agree= SA

Statements	SD	D	A	SA
Designing legally binding agreements.				
Being compliant to agreed standards.				
Being compliant to procurement policies.				
Consideration of social upliftment.				
Clear and understandable contract.				

B4: ENTERPRISE SUPPLIER DEVELOPMENT (ESD)

B4.1. Which of these statements are important in local support? Where 1= Not important at all (NIA), 2= Less important =LI, 3= Important =I, 4= Very important =VI

Statements	NIA	LI	I	VI
Clothing retail shops buying from local clothing manufacturers.				
Manufacturers of cut make and trim (CMT) clothing being transformed into full-scale manufacturing operations.				
Skills improvements.				
Technological advancements.				
Technological integration support.				
Infrastructure development.				
Machinery advancement.				
Financial support.				
Incentives provisions.				
Competitive improvement programs.				
Training of clothing manufacturers including staff.				
Contribute to local job creation.				

B4.2. Indicate the agreement level relating to the important in preserving the total cost of owning the business on both partners (manufactures and retail clothing shops)? Where1 = Strongly disagree=SD, 2= Disagree= D,
3 = Agree = A, 4 = Strongly agree= SA

Statements	SD	D	A	SA
It leads to surplus reduction.				
It reduces marketing cost .				
It reduces product cost.				
It assists in profit upliftment				
It leads to manufacturing cost reduction.				
It reduces lead time (customer waiting period).				
It reduce transport cost .				
It reduces storage cost.				
It improves adhering to government policies on carbon emission.				

5

314

B5: STRATEGIC PARTNERSHIP

B5.1 Indicate your level of agreement regarding the following statements relating to a strategic partnership. Where1 = Strongly disagree=SD, 2= Disagree= D, 3 = Agree = A, 4 = Strongly agree= SA

Statements	SD	D	A	SA
Clothing retail shops should build relationships with capable local manufacturers.				
All partners should strive to improve global competency.				
All partners should strive to reform the local economic sector.				
Trust is crucial in building relationship amongst partners.				
We should set clear standards with business partners.				
Compliance with agreed-upon standards should be ensured.				
Adherence to the code of conduct is important.				
Obedience to policies relating to environmental compliance is important.				

B6: DUE DILIGENCE GUIDENCE

Due diligence guidance is a government document that supports good procurement practices amongst supply chain (SC) partners in the clothing industry and promotes ethical processes such as minimum lead time, constant supplier partnership monitoring and investment, properly designed contracts and policies, order reliability, sharing between SC partners on manufacturing outputs and improved employee wage and working environment, environmental sustainability and ethics.

With these statements is mind, which of these statements in mind, please indicate whether how important it is to conduct due diligence for the procurement of clothes in your organisation Where 1= Not important at all=NIA, 2= Less important =LI, 3= Important= I, 4= Very important =VI

Statements	NIA	LI	I	VI
It is important to conduct due diligence in the procurement of clothes.				

SECTION C: GOVERNMENT POLICIES AND REGULATION

C1: Procurement policies and regulations

Please indicate your level of agreement with the following statements on broad base economic empowerment (B-BBBE). Where1 = Strongly disagree=SD, 2= Disagree= D, 3 = Agree = A, 4 = Strongly agree= SA

Statements	SD	D	A	SA
BBBEE policy encourages clothing retail shops to support local clothing manufactures.				
Clothing retailers should comply with the BBBEE policy requirements for supporting local manufacturers.				

C2: Please indicate your level of agreement with the following statements on the INDUSTRIAL POLICY ACTION PLAN (IPAP). Where1 = Strongly disagree=SD, 2= Disagree= D, 3 = Agree = A, 4 = Strongly agree= SA

6

315

Statements	SD	D	A	SA
The SA government offer funding to local clothing manufactures through IPAP.				
Clothing manufacturers of SA should apply for funding.				
Production Incentive Programme (PIP) promotes the provision of local capital support..				

C3: GENERAL AGREEMENT TARIFF TRADE (GATT) POLICIES

The SA government lowered the tariffs on the import of goods/services into the country through the amendment of the General Agreement Tariff Trade (GATT) policy. With this statement in mind, please indicate your level of agreement with the following statement. Where1 = Strongly disagree=SD, 2= Disagree= D, 3 = Agree = A, 4 = Strongly agree= SA

Statements	SD	D	A	SA
Industrialisation of the clothing industry in developing countries may reduce the impact of the GATT policy.				

C4: THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT (NEMA)

National Environmental Management Act (NEMA) 107of 1998, force organisations to protect the environment. Please indicate your level of agreement with the following statement. Where1 = Strongly disagree=SD, 2= Disagree= D, 3 = Agree = A, 4 = Strongly agree= SA

Statements	SD	D	A	SA
It is crucial to have ISO 14001 certification				
It is crucial to have Sustainable Apparel Coalition (SAC) certification.				
Compliance with ISO 14001 is important.				

SECTION D: THE VALUE OF PROCUREMENT PRACTICES IN THE SA CLOTHING INDUSTRY

Please indicate your level of agreement regarding the value of procurement practices in the SA clothing industry. Where1 = Strongly disagree=SD, 2= Disagree= D, 3 = Agree = A, 4 = Strongly agree= SA

D.: A procurement practice creates value when it is able to:

Statements	SD	D	A	SA
Maintain total quality management (TQM).				
Maintain total cost of ownership (TCO).				
Improve resource capability.				
Improve ordering accuracy.				
Reduce lead time.				
Promote clear practice and standards.				
Adherence to the code of conduct.				
Promote local support.				
Promote local economic development.				
Uplift local infrastructure.				
Improve environmental sustainability.				

7

316

Promote pleasant working conditions.				

SECTION E: SUSTAINABILITY OF PROCUREMENT IN THE CLOTHING VALUE CHAIN

Please indicate your level of agreement regarding the following statements the sustainable procurement in the SA clothing industry. Where1 = Strongly disagree=SD, 2= Disagree= D, 3 = Agree = A, 4 = Strongly agree= SA

E1: Procurement is sustainable when is able to achieve the following:

Statements	SD	D	A	SA
Promote fair remuneration and rewards.				
Enforce recognition of employees.				
Incorporate safety measures in the organisation.				
Promote healthy working conditions.				

E2: ENVIRONMENTAL SUSTAINABILITY
Please indicate your level of agreement regarding the following statements on environmental sustainability in the SA clothing industry. Where1 = Strongly disagree=SD, 2= Disagree= D, 3 = Agree = A, 4 = Strongly agree= SA
In our organisation, we believe that:

Statements	SD	D	A	SA
fast fashion contributes to increasing pollution.				
clothes should be manufactured in an eco-friendly manner.				
it is important to subscribe to Sustainable Apparel Coalition (SAC) which assesses environmental, social and labour impacts across the supply chain.				
preventative measures should in place in relation to increased carbon emission.				
considering the effect of clothing supply chain process towards the environment is important.				
it is important to manage the use of insecticides on fabrics.				

SECTION F: PROCUREMENT CHALLENGES IN THE CLOTHING INDUSTRY

Please indicate your level of agreement regarding the following statements relating to procurement challenges in the SA clothing industry. Where1 = Strongly disagree=SD, 2= Disagree= D, 3 = Agree = A, 4 = Strongly agree= SA

Statements	SD	D	A	SA
Lack of resources.				
Too many standards in the production of clothes.				
Fashion complexity.				
Complex clothing production process.				
The industry is highly globalised.				
Flooding of clothing imports from other countries.				
Limited support from local clothing retail shops.				

8

317

Limited funding from the SA government.				
Strict policies on social compliance.				
Strict policies on environmental compliance.				
Local clothing retail shops have dominate power in the negotiation process.				

APPENDIX C:
ETHICAL CLEARANCE CERTIFICATE

UNISA | university of south africa

UNISA COLLEGE OF ECONOMIC AND MANAGEMENT SCIENCES RESEARCH ETHICS REVIEW COMMITTEE

25 August 2021 (Date of issue)
12 May 2022 (Date of amendment)

Dear Ntombizodwa J Matsoma

Ref #: *2021_CEMS_DAM_007*
Name#: *Ntombizodwa Matsoma*
Student number # 34314377

Decision: Ethics Approval Extended to 31 December 2024

Working title of research:

"A procurement framework for the South African clothing industry"

Qualification: PhD Management Studies(Supply Chain Management)

Thank you for the application requesting **amendments** to the original research ethics certificate issued by the Department of Applied Management Review Committee for the above mentioned research on 25 August 2021. The approval of the requested amendment is granted/extended for the study for the period 12 May 2022 until 31 December 2024.

*The **low risk application** was reviewed by the departmental CRERC 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,*

Open Rubric

University of South Africa
Preller Street, Muckleneuk Ridge, City of Tshwane
PO Box 392 UNISA 0003 South Africa
Telephone: +27 12 429 3111 Facsimile: +27 12 429 4150
www.unisa.ac.za

319

should be communicated in writing to the UNISA Research Ethics Review Committee. An amended application could be requested if there are substantial 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,

Dr Vaola Sambo
Chairperson, CRERC
E-mail: Esambovt@unisa.ac.za
Tel: 012 429 4355

APPENDIX D:
PERMISSIONS TO CONDUCT RESEARCH

Appendix D (a): Request for permission ATASA

TEMPLATE 1

Request for permission from researcher to organisation/stakeholder

General requirements

- Formal letter from researcher to gatekeeper - Unisa letterhead
- Email and letter addressed to a specific person and/or position (eg. Director). This person will sign on behalf of the organisation. It should be preferably be the HR manager, directors, risk and compliance officers etc.)
- Letter signed by researcher/applicant

> Note: It could be useful using the information from your INFORMED CONSENT pager her to explain your study.

Dear Mr Rajen Naicker (Chairperson of Apparel and Textile Association of South Africa)

My name is Ntombizodwa Matsoma and I am currently enrolled for a PhD in the Applied management Department (Student number: 34314377) at the University of South Africa.

The topic for my research study is **A PROCUREMENT FRAMEWORK FOR THE SOUTH AFRICAN CLOTHING INDUSTRY** and entails the investigation of procurement practice in the clothing industry of South Africa (SA) The purpose of the study is to design a **A PROCUREMENT FRAMEWORK FOR THE SOUTH AFRICAN CLOTHING INDUSTRY** that will promote localisation and industrialisation leading to socio-economic development.

I would like to request permission from the Apparel and Textile Association of South Africa (ATASA) to conduct research within clothing manufacturing factories in SA. Also, I am requesting ATASA to disseminate the survey to clothing manufacturing factory organisation that are listed in your data base. Managers in clothing manufacturing factories of SA with expertise on procurement practice will be required to participant in completing the survey.

The research study will involve the following:

- Survey documents

1

Open Rubric

- 418 SA clothing organisations from Western Cape, Gauteng and KwaZulu-Natal listed in your data base should be randomly selected to participate in the study
- The researcher will send the survey link to ATASA to disseminate to clothing manufacturing organisations requiring managers to complete.
- Only managers or specialist in procurement practice in the industry may complete the questionnaire

EXAMPLE: The survey has been designed to study the project description in non-scientific language. By agreeing to grant permission for the study and for the survey to be disseminated through ATASA, you agree that the information you provide may be used for research purposes, including dissemination through peer-reviewed publications and conference proceedings.

It is anticipated that the information we gain from this survey will help us to conduct statistical analysis of the outcome and to design a workable procurement practice framework that will promote localisation, industrialisation leading to socio-economic development in the industry.

We do not foresee that you and/or the organisation will experience any negative consequences by completing the survey. The researcher(s) undertake to keep any information provided herein confidential, not to let it out of our possession and to report on the findings from the perspective of the participating group and not from the perspective of an individual.

Note: Be as specific as possible

The data obtained will be used ONLY for the purpose of the study. Upon completion of the study. I undertake to provide ATASA with a copy of the full research report upon request.

The records will be kept for five years for audit purposes where after it will be permanently destroyed, hard copies will be shredded, and electronic versions will be permanently deleted

2

from the hard drive of the computer [adapt according to the nature of the study]. You will not be reimbursed or receive any incentives for your participation in the survey.

The research will be reviewed and approved by the College of Economic and Management Sciences Ethics Review Committee. The primary researcher, Mrs Ntombizodwa J Matsoma can be contacted during office hours at (012) 433 4669/ 0824428114 The study leader, Prof IM Ambe can be contacted during office hours at (012) 429 4500

Kind Regards

TEMPLATE 2

Requirements for letter of permission from organisation/gatekeeper

- Formal letterhead of company (PDF Format) emails not acceptable.
- Signatures at the bottom of applicant's request letter not acceptable.
- Letter must acknowledge the details of the researcher (name and surname), and the title of the study.
- Letter must acknowledge that the specific information requested will be provided (refer to previous template)
  Examples: Email addresses, contact details, venues, documents etc.
- Organisation must state expectations of the outcomes of the study. For example: Will feedback/report be required by the organisation before submission of the thesis? Can the organisation censor or prevent the publication of the study in the public domain if problems arise?
- Formal letter must be signed by a specific individual. Include her/his job title, designation and contact details.
- The letter must be signed by the specific individual and dated.

3

Appendix D (b): Request for permission SAAA

TEMPLATE 1

Request for permission from researcher to organisation/stakeholder

General requirements

- Formal letter from researcher to gatekeeper - Unisa letterhead
- Email and letter addressed to a specific person and/or position (eg. Director). This person will sign on behalf of the organisation. It should be preferably be the HR manager, directors, risk and compliance officers etc.)
- Letter signed by researcher/applicant

> Note: It could be useful using the information from your INFORMED CONSENT pager her to explain your study.

Dear Mr Johann Baard (Executive director of South African Apparel Association)

My name is Ntombizodwa Matsoma and I am currently enrolled for a PhD in the Applied management Department (Student number: 34314377) at the University of South Africa.

The topic for my research study is **A PROCUREMENT FRAMEWORK FOR THE SOUTH AFRICAN CLOTHING INDUSTRY** and entails the investigation of procurement practice in the clothing industry of South Africa (SA) The purpose of the study is to design a **A PROCUREMENT FRAMEWORK FOR THE SOUTH AFRICAN CLOTHING INDUSTRY** that will promote localisation and industrialisation leading to socio-economic development.

I would like to request permission from South African Apparel Association (SAAA) the to conduct research within clothing manufacturing factories in SA. Also, I am requesting SAAA to disseminate the survey to clothing manufacturing factory organisation that are listed in your data base. Managers in clothing manufacturing factories of SA with expertise on procurement practice will be required to participant in completing the survey.

The research study will involve the following:
- Survey documents

1

- 418 SA clothing organisations from Western Cape, Gauteng and KwaZulu-Natal listed in your data base should be randomly selected to participate in the study
- The researcher will send the survey link to SAAA to disseminate to clothing manufacturing organisations requiring managers to complete.
- Only managers or specialist in procurement practice in the industry may complete the questionnaire

EXAMPLE: The survey has been designed to study the project description in non-scientific language. By agreeing to grant permission for the study and for the survey to be disseminated through SAAA, you agree that the information you provide may be used for research purposes, including dissemination through peer-reviewed publications and conference proceedings.

It is anticipated that the information we gain from this survey will help us to conduct statistical analysis of the outcome and to design a workable procurement practice framework that will promote localisation, industrialisation leading to socio-economic development in the industry.

We do not foresee that you and/or the organisation will experience any negative consequences by completing the survey. The researcher(s) undertake to keep any information provided herein confidential, not to let it out of our possession and to report on the findings from the perspective of the participating group and not from the perspective of an individual.

Very important
Take note

Note: Be as specific as possible

The data obtained will be used ONLY for the purpose of the study. Upon completion of the study. I undertake to provide SAAA with a copy of the full research report upon request.
The records will be kept for five years for audit purposes where after it will be permanently destroyed, hard copies will be shredded, and electronic versions will be permanently deleted

2

325

from the hard drive of the computer [adapt according to the nature of the study]. You will not be reimbursed or receive any incentives for your participation in the survey.

The research will be reviewed and approved by the College of Economic and Management Sciences Ethics Review Committee. The primary researcher, Mrs Ntombizodwa J Matsoma can be contacted during office hours at (012) 433 4669/ 0824428114 The study leader, Prof IM Ambe can be contacted during office hours at (012) 429 4500

Kind Regards

TEMPLATE 2

Requirements for letter of permission from organisation/gatekeeper

- Formal letterhead of company (PDF Format) emails not acceptable.
- Signatures at the bottom of applicant's request letter not acceptable.
- Letter must acknowledge the details of the researcher (name and surname), and the title of the study.
- Letter must acknowledge that the specific information requested will be provided (refer to previous template)
  Examples: Email addresses, contact details, venues, documents etc.
- Organisation must state expectations of the outcomes of the study. For example: Will feedback/report be required by the organisation before submission of the thesis? Can the organisation censor or prevent the publication of the study in the public domain if problems arise?
- Formal letter must be signed by a specific individual. Include her/his job title, designation and contact details.
- The letter must be signed by the specific individual and dated.

APPENDIX E:
APPROVAL LETTERS

Appendix E (a): Approval Letter ATASA

25 June 2021

Mrs Ntombizodwa J Matsoma
University of South Africa (UNISA)

Dear Mrs NJ Matsoma

PERMISSION TO UNDERTAKE THE RESEARCH STUDY ON PROCUREMENT PRACTICE IN THE SA CLOTHING INDUSTRY AND DISSEMINATE THE SURVEY FOR THE STUDY TO CLOTHING MANUFACTURING FACTORIES OF SA.

This letter serves to endorse MRS NJ Matsoma, A PhD student at UNISA to conduct research with clothing manufacturing factories of South Africa (SA) Also, to assist her in disseminating the survey for the study to clothing manufacturing factories in SA.

The endorsement is for the following topic of investigation: **A FRAMEWORK FOR PROCUREMENT PRACTISE IN THE SA CLOTHING INDUSTRY.**

The information obtained should be treated with confidentiality and used for the purpose of the study.

Kind regards,

Rajen Naicker
Chairperson

Telephone: 031 201 2407 / 031 201 2248
Email: admin@atasa.org.za

15 Brand Road, Unit 6, 2nd Floor, Charter House, Berea, Durban, 4001
PO Box 10740 / Port Shepstone / 4240

A PROCUREMENT FRAMEWORK FOR THE SOUTH AFRICAN CLOTHING
INDUSTRY

TITLE OF STUDY

A PROCUREMENT FRAMEWORK FOR THE SOUTH AFRICAN CLOTHING INDUSTRY

PRINCIPAL INVESTIGATOR

Mrs Ntombizodwa J Matsoma
Department of Applied Management
University of South Africa
Preller street
Muckleneuk campus
0002
(012) 433 4669
Matsonj@unisa.ac.za

PURPOSE OF STUDY

You are being asked to take part in a research study by assisting with distributing the survey to clothing factories of SA using Survey Monkey to conduct the survey

Before you decide to participate in this study, it is important that you understand why the research is being done and what it will involve. Please read the following information carefully. Please ask the researcher if there is anything that is not clear or if you need more information.

This study aims to develop a procurement framework for promoting socio-economic objectives in the SA clothing industry.

STUDY PROCEDURES

The study aims to collect data using a survey to a sample of 418 clothing manufacturing factories of SA. To determine how procurement is practiced in the industry. The researcher will design survey monkey to send the link to **Apparel & Textile Association of South Africa (ATASA)**. ATASA is requested to assist in sending survey to clothing factories in listed in their data base. The survey should take 30 minutes to complete.

The outcome will be analysed statistically using Statistical analysis software package such as SPSS .Information obtained from the analyses will be used to design a procurement framework for the SA industry which supports industrialisation leading to socio-economic developments. The study is expected to complete in 2023.

Page 1 of 3

Participant's Initials: _____

A PROCUREMENT FRAMEWORK FOR THE SOUTH AFRICAN CLOTHING INDUSTRY

RISKS

The study poses no risk to the participants as they will be completing a survey. The survey might inconvenience them in attending to the work schedule, however, they may complete the survey at their best convenient time. Participants may decline to answer any or all questions and you may terminate your involvement at any time if you choose.

BENEFITS

The information obtained from the study may assist in informing participants on how they may use variables of procurement practice to promote sustainable procurement practice resulting to industrialization and socio-economic development

Participants will be informed on policies that promotes ethical trading and compliance in the SA clothing industry

The study may assist in promotes localisation, social and environmental compliance within the SA clothing industry.

The study educates participants that local buying creates local employments and promote local infrastructure and economic upliftment.

CONFIDENTIALITY

Your responses to this survey will be anonymous. Please do not write any identifying information on your survey. Every effort will be made by the researcher to preserve your confidentiality including the following:

- Assigning code names/numbers for participants that will be used on all research notes and documents
- Ensuring that the information is protected with a password or in a locked file cabinet in the personal possession of the researcher.]

Participant data will be kept confidential except in cases where the researcher is legally obligated to report specific incidents. These incidents include, but may not be limited to, incidents of abuse and suicide risk.

CONTACT INFORMATION

If you have questions at any time about this study, or you experience adverse effects as the result of participating in this study, you may contact the researcher whose contact information is provided on the first page. If you have questions regarding your rights as a research participant, or if problems arise which you do not feel you can discuss with the

Page 2 of 3

Participant's Initials: _____

A PROCUREMENT FRAMEWORK FOR THE SOUTH AFRICAN CLOTHING INDUSTRY

Primary Investigator, please contact the Institutional Review Board at (865) 354-3000, ext. 4822.

VOLUNTARY PARTICIPATION

Your participation in this study is voluntary. It is up to you to decide whether or not to take part in this study. This consent form serves as your approval to participate in the study , you will be asked to sign a consent form. After you sign the consent form, you are still free to withdraw at any time and without giving a reason. Withdrawing from this study will not affect the relationship you have, if any, with the researcher. If you withdraw from the study before data collection is completed, your data will be returned to you or destroyed.

CONSENT

I have read and I understand the provided information and have had the opportunity to ask questions. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving a reason and without cost. I understand that I will be given a copy of this consent form. I voluntarily agree to take part in this study.
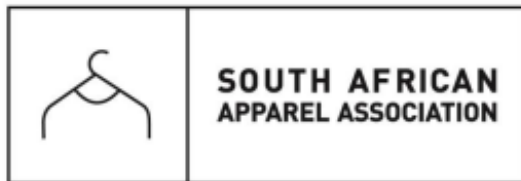
Participant's signature _____ Date 25/6/2021

Investigator's signature _____ Date _____

Participant's Initials: _____   Page 3 of 3

Appendix E (b): Approval Letter SAAA

SOUTH AFRICAN APPAREL ASSOCIATION

Registration No. LR2/6/3/14

Tel: 021 531 2130/2123
Fax: 086 502 1754
info@saa-a.co.za

PO Box 38694
Pinelands 7435

11 May 2021

Mrs NJ Matsoma
University of South Africa (UNISA)

PERMISSION TO UNDERTAKE THE RESEARCH STUDY ON PROCUREMENT PRACTICE IN THE CLOTHING INDUSTRYOF SOUTH AFRICA (SA)

Dear Mrs NJ Matsoma

This letter serves to authorise Mrs NJ Matsoma, a PHD student at UNISA to conduct research with clothing manufacturing organisations of South Africa. The authorisation is for the following topic of investigation: **A FRAMEWORK FOR PROCUREMENT PRACTICE IN THE SA CLOTHING INDUSTRY.**

The information obtained should be treated with confidentiality and used for study purpose.

Kind regards

JOHANN BAARD
EXECUTIVE DIRECTOR

Open Rubric

APPENDIX F:
DECLARATION OF PROFESSIONAL EDIT

Retha Burger
B.A.(H.E.D.)
Independent Skills Development Facilitator

tel : 012 807 3864
cell : 083 653 5255
fax : 012 807 3864
e-mail : retha@skillnet.co.za

Dear Ms Matsoma

This letter is to record that I have completed a language edit of your PhD thesis entitled, "Developing a Framework for Procurement Practice for the South African Clothing Industry".

The edit that I carried out included the following:

-Spelling   -Grammar
-Vocabulary   -Punctuation
-Pronoun matches   -Word usage
-Sentence structure   -Correct acronyms (matching your supplied list)
-Captions and labels for figures and tables
-Spot checking of 10 references

The edit that I carried out excluded the following:

-Content
-Correctness or truth of information (unless obvious)
-Correctness/spelling of specific technical terms and words (unless obvious)
-Correctness/spelling of unfamiliar names and proper nouns (unless obvious)
-Correctness of specific formulae or symbols, or illustrations

Yours sincerely

Retha Burger

8 August 2023

APPENDIX G:
TURNIT-IN CERTIFICATE

Thesis final

ORIGINALITY REPORT

16%	15%	6%	7%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	hdl.handle.net Internet Source	3%
2	uir.unisa.ac.za Internet Source	2%
3	vital.seals.ac.za:8080 Internet Source	1%
4	researchspace.ukzn.ac.za Internet Source	<1%
5	Submitted to University of Witwatersrand Student Paper	<1%
6	www.researchgate.net Internet Source	<1%
7	ujcontent.uj.ac.za Internet Source	<1%
8	Submitted to University of South Africa Student Paper	<1%
9	repository.up.ac.za Internet Source	<1%

Open Rubric

333

10	core.ac.uk Internet Source	<1%
11	scholar.ufs.ac.za Internet Source	<1%
12	Submitted to University of Johannsburg Student Paper	<1%
13	repository.nwu.ac.za Internet Source	<1%
14	respect.international Internet Source	<1%
15	iaabd.org Internet Source	<1%
16	scholar.sun.ac.za Internet Source	<1%
17	Jolta Kacani. "A Data-Centric Approach to Breaking the FDI Trap Through Integration in Global Value Chains", Springer Science and Business Media LLC, 2020 Publication	<1%
18	Submitted to RMIT University Student Paper	<1%
19	businessdocbox.com Internet Source	<1%
20	Submitted to Vaal University of Technology Student Paper	<1%

21 Submitted to University of Hertfordshire
Student Paper
<1%

22 mafiadoc.com
Internet Source
<1%

23 docplayer.net
Internet Source
<1%

24 Ntombizodwa J. Matsoma, Intaher M. Ambe. "Demand planning approaches employed by clothing industry stakeholders in Gauteng, South Africa", Journal of Transport and Supply Chain Management, 2017
Publication
<1%

25 Submitted to Monash University
Student Paper
<1%

26 Submitted to University College London
Student Paper
<1%

27 Submitted to Heriot-Watt University
Student Paper
<1%

28 researchbank.swinburne.edu.au
Internet Source
<1%

29 lup.lub.lu.se
Internet Source
<1%

30 publications.aston.ac.uk
Internet Source
<1%

31	ir-library.egerton.ac.ke Internet Source	<1%
32	primavera.feb.uva.nl Internet Source	<1%
33	www.scielo.br Internet Source	<1%
34	etd.uum.edu.my Internet Source	<1%
35	ir.cput.ac.za Internet Source	<1%
36	Submitted to University of East London Student Paper	<1%
37	Georgios Tsironis, Konstantinos P. Tsagarakis. "Global Online networking for Circular economy companies in fashion, apparel, and textiles industries, the LinkedIn platform", Current Opinion in Green and Sustainable Chemistry, 2023 Publication	<1%
38	www.tips.org.za Internet Source	<1%
39	link.springer.com Internet Source	<1%
40	Submitted to Galileo Global Education Student Paper	<1%

336