

Customer Satisfaction in the Online Grocery Shopping Market

**Graduate School of Business Leadership
UNISA
Master of Business Leadership**

Research Report: MBL3

**Submitted by
Andrew Croker
November 2005**

ABSTRACT

To establish an online grocery shopping service and to attract customers to it is an expensive operation. In order to recoup those expenses, and ultimately make a profit, an online retailer needs to ensure that customers remain loyal and make repeat purchases for as long as possible. Although customer satisfaction does not guarantee loyalty, dissatisfied customers generally take their business elsewhere at the first opportunity.

This study investigates the overall level of satisfaction amongst a small sample of Woolworths' online customer base. In pursuit of this, a multi-dimensional model was developed for assessing customer satisfaction in various areas, highlighting those which may require improvement. The impact of certain key demographic data on these dimensions was also investigated. Since satisfaction is not enough to guarantee loyalty, an assessment of the perceived value in making purchases online is also undertaken in an attempt to ascertain purchase intentions.

The key findings of this study revealed a relatively high level of customer satisfaction as well as significant perceived value in shopping online when measured against the sacrifices made. However, a main area for improvement is to enhance the customer's perception of the value they receive. The demographic variables of age, gender and language had no significant impact on any dimension, while the customer's connection type was found to have a significant impact on their satisfaction pertaining to the performance of the Web site. Finally, it was established that there is a strong association with the Woolworths brand and corporate image, even though the online shopping initiative was launched as a separate brand.

ACKNOWLEDGEMENTS

The researcher wishes to thank Arien Strasheim from the UNISA Graduate School of Business Leadership, for her supervision and assistance in preparing and finalising this research.

This research is dedicated to my wife Christine, who has supported and motivated me over the past three years, to my wonderful children Darin, Justine and Samantha who have managed to confine growing up to the hours I have been able to spend with them, to the group leader of BEN0103, Rynhardt Kruger, who kept the group together and provided inspiration to us all, especially myself, and to everyone else who stood by me and believed in me when I no longer believed in myself.

DECLARATION

The researcher certifies and declares that, other than where elsewhere noted, the entire body of this research is the researcher's own work, and that all references used have been accurately reported. The research is being submitted in partial fulfilment of the requirements for the degree of Master of Business Leadership at the Graduate School of Business Leadership, UNISA and has not been submitted before, in whole or in part, for any degree or examination at any university.

Signed: Andrew Croker

Date: 30 November 2005

TABLE OF CONTENTS

ABSTRACT	i
ACKNOWLEDGEMENTS.....	ii
DECLARATION	iii
CHAPTER 1: ORIENTATION.....	1
1.1 Introduction.....	1
1.2 Background.....	2
1.3 Research Objectives.....	6
1.4 Research Question	6
1.5 Problem Statement	6
1.5.1 Research Problem 1	6
1.5.2 Research Problem 2	7
1.5.3 Research Problem 3	7
1.5.4 Research Problem 4	7
1.5.5 Research Problem 5	7
1.6 Definitions	8
1.7 Delimitations of the Study.....	9
1.8 Importance and Benefits of the Study	10
1.9 Outline of the Research Report.....	11
1.9.1 CHAPTER 1: ORIENTATION	11
1.9.2 CHAPTER 2: LITERATURE REVIEW	11
1.9.3 CHAPTER 3: RESEARCH METHODOLOGY	11
1.9.4 CHAPTER 4: RESEARCH RESULTS	11

1.9.5	CHAPTER 5: DISCUSSION AND RECOMMENDATIONS	11
	CHAPTER 2: LITERATURE REVIEW	12
2.1	Introduction.....	12
2.2	The Service Quality Model (1984)	12
2.3	Service Quality Gaps Model (1985)	13
2.4	SERVQUAL (1988).....	14
2.5	SERVPERF (1992).....	16
2.6	Satisfaction versus Loyalty	17
2.7	The Future of SERVQUAL	18
2.8	Online Retail Service Quality	20
2.8.1	Van Iwaarden, van der Wiele, Ball & Millen (2003)	21
2.8.2	Janda, Trocchia & Gwinner (2002); Trocchia & Janda (2003)	22
2.8.3	Chen & Chang (2003)	23
2.8.4	Cai & Jun (2003)	24
2.8.5	Yang, Jun & Peterson (2004)	24
2.8.6	Jun, Yang & Kim (2004)	25
2.8.7	Lim & Dubinsky (2004)	25
2.8.8	Security, Privacy, Credibility and Trust	28
2.8.9	Personalisation and Web Site Design and Performance	31
2.8.10	Information, Support and Access to Retailer	35
2.8.11	Order and Delivery Fulfilment	36
2.8.12	Variety	38
2.8.13	Benefits – Price, Convenience and Value	38
2.9	Online Groceries.....	41
2.10	Web site Quality	44

2.10.1	WebQual	45
2.11	Branding.....	50
2.12	Summary.....	50
CHAPTER 3: RESEARCH METHODOLOGY		52
3.1	Introduction.....	52
3.2	Problem Statement	52
3.2.1	Research Problem 1	52
3.2.2	Research Problem 2	52
3.2.3	Research Problem 3	52
3.2.4	Research Problem 4	53
3.2.5	Research Problem 5	53
3.3	Development of Research Model.....	53
3.3.1	Website Quality Dimension	55
3.3.2	Service Quality Dimension	56
3.3.3	Overall Quality Dimension	56
3.3.4	Overall Customer Satisfaction Score	56
3.3.5	Costs versus Benefits	57
3.4	Measurement Instrument	57
3.4.1	Biographic Information	57
3.4.2	Service Quality Dimension	58
3.4.3	Website Quality Dimension	58
3.4.4	Overall Quality Dimension	59
3.4.5	General	60
3.4.6	Validity and Reliability	60
3.5	Population and Sample.....	61

3.6	Distribution Method	61
3.7	Limitations.....	62
3.8	Summary.....	63
CHAPTER 4: RESEARCH RESULTS		64
4.1	Introduction.....	64
4.2	Reliability Test Results	64
4.3	Demographic Information	65
4.3.1	Gender	66
4.3.2	Age	67
4.3.3	Income	68
4.3.4	Language	70
4.3.5	Connection Type	71
4.3.6	Last Utilisation of Woolworths' Online Shopping	73
4.4	Customer Satisfaction Dimensions.....	75
4.4.1	Overall Customer Satisfaction	76
4.4.2	Website Quality Dimension	77
4.4.3	Service Quality Dimension	86
4.4.4	Overall Quality Dimension	92
4.4.5	Costs versus Benefits	94
4.5	General Habits.....	96
4.6	Summary.....	97
CHAPTER 5: DISCUSSION AND RECOMMENDATIONS.....		98
5.1	Introduction.....	98
5.2	Discussion.....	98

5.2.1	Research Problem 1 (Hypothesis 1)	98
5.2.2	Research Problem 2 (Proposition 1)	100
5.2.3	Research Problem 3 (Hypothesis 2)	101
5.2.4	Research Problem 4 (Proposition 2)	102
5.2.5	Research Problem 5 (Proposition 3)	104
5.2.6	General Observations	104
5.3	Recommendations.....	105
5.4	Directions for Future Research	108
5.5	Summary.....	109
	REFERENCES	110
	BIBLIOGRAPHY.....	114
	APPENDICES	117
	Appendix 1: Measurement Instrument.....	117
	Appendix 2: Results of the Consistency Check.....	121
	Appendix 3: Survey Results	124
	Appendix 4: Frequency Analysis.....	130
	Appendix 5: Analysis of Variance	137

LIST OF TABLES

Table 2.1: The service quality measurement debate: a summary of areas of disagreement.....	19
Table 2.2: Van Iwaarden et al (2003) – Applying SERVQUAL Dimensions to Web Sites.....	22
Table 2.3: Janda et al (2002) – Trocchia & Janda (2003) Internet Retail Service Quality.....	23
Table 2.4: Cai & Jun (2003) – Assessment of Online Service Quality	24
Table 2.5: Jun, Yang & Kim (2004) – Six Dimensions of Internet Retail Service Quality.....	25
Table 2.6: Consolidation of Online Service Quality Variables.....	26
Table 4.1: Measurement Instrument Reliability Issues.....	65
Table 4.2: Mean Scores on Customer Satisfaction Dimension (n=50)	76
Table 4.3: Mean Scores on Website Quality Dimension (n=50)	78
Table 4.4: Mean Scores on Consistent Company Image Sub-dimension (n=50)	80
Table 4.5: Mean Scores on Trust Sub-dimension (n=50).....	81
Table 4.6: Mean Scores on Tailored Communications Sub-dimension (n=50) ..	82
Table 4.7: Mean Scores on Visual Appeal Sub-dimension (n=50).....	83
Table 4.8: Mean Scores on Intuitive Operations Sub-dimension (n=50)	84
Table 4.9: Mean Scores on Response Time Sub-dimension (n=50)	85
Table 4.10: Mean Scores on Service Quality Dimension (n=50)	87
Table 4.11: Mean Scores on Assurance Sub-dimension (n=50)	88
Table 4.12: Mean Scores on Tangibles Sub-dimension (n=50)	89
Table 4.13: Mean Scores on Reliability Sub-dimension (n=50)	90
Table 4.14: Mean Scores on Responsiveness Sub-dimension (n=50)	91
Table 4.15: Mean Scores on Relative Advantage Sub-dimension (n=50)	92
Table 4.16: Mean Scores on Sacrifices Sub-dimension (n=50)	95

LIST OF FIGURES

Figure 1.1: Elements of the Online Shopping Experience.....	3
Figure 2.1: The Service Quality Model	13
Figure 2.2: Service Quality Gaps Model	14
Figure 2.3: WebQual Measurement Framework	45
Figure 3.1: Customer Satisfaction Model.....	55
Figure 4.1: Gender in Sample (n=50).....	66
Figure 4.2: Age in Sample (n=50)	67
Figure 4.3: Monthly Household Income in Sample (n=50).....	68
Figure 4.4: Language in Sample (n=50)	70
Figure 4.5: Connection Type in Sample (n=50).....	71
Figure 4.6: Last Used Woolworths Online Shopping in Sample (n=50).....	74
Figure 4.7: Overall Customer Satisfaction Results	76
Figure 4.8: Website Quality Dimension Results	78
Figure 4.9: Consistent Company Image Results.....	80
Figure 4.10: Trust Results	81
Figure 4.11: Tailored Communications Results	82
Figure 4.12: Visual Appeal Results	83
Figure 4.13: Intuitive Operations Results.....	84
Figure 4.14: Response Time Results.....	85
Figure 4.15: Service Quality Dimension Results.....	86
Figure 4.16: Assurance Results.....	88
Figure 4.17: Tangibles Results.....	89
Figure 4.18: Reliability Results	90
Figure 4.19: Responsiveness Results.....	91
Figure 4.20: Relative Advantage Results	92
Figure 4.21: Costs vs Benefits Results.....	94
Figure 4.22: Sacrifices Results	95
Figure 4.23: General Online Habits	96

CHAPTER 1: ORIENTATION

1.1 Introduction

Customer satisfaction is defined as “The extent to which a firm fulfils a customer’s needs, desires, and expectations.” (Perreault & McCarthy, 2002: 5)

The South African online grocery shopping market is dominated by two retail giants: Woolworths (www.inthebag.co.za) and Pick ‘n Pay (www.picknpay.co.za). The Woolworths initiative began in October of 2000 and Pick ‘n Pay’s offering was trialled and gradually rolled out during the course of 2001 / 2002.

“Banking and shopping online saw the largest increases for Internet usage in SA last year, says survey firm Webchek.” (ITWeb, 2005: no page).

The percentage of South African Internet users that are making use of online shopping facilities is on the increase. In 2001, this figure was at 26% which increased to 30% in 2002 and to 37% in 2003 according to online survey firm Webchek (2004). Although this figure appears to bode well for online grocery retailers, according to Webchek (2004), it is airline ticket sales that have attributed to the reflected increase in online shopping usage for 2002 and 2003. The 2001 figure was down from the 2000 figure of 31% which is attributable to the changing demographics of the average web user brought about by more affordable and readily available Internet access in the South African environment. If we consider the AMPS figure for 2001 of 1.3 million Internet users, 338,000 people had shopped online in 2001 (Webchek, 2002). Webchek (2002) also reported an increase in online grocery shopping in 2001 which was an almost negligible proportion prior to the launch of Woolworths’ and Pick ‘n Pay’s online shopping facilities.

Webchek conducts annual surveys into online usage, yet do not publish information related to the customer satisfaction experiences of Internet users in general or relating to specific industries. Having been a sporadic user of both Woolworths’ and Pick ‘n Pay’s services since their inception, the researcher has not been made aware of any attempts by either company to ascertain customer satisfaction with their offerings.

“Successful online sellers base their marketing strategy on the pursuit of loyal, profitable customers” (Reichheld, Markey & Hopton, 2000: 173). During the Internet boom of the late 1990s, many retailers leapt onto the e-tailing bandwagon and many of these initiatives failed or caused severe embarrassment – even for corporate giants like Compaq and Toys ‘R’ Us. Many companies abandoned their core competencies and neglected to strategise correctly for online trading since other organisations made it appear so easy, with the result that some companies had an online presence but lacked the backend processes to handle online trading.

1.2 Background

In terms of an online shopping and delivery service, there are many factors that constitute the entire customer experience. These factors can be roughly divided into two broader areas: the online shopping experience and the back-end service operation (Figure 1.1).

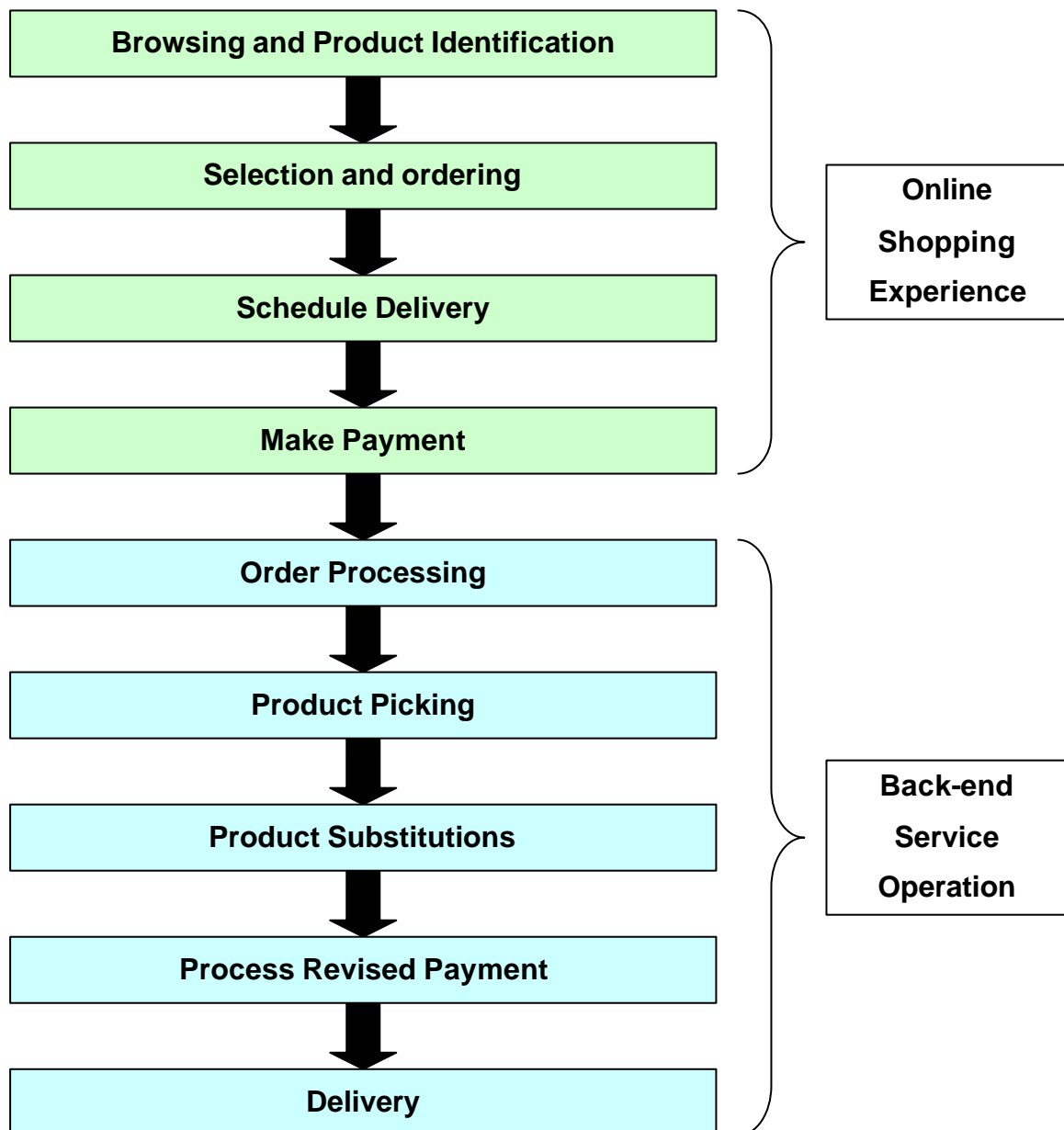
The first of these areas is the online shopping experience itself. This area is not specific to each individual shopper apart from some personalisation aspects, but contains the established product offering available to all customers. The following are factors that contribute to this area of experience:

Firstly, the web portal or customer interface provides the online environment where customers select the items they wish to purchase. The customer’s experience of this environment can be described in terms of the typical factors that constitute any Internet website experience viz. layout, information, intuitiveness and features. In this case, features include functionality that make it easier for the customer to make their selection, such as being able to establish shopping lists of items that one purchases regularly.

Secondly, product selection and variety is part of the online experience, since the customer can see all of the items that are available for purchase. The presentation of the product catalogue forms part of the web interface. Consumers learn store layouts and product packaging which provide methods of identifying items for purchase in a physical store; they might not even know what the product is called. In the online environment, product selection is performed in a different fashion and customers

need to know what they are looking for.

Figure 1.1: Elements of the Online Shopping Experience



Thirdly, there are the delivery options. One of the benefits of shopping online is for convenience and to overcome time restraints that may prevent a customer from being able to physically visit a store. The customer therefore needs to be able to receive their online order at a time that is convenient and fits their schedule.

Fourth, there is the method of payment. Since customers cannot pay cash for online purchases, they need to be able to select from a variety of alternative methods of

payment.

Lastly, online security is a factor. Since the customer is paying by some means other than cash, information is required as to where the funds for their purchases are coming from. Address and contact information is also required for deliveries or verification of product substitutions. A customer needs to be confident that any information entered on the online shopping web site will remain confidential and will not be subject to misuse.

Once the online shopping experience is complete and the customer is awaiting delivery at the specified time, the back end service operation begins. This is where the store is required to service the individual customer. Factors that constitute the customer's overall experience in this area include:

Stock availability: The customer has ordered specific items and is expecting them to be delivered. At the time of placing the order, exact stock levels are not taken into account as the grocery industry consists of fast moving items that are also often subject to perishing. What is in stock on one day may not be in stock three days later when the customer has requested their delivery. Similarly, out-of-stock items at the time of ordering may be received by the store prior to the scheduled delivery date. Items can not necessarily be reserved at the time of ordering as they could perish or expire prior to delivery. The online stores therefore allow the customer to order any item but offer the facility of substituting an out-of-stock item with an equivalent product. If the customer refuses this option at the time of ordering, out-of-stock items are removed from the order. The number of undelivered items or substitute products, and the suitability of the substitutions made, contributes to the overall perception of service.

Accuracy of selections: Apart from substituted products identified at the time of delivery, the customer expects to receive the items they ordered, in the packaging specifications they requested.

Payment terms: Since the customer has selected a method of payment, they have certain expectations as to when they will be charged, that they will not be overcharged, that they will not be charged for undelivered items or be charged for

inaccuracy of picked stock. In the event that they are charged up front, refunds for undelivered items must be made without delay.

Delivery schedule: The customer has specified a time or range of times for delivery that satisfies their schedule. Being inconvenienced by tardy deliveries or having to reschedule deliveries contributes negatively to their overall satisfaction with the service.

Quality of delivery: This includes such items as presentation of drivers, vehicles and packaging. It also includes items such as cold packing of refrigerated and frozen items and packing of items so as not to damage other items.

Quality of the products: Perishable items should be well within their expiry date, fresh items should be fresh and all packaging should be undamaged.

There is an additional customer perception that rates their overall online shopping experience, namely the costs versus benefits analysis. The customer needs to weigh up the benefits received against the sacrifices made by online shopping in order to determine whether this is a replacement for in-store shopping or a complementary service. Factors that are taken into consideration here include value for money (both in terms of the goods purchased and the costs of delivery), sacrifices made by not physically visiting the store (in-store promotions, physical product comparisons, having your purchases immediately, being able to use cash) and the convenience associated with online shopping (suitable time, possible reduced time, reduced stress associated with busy stores, busy parking or being accompanied by children).

Once this is done, it is possible to qualify the online shopping experience as it measures up against an in-store shopping experience and identify the criteria that influence the decision to purchase groceries online.

Many online customers – as in-store customers tend to do – make use of more than one online store to meet their requirements. As Weinstein puts it, “loyalty ... does not necessarily equate with exclusivity” (Weinstein, 2002: 65). Is it possible to gather an overall customer satisfaction score for Woolworths’ online services against which Pick ‘n Pay or a possible newcomer to the market would have to measure up?

An additional area for investigation is whether the demographic variables of age, income, language or gender have a relationship with or an impact on customer satisfaction in one or more areas of the experience.

Another factor to be considered is the consumer's connection speed. In South Africa, broadband Internet connections are still expensive enough that the personal user market has not yet widely adopted a broadband technology. Does this variable, which is outside the control of retailers, have an impact on customer satisfaction?

1.3 Research Objectives

This research intends to determine the level of satisfaction with the current online grocery shopping service offered by Woolworths.

The study also investigates the perceived value that is realised when making grocery purchases online.

1.4 Research Question

Do the existing customers of Woolworths' online grocery shopping offering perceive a level of service that meets their expectations?

Is there a tangible benefit that can be observed in using Woolworths' online shopping?

1.5 Problem Statement

1.5.1 Research Problem 1

The main research problem is to establish the current customer satisfaction levels across all dimensions and across all respondents. In addition to the overall satisfaction rating specific areas for improvement may be identified.

Hypothesis 1: *Most satisfaction ratings will be significantly above 3 on a 5-point scale.*

1.5.2 Research Problem 2

To determine the perceived benefits of utilising the online shopping service that may increase the likelihood of using the service again in future.

Proposition 1: The ratio of perceived benefits to sacrifices will be higher than 1.

1.5.3 Research Problem 3

To determine whether the demographic variables of age, income, language or gender have an effect on the overall customer satisfaction or on any specific areas of the online shopping service.

Hypothesis 2: There will be no significant differences between the various categories of demographic variables with respect to the overall customer satisfaction rating, Website Quality, Service Quality or Overall Quality Dimensions.

1.5.4 Research Problem 4

To determine whether a consumer's Internet connection speed has an influence on their satisfaction with the service.

Proposition 2: A faster Internet connection will have a positive effect on perceived customer satisfaction, specifically in the Website Quality Dimension.

1.5.5 Research Problem 5

To determine whether the branding of the online shopping extension of Woolworths as "InTheBag" has had an impact on company image.

Proposition 3: The Consistent Company Image sub-dimension will be significantly below 3 on a 5-point scale.

1.6 Definitions

Assurance: “Knowledge and courtesy of employees and their ability to inspire trust and confidence” (Parasuraman, Zeithaml & Berry, 1988: 23)

Consistent (Company) Image: “The Web site does not create dissonance for the user by an image incompatible with that projected by the firm through other media” (Loiacono, Watson & Goodhue, 2002: 20)

Customer Satisfaction: “a person’s feelings of pleasure or disappointment resulting from comparing a product’s perceived performance (or outcome) in relation to his or her expectations.” (Kotler, 2000: 36)

Ease of Understanding: “Easy to read and understand” (Loiacono et al, 2002: 20)

Emotional Appeal: “The emotional effect of using the Web site and intensity of involvement” (Loiacono et al, 2002: 20)

Empathy: “Caring, individualized attention the firm provides its customers” (Parasuraman et al, 1988: 23)

Innovativeness: “The creativity and uniqueness of a Web site” (Loiacono et al, 2002: 20)

Intuitive Operations: “Easy to operate and navigate” (Loiacono et al, 2002: 20)

Online shopping: The purchase of goods or services through the Internet.

Relative Advantage: “Equivalent or better than other means of interacting with the company” (Loiacono et al, 2002: 20)

Reliability: “Ability to perform the promised service dependably and accurately” (Parasuraman et al, 1988: 23)

Response Time: “Time to get a response after a request or an interaction with a Web site” (Loiacono et al, 2002: 19)

Responsiveness: “Willingness to help customers and provide prompt service” (Parasuraman et al, 1988: 23)

Sacrifices: Aspects of traditional shopping that are given up in the online shopping environment.

Tailored Communications: “Communications can be tailored to meet the user’s needs” (Loiacono et al, 2002: 19)

Tangibles: “Physical facilities, equipment, and appearance of personnel” (Parasuraman et al, 1988: 23)

Trust: “Secure communication and observance of information privacy” (Loiacono et al, 2002: 19)

Visual Appeal: “The aesthetics [of the] Web site” (Loiacono et al, 2002: 20)

1.7 Delimitations of the Study

This study focuses on customer satisfaction levels pertaining to the delivery of the online shopping service, it does not investigate customer satisfaction with the Woolworths company as a whole, nor does it attempt to assess customer satisfaction with any of the Woolworths products.

A secondary area of investigation is an analysis of costs versus benefits, which is designed to assess whether customers realise benefit from purchasing their Woolworths groceries online, but is not designed to provide a direct comparison between online and traditional shopping, nor is the intent to determine that one is necessarily better than the other.

This research investigates the Woolworths online shopping service from the consumer point of view, the viability for Woolworths in providing this service is not assessed.

1.8 Importance and Benefits of the Study

Online grocery shopping in South Africa has been available for a little over four years, with the initial offering being limited in terms of geographic locations for deliveries as well as product offerings. Extensive work has been done by Woolworths to extend the reach of their offering since the early pilot stage, both in terms of geographic availability and customer friendly features. The researcher assumes the company has a stable online customer base which they would be interested to learn more about. Moreover, according to Reichheld and Scheffer (2000), loyalty economics dictates that customers need to stay loyal for two to three years for them to be profitable.

Completing a customer satisfaction survey over their entire online customer base (including previously registered and now dormant customers) will give Woolworths additional insight into how their customers rate their offering. If certain areas can be identified where Woolworths are under-delivering, they can limit the focus of where to improve. If there are areas where they exceed customer expectations, it is entirely possible that certain components of the offering can be downscaled without a reduction in perceived service quality. Including customers that no longer make use of the service could give insight into where the offering was lacking in the past, resulting in the loss of those customers. Identifying and correcting these areas could win back some of these customers and improve the chances of retaining existing clientele.

The researcher was unable to discover recent satisfaction studies of South African online grocery shoppers, which further points to the need for a study of this nature.

Even though satisfied customers can have a high propensity to switch, dissatisfied customers are almost guaranteed to do so (Mittal & Lassar, 1998). Assessing customer satisfaction could give some indication of the likelihood that customers would switch to a new entrant into this market.

Identifying the perceived benefit in purchasing groceries online will also give the service providers significant insight into how to keep their existing customers, as well as identify focus areas for attracting new customers.

In the event that the viability of an online grocery shopping offering is in question, a survey of this type would be able to settle this debate.

1.9 Outline of the Research Report

This report comprises five chapters as follows:

1.9.1 CHAPTER 1: ORIENTATION

This chapter introduces the research, outlines its purpose, importance and delimitations, states the problems investigated and provides a definition of key terms and concepts used in the research.

1.9.2 CHAPTER 2: LITERATURE REVIEW

Chapter 2 is a review of relevant literature pertaining to customer satisfaction and service quality assessment and how this is applied in an online environment, web site design and quality and online grocery shopping in foreign markets. The specific models which will form the basis of a model for this study are described extensively.

1.9.3 CHAPTER 3: RESEARCH METHODOLOGY

Chapter 3 provides the detailed structure of how the research was conducted, including the development of the model used, the population, the sample, the instrument and the method of distribution.

1.9.4 CHAPTER 4: RESEARCH RESULTS

Chapter 4 contains the survey results in graphical and tabular form accompanied by a narrative which relates the results back to the problems that were investigated.

1.9.5 CHAPTER 5: DISCUSSION AND RECOMMENDATIONS

The final chapter contains a detailed discussion of the results and the conclusions that were derived. Recommendations are made in terms of the research problems and the results discussed in Chapter 4.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

Chapter 1 defined the research, its purpose, importance, delimitations, the problems investigated and key terms and concepts.

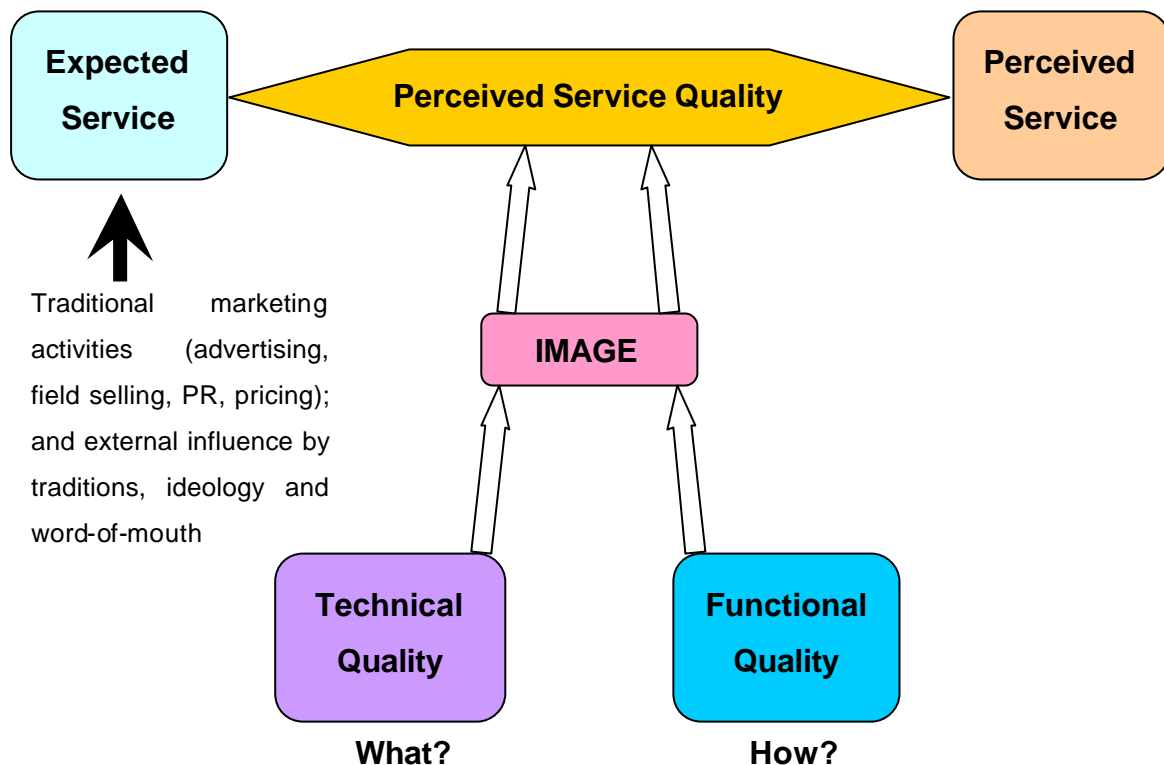
This chapter is a review of relevant literature that begins with a chronological study of the development of service quality assessment and customer satisfaction models. This is followed by a review of literature from the areas of online retail service quality and satisfaction, Web site design and quality and prior research into online grocery retailing in some European markets.

There have been many efforts to study service quality but there has been no general agreement on how to measure it. There is however general agreement that in order to assess service quality, some measurement of perceived performance is required (Robinson, 1999).

2.2 The Service Quality Model (1984)

An early model to describe customer perceptions of service quality was proposed by Grönroos (1984) as shown in (Figure 2.1), when he identified the requirement for such a model in order to develop service oriented concepts more successfully, a need which was emphasised by Parasuraman, Zeithaml & Berry (1985; 1988).

Figure 2.1: The Service Quality Model

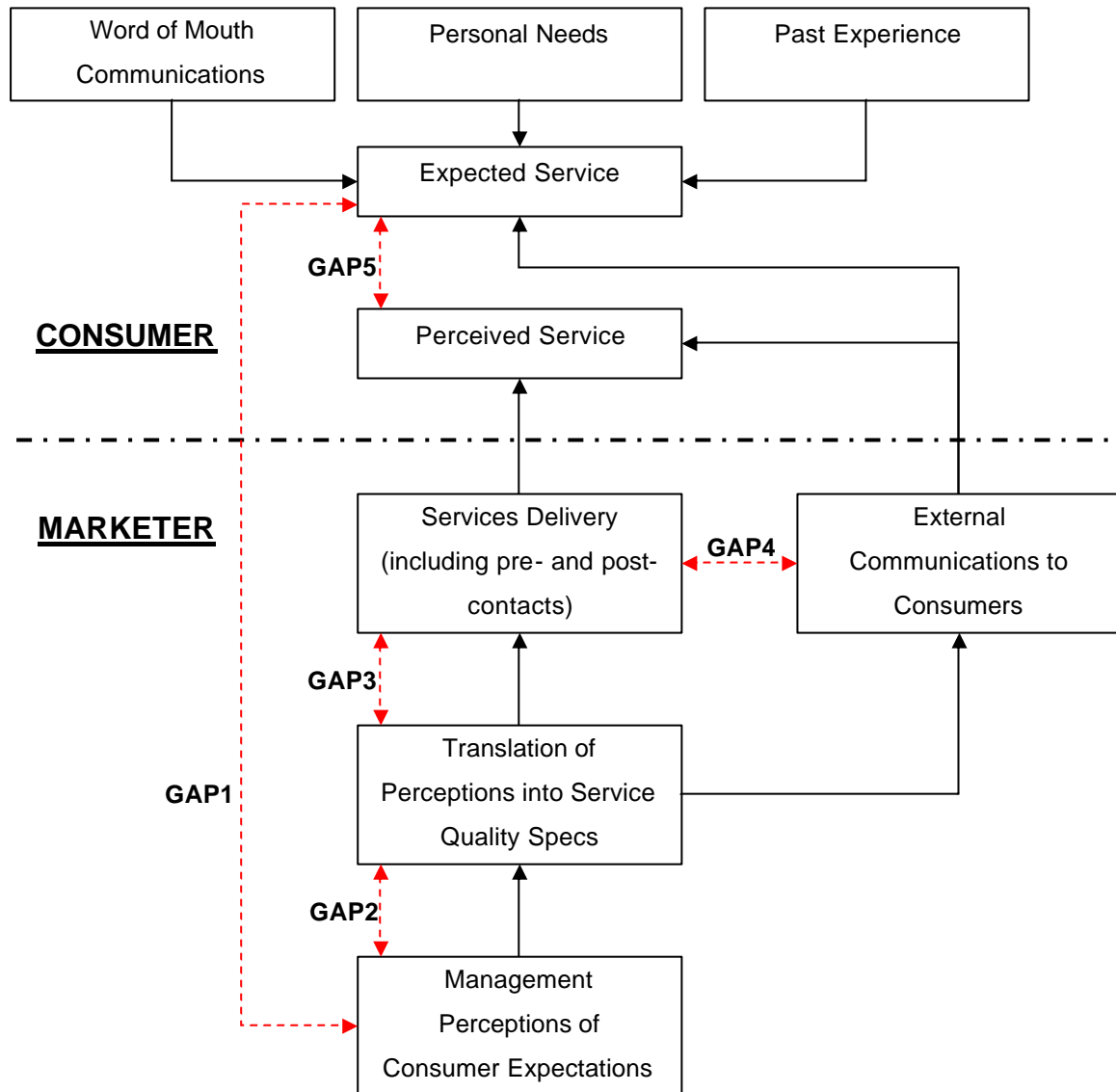


Adapted from Grönroos (1984)

2.3 Service Quality Gaps Model (1985)

Building on the work of Grönroos (1984), Parasuraman et al (1985) developed the Service Quality Gaps Model which defines five potential gaps in service quality. Their support of the popular notion of the early 1980s that perceived service quality is a comparison between expected service and perceived service is depicted in Gap 5 of the model (Figure 2.2). Gap 5 is a function of Gaps 1, 2, 3 and 4 which occur as a result of influences exerted by the customer and shortfalls on the part of the service provider. Expectations are influenced by the extent of personal needs, reputation (word-of-mouth and marketing communication) and past experiences. If the perceived service meets expectation, i.e. Gap 5 is closed, the customer is satisfied. If expectation is exceeded then the customer is more than satisfied. The model identifies 10 dimensions as determinants of service quality: reliability, responsiveness, competence, access, courtesy, communication, credibility, security, understanding / knowing the customer and tangibles.

Figure 2.2: Service Quality Gaps Model



Adapted from Parasuraman, Zeithaml & Berry (1985)

2.4 SERVQUAL (1988)

Parasuraman et al (1988) expanded the Service Quality Gaps Model (Parasuraman et al, 1985) with the SERVQUAL model which has Gap 5 from the Service Quality Gaps Model as the starting point for the development of a multiple-item scale for measuring service quality. Although subject to much criticism, most notably Carman (1990) and Cronin and Taylor (1992; 1994), SERVQUAL proved to be possibly the best and certainly the most popular approach to assessing service quality throughout the 1990s (Moolla & du Plessis, 1997; Mittal & Lassar, 1998; Robinson, 1999).

Parasuraman et al (1988) suggest SERVQUAL as a skeleton to be adapted for use to fit different characteristics of different service organisations, yet Parasuraman, Zeithaml & Berry (1991) recommend that it be used in its entirety as far as possible. Most researchers have added to or amended the content of the SERVQUAL model to make the questionnaire more relevant to their specific situations while recognising the content validity of the model (Moolla & du Plessis, 1997; Robinson, 1999).

The SERVQUAL model refined the 10 determinants of service quality from the Service Quality Gaps Model into 5 dimensions:

Tangibles: Physical facilities, equipment and appearance of personnel.

Reliability: Ability to perform the service dependably and accurately.

Responsiveness: Willingness to assist customers and provide prompt service.

Assurance: Competence, credibility and courtesy of employees and their ability to inspire trust and confidence.

Empathy: Caring and individualised attention that the customer receives.

The basic structure of the SERVQUAL instrument consists of a questionnaire in two sections, an expectations section and a perception section. Each section contains 22 statements, 9 of which are negatively worded. In the expectations section, the respondent indicates on a seven point likert scale (Strongly Agree – 7, Strongly Disagree – 1, with no labels for values 2 to 6) the extent to which the ideal offering would possess the characteristic described in each statement. In the perceptions section, the same scale is used to record the respondents' impression of the extent to which the organisation under scrutiny exhibits that particular characteristic.

Analysing the two sections gives the researcher the ability to rate the perceived performance of the organisation against the consumer's expectation for each characteristic. An average for each of the 44 questions is calculated (responses to negatively worded questions are reversed before scoring) and, comparing the average perceived value against the average expected value for each pair of questions, makes it simple to identify areas where the organisation is under-delivering against expectations, where they meet expectations or where they exceed customer expectations.

The five dimensions of this model allow a company to assess overall service delivery as well as service delivery in each dimension. Demographic and psychographic variables can be combined with the model to gain further managerial insight into customer perceptions in each dimension. Naturally, comparative analyses against competitors or amongst branches are easily achieved using the SERVQUAL model by obtaining responses on each entity to be compared.

A revision to SERVQUAL removed the negatively worded questions and focused the expectation questions on what an excellent company would provide, not what firms in the industry should provide, while adding a third section that measures the relative importance of the five dimensions to the respondent (Parasuraman et al, 1991).

2.5 SERVPERF (1992)

Grönroos (1984) and Parasuraman et al (1985; 1988; 1991) upheld the popular notion of the early 1980s that perceived service quality is a comparison between expected service and perceived service. However, Cronin & Taylor (1992) determined that service expectation is inherent in service perception and therefore that service quality is equivalent to service perception. Their SERVPERF model therefore removed the customer expectations section of the SERVQUAL questionnaire, leaving just the 22 questions in the perceptions section.

Boulding, Kalra, Staelin & Zeithaml (1993) supported this view and proposed that perceived service after a service interaction is a blend of prior service expectations and perceived service during the interaction.

Cronin & Taylor (1992) also determined that it is not necessary to weight perceived service with an importance factor whether using the SERVQUAL model or the SERVPERF model.

Cronin & Taylor (1992) also disputed the proposition by Parasuraman et al (1985; 1988) that perceived service quality results in customer satisfaction, and counter-proposed that customer satisfaction is an antecedent of service quality and that (dis)satisfaction results in an amended service quality perception. Cronin & Taylor (1992) found in their research however, that service quality is an antecedent of

customer satisfaction and that consumer satisfaction has a stronger influence than service quality on a consumer's purchase intentions. In the online retail environment, Jun, Yang & Kim (2004) observed a statistically strong relationship between the concepts of perceived service quality and customer satisfaction.

2.6 Satisfaction versus Loyalty

Mittal & Lassar (1998) found that customer satisfaction is insufficient to guarantee loyalty; companies need to strive to create loyalty beyond the point where the customer is satisfied. The relationship between satisfaction and loyalty is asymmetrical and Mittal & Lassar (1998) emphasise the fact that although customer satisfaction does not guarantee loyalty, dissatisfied customers are almost guaranteed to switch if an alternative is available.

Mittal & Lassar (1998) used the Service Quality Model (Grönroos, 1984) and concluded that the effects of technical quality and functional quality in driving satisfaction and loyalty were different, and that the effects also varied according to the type of service provided. For a low contact service, technical quality was first required in creating satisfaction and functional quality was required in expanding the satisfaction into loyalty. For a high contact service, the opposite was observed. Mittal & Lassar (1998) observed that the SERVQUAL dimensions of empathy, responsiveness and assurance had a high correlation with functional quality from the Service Quality Model, while the SERVQUAL dimension of reliability reflected technical quality. The SERVQUAL dimension, tangibles, proved insignificant in their research.

The fact that Mittal and Lassar (1998) managed to combine the development done on SERVQUAL with the work done by Grönroos (1984), with a high level of correlation in a controlled environment, indicates that, although the models may have been presented in different terms, much of the popular base theory around customer satisfaction and perceived service quality is consistent.

Reichheld and Scheffer (2000) and Weinstein (2002) agree with Mittal and Lassar (1998) that customer retention is cheaper than customer attraction, and thus that loyal customers are more profitable. Although Reichheld and Scheffer (2000) do not

attempt to quantify customer loyalty as a function of customer satisfaction as Mittal and Lassar (1998) do, they do advocate that loyalty is achieved through the “delivery of a consistently superior customer experience.” (Reichheld & Schefter, 2000: 113) while Weinstein states that “By maintaining consistently high levels of customer satisfaction and loyalty, customer defection becomes less likely.” (Weinstein, 2002: 267). Reichheld and Schefter (2000) develop the idea that the Internet has made it even more critical for companies to provide great customer service and that whereas in-store customers may have been loyal out of necessity; online shoppers have the ability to make real time supplier comparisons and will accept nothing less than the best product and service quality. Reichheld et al (2000) place a large emphasis on trust in online shopping. Another interesting fact is the low proportion (less than 20%) of online companies that use the Internet tools available to them to perform any form of customer tracking (Reichheld & Schefter, 2000; Reichheld et al, 2000). Obtaining and combining this type of information is easy in an online environment where the items that are viewed can be monitored; whereas in a physical store, it is much more difficult to keep track of which aisles a customer might visit or products they might touch. The online environment is also less anonymous; the customer has to identify themselves if they wish to have something delivered, but in a physical store where a customer might purchase with cash, there is often no record of which customers have made which purchases.

From both Reichheld et al (2000) and Reichheld & Schefter (2000), it can be concluded that loyalty amongst online shoppers requires a satisfactory experience, but that as Mittal and Lassar (1998) discovered, customer satisfaction does not necessarily guarantee loyalty and this is also true for online shoppers. Smith (2002) also concluded that retention is just as important in an e-commerce environment as in a traditional shopping environment.

2.7 The Future of SERVQUAL

It is extremely difficult to document all the debate surrounding the measurement of service quality and the use of the SERVQUAL model, perhaps Robinson (1999) summarises it best in the following table:

Table 2.1: The service quality measurement debate: a summary of areas of disagreement

Area	Nature of disagreement
The purpose of the measurement instrument	Whether the prime purpose is diagnostic or predictive
The definition of service quality	The nature of the attitude: whether it relates to performance, expectations and/or ideal standards
Models for service quality measurement	Whether to measure expectations or not Whether to measure importance or not
The dimensionality of service quality	Whether the five dimension model is correct for its original context
Issues relating to expectations	The definition of expectations Whether it is necessary to identify which items are vector attributes and which are classic ideal point attributes When to measure expectations, before or after the service encounter
The format of the measurement instrument	Which measurement approach is best: difference score, non-difference score or semantic differential scales Whether importance should be measured by item or dimension, or inferred from performance and expectations scores

Source Robinson (1999: 30)

SERVQUAL has dominated the services marketing literature in the 1990s and was the subject of much debate. It is clear that SERVQUAL and its critics have contributed a great deal to the measurement of service quality, yet there is still no definitive model that can be generically applied to all services in all industries, and this is unlikely to be possible. The introduction of the Internet and its related services adds additional levels of complexity to the measurement of service quality. It appears that at the present time, it is up to the researcher to assess the various models available to them and to determine whether there is one that can be applied with a high level of fit to meet the requirements of their particular study. Failing this, an existing model may be adapted or a new model may need to be developed and validated for it to meet their specific needs.

Much of the service quality and customer satisfaction literature defines the two entities as different constructs. Service quality relates to how well an enterprise provides the service, and customer satisfaction relates to how the consumer perceives the service. It is possible for a company to provide poor service that is satisfactory to the consumer, especially if the consumer expects the service to be poor – then they are not disappointed when it is. Similarly, a company that is expected to provide exceptional levels of service may fail to satisfy the consumer when delivering good quality service that does not measure up to expectation.

Therefore, it can be seen that measuring customer satisfaction does not really indicate the level of service. What customer satisfaction does tell us is whether a company performs consistently in line with expectations. New adopters of online shopping do not have high expectations of service as the switch to online shopping entails giving up the traditional service interface, so it becomes a low contact service, which means that the technical aspects (the what) becomes much more important in generating customer satisfaction (Grönroos 1984). However, just because a consumer expects mediocre service and receives it, may mean that they are satisfied that the provider delivered according to expectations, but it does not necessarily mean they are content to receive mediocre service – there has to be some payoff or incentive to make the customer repeat the experience, and this is the benefit that is realised from a service.

2.8 Online Retail Service Quality

In the Internet boom, with just about every company clamouring to leap onto the World Wide Web bandwagon and establish some sort of Internet presence, many online trading sites were established with little thought, planning or support, with the result that many companies subsequently disappeared just as quickly, and that many more had poor quality Web strategies and online presences. This condition has to be rectified and companies must pay more attention to the quality of their online service offerings in order to be successful.

Customer tolerance for “poorly functioning websites, shoddy service, lax communications or poor products is rapidly diminishing” (Reichheld et al, 2000: 178).

“Companies cannot afford to be mediocre or inconsistent – this condition simply will not be tolerated in an e-commerce environment” (Smith, 2002:160).

There is a wealth of research into online retail service quality with each new research defining its own measurement methodology. Many of the researchers attempt to justify their models with some grounding in service quality literature of the 1980s and 1990s; most notable are the frequent attempts to map their categories to the SERVQUAL dimensions. However, there is little regard for other research that has been done in the online environment; nobody has managed to define a model that anybody else appears ready to accept as even a basis for measuring online service quality. Of particular note is that the researcher discovered three articles published within the timeframe of a year that had a common author and defined three different methods of categorisation (Cai & Jun, 2003; Yang et al, 2004; Jun et al, 2004). Although the naming and classifications differ, there are only a finite number of constructs to be assessed in the online service quality field, and most of these are common in the bulk of the research that has been done. A summary of the different classifications follows, followed by a more detailed examination of the literature.

2.8.1 Van Iwaarden, van der Wiele, Ball & Millen (2003)

Van Iwaarden et al (2003) conclude that the quality dimensions of the SERVQUAL model can be mapped directly to an e-business environment, the details of which are summarised in Table 2.2.

Van Iwaarden et al (2003) determined that the importance of any of the five factors may differ per type of e-business, just as they do vary according to service sector, and that frequent users of online shopping tend to have higher quality expectations and to place higher importance on all dimensions than infrequent shoppers.

However, this study identified 50 questions relating to Web aspects in the following categories: clarity of purpose, design, communication, reliability, service and frequently asked questions, accessibility and speed, product or service choice, order confirmation, product purchase, user recognition, extra service and frequent buyer incentives. These categories are then “forced” into the five SERVQUAL dimensions with conflicting ideas such as personalisation of the service being offered as opposed

to personalisation of the Web site which is the original definition of the empathy dimension. It is unclear exactly what the research is intended to discover, the broad statement declares the intention of trying to determine what makes a good Web site and what factors determine the quality of a Web site, yet many of the questions posed relate to the quality of the underlying service or product being delivered through the Web site and do not assess the Web interface itself.

Table 2.2: Van Iwaarden et al (2003) – Applying SERVQUAL Dimensions to Web Sites

Dimension	SERVQUAL Definition	Van Iwaarden et al (2003) Usage
Tangibles	Physical facilities, equipment and appearance of personnel	Visual aspects and functionality of the Web site
Reliability	Ability to perform the service dependably and accurately	Order information such as delivery times, charges, product details
Responsiveness	Willingness to assist customers and provide prompt service	Speed of the Web site
Assurance	Competence, credibility and courtesy of employees and their ability to inspire trust and confidence	Availability of information Privacy and confidentiality Security
Empathy	Caring and individualised attention that the customer receives	Personalisation of the Web site

2.8.2 Janda, Trocchia & Gwinner (2002); Trocchia & Janda (2003)

Janda et al (2002) develop 5 dimensions in assessing Internet retail service quality: performance, access, security, sensation and information while Trocchia & Janda (2003) expand the classification by matching the five dimensions to SERVQUAL as in Table 2.3.

Although the authors are attempting to obtain a rating of Internet retail service quality, their measurement instrument is measuring customer satisfaction. Their research attempts to assess the overall service quality of an online shopping experience within these five dimensions with the result that the separate components that make up the entire experience are all scored together. For example the performance dimension includes assessments on the performance of the website as well as how long the delivery takes to arrive. Clearly, in the event that a service provider scores low in the

performance dimension, they would want to know at a glance which areas of performance they were lacking in, if the deliveries and web-site development were both outsourced, it wouldn't be fair to blame one at the fault of the other.

Table 2.3: Janda et al (2002) – Trocchia & Janda (2003) Internet Retail Service Quality

SERVQUAL Dimension	Janda et al (2002); Trocchia & Janda (2003)
Reliability Responsiveness	Performance (transaction efficiency, delivery fulfilment)
Tangibles Empathy	Sensation
Assurance	Security
	Access (variety, universality)
	Information

2.8.3 Chen & Chang (2003)

Chen & Chang (2003) define three measures of online service quality as follows:

- Interactivity:
 - The consumer's connection quality
 - The consumer's Internet Service Provider's quality
 - The vendor's connection quality which contains factors such as Web site design and system performance.
- Transaction:
 - value – price and quality
 - convenience – location, time and variety
 - assurance – privacy, security and purchase policies
 - evaluation – product information, ability to offer customised comparison
 - entertainment – fun, novelty
- Fulfilment:
 - order processing
 - delivery
 - post-sales service.

2.8.4 Cai & Jun (2003)

Cai & Jun (2003) use factor analysis to determine 4 dimensions in assessing online buyers' and information researchers' service quality perceptions. Mapped against the SERVQUAL dimensions, these are:

Table 2.4: Cai & Jun (2003) – Assessment of Online Service Quality

SERVQUAL Dimension	Cai & Jun (2003)
Tangibles	Web site design and content
Reliability Responsiveness	Prompt, reliable service
Assurance (credibility and security components only)	Trustworthiness
Empathy	Communication

2.8.5 Yang, Jun & Peterson (2004)

Yang et al (2004) define six measures of Internet retail service quality:

- 1) Reliability: accurate online transactions, accurate records, correct performance, fulfilment of promises. Corresponds to SERVQUAL's Reliability.
- 2) Responsiveness: prompt response to customer requests, speed in resolving customer problems, prompt services. Corresponds to SERVQUAL's Responsiveness.
- 3) Competence: employee ability to answer customer questions, ability to resolve problems that arise, compliance with customer requests. Corresponds to SERVQUAL's Assurance.
- 4) Ease of use: moderate effort required to navigate Web site, well organised and easy to follow catalogues, ease of completing an online transaction. Most of these dimensions agree closely with SERVQUAL's Tangibles.
- 5) Security: low risk associated with online transactions, safeguarding personal information, safety in completing online transactions.
- 6) Product portfolio: online service functions, useful free services, wide range of product and service packages, diverse features.

2.8.6 Jun, Yang & Kim (2004)

Jun et al (2004) define six dimensions of Internet retail service quality, mapped to SERVQUAL's dimensions as given in Table 2.5.

Table 2.5: Jun, Yang & Kim (2004) – Six Dimensions of Internet Retail Service Quality

SERVQUAL Dimension	Jun, Yang & Kim (2004)
Tangibles	
Reliability Responsiveness	Reliable prompt responses
Assurance	Security Credibility
Empathy	Ease of use
	Access
	Attentiveness

2.8.7 Lim & Dubinsky (2004)

Lim & Dubinsky (2004) define four sets of characteristics to be measured:

- 1) Merchandise characteristics: Product information, variety of merchandise.
- 2) Interactivity characteristics: Customer support, personal choice helper.
- 3) Reliability characteristics: Good reputation, security, privacy.
- 4) Navigation characteristics: Time to get to home page, time to download Web page.

Although the apparent methodology in assessing online retail service quality appears to differ from research to research, the variables that are to be assessed are seen to be fairly consistent and all of the above researchers claim a high level of validity. The differences impact on the classification of these variables and the scoring of responses, since the variables will be grouped differently. Interestingly, although convenience is cited in most studies as one of the driving factors in customers' intentions to purchase online, only Chen & Chang (2003) used this as a measure of satisfaction, questioning whether it is as convenient to shop online as the customer expected. A few of the above variables may appear common, however the definitions for some researchers differ e.g. Janda et al (2002) define access as product variety and universality, whereas Jun et al (2004) define access as having access to the

retailer and its staff which would seem to almost coincide with their customer support criterion. Only Chen & Chang (2003) consider that customer-controlled features such as the customer's Internet connection and service provider may affect perceived service quality, although van Iwaarden et al (2003) have a section where respondents rate their satisfaction with their connection and download speeds.

In combination, the following variables are found:

Table 2.6: Consolidation of Online Service Quality Variables

Variable	Research
Security	<ul style="list-style-type: none"> • van Iwaarden et al (security) • Janda et al; Trocchia & Janda (security) • Chen & Chang (assurance) • Cai & Jun (trustworthiness) • Yang et al (security) • Jun et al (security) • Lim & Dubinsky (security)
Privacy	<ul style="list-style-type: none"> • van Iwaarden et al (privacy and confidentiality) • Janda et al; Trocchia & Janda (security) • Chen & Chang (assurance) • Cai & Jun (trustworthiness) • Yang et al (security) • Jun et al (security) • Lim & Dubinsky (privacy)
Credibility	<ul style="list-style-type: none"> • Cai & Jun (trustworthiness) • Jun et al (credibility) • Lim & Dubinsky (good reputation)
Web site design	<ul style="list-style-type: none"> • van Iwaarden et al (visual aspects and functionality of the Web site) • Janda et al; Trocchia & Janda (sensation) • Chen & Chang (vendor's connection quality) • Cai & Jun (Web site design and content) • Yang et al (ease of use) • Jun et al (ease of use)
Web site performance	<ul style="list-style-type: none"> • van Iwaarden et al (speed of the Web site) • Janda et al; Trocchia & Janda (performance) • Chen & Chang (vendor's connection quality) • Jun et al (reliable, prompt responses) • Lim & Dubinsky (navigation characteristics)

Variable	Research
Information	<ul style="list-style-type: none"> • van Iwaarden et al (availability of information) • Janda et al; Trocchia & Janda (information) • Chen & Chang (evaluation) • Cai & Jun (communication) • Lim & Dubinsky (product information)
Personalisation	<ul style="list-style-type: none"> • van Iwaarden et al (personalisation of Web site) • Janda et al; Trocchia & Janda (sensation) • Yang et al (product portfolio) • Jun et al (attentiveness) • Lim & Dubinsky (personal choice helper)
Customer support	<ul style="list-style-type: none"> • Chen & Chang (post-sales service) • Cai & Jun (prompt, reliable service) • Jun et al (reliable, prompt responses) • Yang et al (responsiveness, competence) • Lim & Dubinsky (customer support)
Access to retailer	<ul style="list-style-type: none"> • Van Iwaarden et al (availability of information) • Cai & Jun (communication) • Jun et al (access)
Order policies	<ul style="list-style-type: none"> • van Iwaarden et al (order information) • Janda et al; Trocchia & Janda (performance) • Chen & Chang (assurance) • Cai & Jun (Web site design and content)
Order performance	<ul style="list-style-type: none"> • Janda et al; Trocchia & Janda (performance) • Chen & Chang (order processing) • Cai & Jun (prompt, reliable service) • Yang et al (reliability) • Jun et al (reliable, prompt responses)
Delivery fulfilment	<ul style="list-style-type: none"> • Janda et al; Trocchia & Janda (performance) • Chen & Chang (delivery) • Yang et al (reliability)
Variety	<ul style="list-style-type: none"> • Janda et al; Trocchia & Janda (access) • Yang et al (product portfolio) • Lim & Dubinsky (variety of merchandise)
Connection quality	<ul style="list-style-type: none"> • Chen & Chang (consumer's connection quality)
ISP quality	<ul style="list-style-type: none"> • Chen & Chang (consumer's ISP quality)
Value	<ul style="list-style-type: none"> • Chen & Chang (value)
Convenience	<ul style="list-style-type: none"> • Chen & Chang (convenience)
Entertainment	<ul style="list-style-type: none"> • Chen & Chang (entertainment)

The eighteen variables defined in Table 2.6 should therefore represent a comprehensive list of all items to be considered for an Internet retail service quality study. Depending on the intention of the study and the particulars of the online service or environment, some of the categories may be more relevant than others. Therefore, attempting to include all of the dimensions in any particular study could overcomplicate measurement or include irrelevant issues for the specific application.

The eighteen determinants of online service quality also have a high correlation with a previous study by Reichheld & Scheffer (2000) where the five primary determinants of loyalty in online shopping were found to be quality customer support, on-time delivery, compelling product presentations, convenient and reasonably priced shipping and handling and clear and trustworthy privacy policies.

Of the studies under review, there were some interesting findings in several of the categories that either supported researcher expectations or contradicted them.

2.8.8 Security, Privacy, Credibility and Trust

Security was a consistent theme throughout all online retailing literature, and most research placed a very high emphasis on this variable. From the very beginning, lack of credit card security has been one of the major problems with Internet shopping (Frain & Grady, 1997).

There are two main areas of concern for Internet shoppers in the security dimension. One is the risk associated with revealing financial information, such as credit card details and the other is revealing personal information, such as name and contact details (Janda et al, 2002).

Where a differentiation is made between security and privacy, security usually involves making sure that information during a transaction cannot be stolen online and privacy refers to the fact that certain information is stored in the retailer's information system and these details should only be available to those who need it to process a transaction or make a delivery.

The credibility of an organisation adds to the feeling of security, for example, an online company like Amazon that deals with thousands of transactions has a reputation to uphold. If outside parties managed to gain access to Amazon's database, it is likely that the most damaging result would be to publicly prove that Amazon's system had been hacked, no matter how insignificant the information was that had been gained. Every single one of Amazon's customers trusts Amazon to keep their information safe. If information can be hacked in any area, Amazon loses credibility, consumers believe their transactions and information are no longer safe and Amazon loses business.

Similarly a company with a reputation for being a trustworthy company in its offline environment may have more initial acceptance of its online extension than a stand alone start-up Internet retailer (Reichheld & Scheffer, 2000; Gulati & Garino, 2000; Rafiq & Fulford, 2005).

Reichheld et al (2000) proposed that the most important factor in generating customer loyalty online is trust. This is backed up by Reichheld & Scheffer (2000) who found that trust outweighs lowest price and broadest selection as the key e-business customer requirement. It is trust that makes a customer willing to part with personal information, something in-store consumers do not need to do. It is this personal information that creates a more intimate relationship between the online retailer and the consumer, allowing the business to cater to the individual's personal requirements, thereby increasing trust and loyalty. Once a customer has shared personal information, they are more comfortable returning to that particular business, since they do not have to overcome their reluctance to share the same personal information with a different online organisation.

Van Iwaarden et al (2003) found that in terms of importance, their privacy and security questions ranked 42nd and 43rd out of 50 elements respectively, indicating that online customers did not consider these items very important at all. It must be noted however, that the items in question related to the displaying of privacy and security policy information on the online retailer's website, and did not attempt to ascertain the importance of an online transaction actually being private or secure. Although the research mentioned security and privacy as areas of concern to be investigated in the study, these items were in fact not measured. A more important

series of questions would be to find out whether the policies contained relevant steps to protect the consumer and whether the consumer believes the retailer lived up to their stated security policies. It must be noted that the gaps between expectation and experience – effectively satisfaction minus importance – for the displaying of the privacy and security policies were amongst the lowest in the study, but the low importance items in general had smaller gaps.

Janda et al (2002) found that security only marginally influences satisfaction and word-of mouth and had no impact on purchase intentions which was not according to the researchers' expectations. The authors proposed that this could be a "maturing" of Internet retailing where positive experiences alleviate fears that security may be compromised. This researcher expresses the concern that should this proposition hold, the Internet consumer is heading dangerously close to taking security policies and procedures for granted, when in actual fact, as Internet business continues to grow, users should become more and more vigilant as the propensity for online fraud increases.

This finding was echoed by Yang et al (2003) where all of the other dimensions were found to have a statistically significant effect on overall service quality, their security dimension was found to be insignificant. Yang et al (2003) proposed two possible reasons for this: either customers have difficulty in assessing Internet security or they are comfortable with the security of online transactions.

Similarly, Jun et al (2004) found that the effects of both security and credibility on service quality and customer satisfaction, in the online retailing environment, were statistically insignificant. The authors do not propose a reason for this result, and recommend that online retailers focus on the other four dimensions as areas for improvement.

Contrarily, Lim & Dubinsky (2004) found that security and privacy played a critical role in online consumers' purchase intentions and that this is an area where retailers should be making efforts to inform their customers how secure the transactions and the customers' private details are.

In developing their research instrument, Chen & Chang (2003) found that, consistent with their expectations, security and privacy was an area of high concern amongst Internet shoppers. The results of their study were that, of their respondents, the area of assurance (security, privacy and purchase policies) was the second least satisfying component of online transactions, entertainment being the least satisfying.

Of the four service quality dimensions developed and used in the study by Cai & Jun (2003), trustworthiness, incorporating such issues as online transaction security and consumer trust in the retailer, was found to be the most important determinant of perceived overall service quality amongst both the online shoppers and information searchers polled.

2.8.9 Personalisation and Web Site Design and Performance

The general opinion throughout the literature reviewed is that the Web interface forms the Tangibles dimension of the SERVQUAL model and as such forms the main point of contact between the customer and the online retailer. Just as in the traditional retailing environment, where the customer interface is an extremely important component in forming customer opinion, the Web interface with the online purchaser is just as important, if the customer does not like the design, content or structure, or finds it difficult to navigate, their satisfaction levels will drop and frustration will set in, possibly causing the customer to abandon the transaction. Just as physical stores need to be unique, internally consistent, entertaining and efficient, so too do online stores need to be unique, innovative, consistent in the presentation of the company brand, entertaining and efficient. Frain & Grady (1997) cited technical problems with the interface as being one of the major problems with the adoption of online shopping. The extent to which a Web site can be personalised to a specific customer requirement is a means of extending the emotional element of the transaction, replacing the personal contact with a salesperson from the traditional environment with a personalised experience. Of course there are those customers who prefer Internet shopping as they do not have to deal with salespeople (Trocchia & Janda, 2003).

Although the Web site design and Web site performance are most often in the literature classified separately, it is clear that the two parameters are linked: a picture

and feature rich design typically exhibits poorer performance characteristics than plain text, so it is imperative for an organisation to find the right balance between visual appeal and performance, a balance which is affected by the need to simultaneously convey the corporate image and brand through company logos and other identifying graphics (van Iwaarden et al, 2003).

Smith (2002) maintains that a Web site with viable content providing a sustainable competitive service is necessary to increase loyalty. A benefit that flows from loyal customers is excellent word-of-mouth. This is an effective mechanism for generating additional business for traditional stores, but it is even more so on the Web as email messages are easily sent. One might not bother reporting on how good a physical shop is to someone who lives in the next town (even if they were advised they would be unlikely to visit it), but the location of a Web site is irrelevant as visiting a site that someone refers to you is as easy as clicking on the link they have included in their email. Many online shops make it even easier to do this with an “email this page to a friend” link (Smith, 2002).

Van Iwaarden et al (2003) define the design and content of the Web site as being of the Tangibles dimension while the Web site performance forms part of the Responsiveness dimension. Of the 50 items in their measurement instrument, the most important item by average related to Web site navigation while the second highest importance mean belonged to a question related to Web site performance. It was this second most important question that also exhibited the greatest difference between importance and satisfaction.

Van Iwaarden et al (2003) equate their personalisation dimension with the empathy dimension of SERVQUAL, which highlights the attempt to recreate the caring and individualised attention that makes up the personal touch of the traditional shopping environment. The results of their study reveal that the importance placed on the personalisation of the Web site is low (including the customer platform for sharing ideas), indicating that these are possibly nice-to-have options, with the corresponding low gap between importance and satisfaction that all of the low importance categories received. The study seems to focus the personalisation questions almost entirely at the users of online travel sites, and asks no questions about receiving personal marketing of products that fit previous buying habits or being able to create

personal lists for repeat purchases; questions that form a part of the personalisation categories of many other studies.

Janda et al (2002) found the most important element in online shopping satisfaction to be performance. One of the factors constituting the performance dimension is transaction efficiency which is partly dictated by the speed of navigation on the Web site. Although the performance dimension proved to be a reliable predictor of satisfaction, word-of-mouth and purchase intentions, it is unclear which aspect of performance has the greater impact – the performance of being able to provide the right product in a timely fashion, or the performance of the online ordering system.

The physical structure and content of the interface are contained within their sensation dimension, along with features that would be considered as adding personalisation to the experience (Janda et al, 2002). The sensation dimension was insignificant as a predictor of satisfaction, word-of-mouth or purchase intentions.

Chen & Chang (2003) define the interactivity issues as consisting of three components: the consumer's connection quality, the consumer's ISP's quality and the vendor's connection quality. Clearly the consumer's connection and ISP are out of the retailer's control, yet organisations must be sure that they do not cut out prospective customers by providing a Web site that performs poorly over an otherwise acceptable combination of connection and ISP performance. Interactivity was found to have a strong association with customer satisfaction with the quality of ISPs having a significant effect on the online shopping experience (Chen & Chang, 2003). The entertainment component of the transaction dimension encompasses the fun and novelty factors of online shopping and was found to be the area that respondents were least satisfied with which seems contrary to the study by Janda et al (2002).

The study by Cai & Jun (2003) has a dimension for Web site design and content yet none of the questions in their instrument relate to the personalisation of the online interface. Their study concludes not only that web site design and content is an important factor in the perception of overall service quality amongst both online purchasers and information searchers, it also plays a central role in converting information searchers into online purchasers. Cai & Jun (2003) recommend that, in

order to be successful, a Web site should allow easy shopping and searching of products, facilitate quick location of a certain brand, have convenient check-out facilities and contain concise and easy to understand information. Although their research does not contain any questions regarding personalisation, the authors do suggest adding this functionality to the organisation's Web site as a means of improving the online experience (Cai & Jun, 2003).

Yang et al (2004) noted that customers' primary priority is on-screen information concerning the products and services they wish to purchase, and the simplicity and smoothness of the online transaction processing is critical to ensure customer satisfaction. They reinforce the idea that a balance between graphical content and download speed must be maintained, and that poor content can lead to frustration and terminated transactions. The organisation and structure of online catalogues should be easy to follow and navigate, the sequence of navigation should be intuitive and the current status of the transaction should be clearly evident.

The study by Jun et al (2004) also found that, in descending order of importance, reliable prompt responses, attentiveness and ease of use all had significant positive influences on both perceived service quality and customer satisfaction. The reliable prompt responses dimension related partly to the performance of the Web site, the attentiveness dimension incorporated elements relating to Web site personalisation while the ease of use dimension pertained to the Web site design and navigation.

Contrarily, Lim & Dubinsky (2004) observed that consumers' attitude to online purchasing is not significantly affected by interactivity or navigation characteristics. Although adequate support and Web site performance are essential, they are insufficient to guarantee success. Lim & Dubinsky (2004) propose that online retailers may have been more conscientious in their approach to Web site design, interactive quality and navigation speed following early criticism, with the result that customer concerns about these two aspects have been significantly reduced. Of course, the opposite may be the case; all of the bad word-of-mouth ensuing from the early poor quality may have resulted in low expectations on the part of the consumer.

2.8.10 Information, Support and Access to Retailer

Information is a topic that covers product information, retailer information, order information, customer shared experiences or ideas, frequently asked questions and customer support. Some researchers choose to separate these items and the results of some of the studies support this separation. In order to gain a concise view of the literature, product information, retailer information and customer support are discussed in this section, order information will be included in the order and delivery fulfilment section and the customer forum for shared experiences has been dealt with as part of the personalisation topic.

According to Frain & Grady (1997) insufficient product information was another of the major problems with Internet shopping while Smith (2002) finds that improved post purchase service and support enhances loyalty.

An important finding regarding the availability of information, is that higher availability of product information is associated with lower price-sensitivity amongst consumers (Lim & Dubinsky, 2004).

In the study by van Iwaarden et al (2003), access to company details features as the sixth least important feature as a measure of quality with a relatively high level of satisfaction, while product detail, query responses and the availability of and response to frequently asked questions are not seen as particularly important or unimportant in perceived service quality.

Janda et al (2002) find that their information dimension has the second most significant impact on customer satisfaction, word of mouth and purchase intentions. The authors place high importance on supplying reliable product information and product availability status. Within the information dimension, two separate questions were asked, whether the retailer provides accurate product information and whether the retailer provides trustworthy product information. No explanation is offered in the text as to the difference between these two items, although accuracy seems to score higher than trustworthiness amongst the respondents. Surely the researchers are not suggesting that a retailer could provide accurate product information that could not be trusted? Conversely, information that is inaccurate is surely not to be trusted.

Chen & Chang (2003) find that the ability to conduct product evaluations and comparisons using information that is available are distinct advantages for Internet shoppers and contribute to the intention to purchase online. They mention technical support and post sales service as being part of their performance dimension, yet none of the questions in the measurement instrument pertain to any form of customer support or to access to the retailer.

Cai & Jun (2003) include survey questions on access to retailer information within the communication dimension and customer support is part of the prompt, reliable service dimension. The study found that both communication and prompt, reliable service each had a significant, positive impact on perceived overall service quality

Yang et al (2004) determine that responsiveness and competence have a statistically significant effect on overall service quality. These dimensions both contain questions pertaining to customer support and the resolution of problems. There is an implicit reference to access to employees being attainable otherwise the support issues would not have been able to be raised, not to mention be resolved.

Jun et al (2004) also found that customer support responses, access to retailer and access to information all had a significant positive impact on overall service quality as well as on customer satisfaction.

Information forms part of the merchandise dimension in the study by Lim & Dubinsky (2004). Their research found that consumers tend to focus on information when evaluating an online retailer and seek high quality, detailed product information as purchases are made without being able to physically see or touch the item. Their interactivity dimension, incorporating customer support and access to retailer, was found to be less important in determining purchase intentions.

2.8.11 Order and Delivery Fulfilment

Variables in this particular category pertain largely to the compiling and delivery of the order by the retailer and/or their agents. The consumer has completed their part at this stage and can now await the arrival of their goods. Because the actual ordering online can be seen as an active part of the entire process, the consumer

could conceivably believe that since they have significant input, that they could be partly responsible for any dissatisfaction. However, the order and delivery fulfilment is a passive process for the consumer, this is the area where they are having a service performed on them, and so how this is done is absolutely critical in assessing satisfaction with the service and creating or retaining customer loyalty (Smith, 2002).

In the study by van Iwaarden et al (2003), of the ten most important features conducive to perceived service quality, six items relate to the ordering process and all fall short in terms of satisfaction. Relatively, the most satisfying of these items are those that relate to the ordering information, the complete order is shown before making the final purchase decision and email confirmation containing all details is sent.

Janda et al (2002) include the physical completion of the order in their performance dimension which stresses the importance of accurate delivery and error-free order processing. The results of their research indicate that this dimension is the most important in assessing customer satisfaction, word of mouth and purchase intentions, emphasising the fact that performance is the key to overall effectiveness in the online retailing environment. Another factor of the performance dimension is the risk that consumers take when allowing someone else to pick their products for them, for any item this could be an inadvertent selection of the wrong brand, size or colour which may need to be returned for the correct item, but for groceries this could have an impact on freshness.

According to Chen & Chang (2003) superior performance in the fulfilment area leads to greater convenience and convenience was found to be the most important benefit in making the decision to purchase online. For example, a delivery that arrives at the scheduled time is more convenient than a delivery that arrives late since the customer has had to wait for the scheduled interval to elapse, in case the delivery arrived as expected, then they still had to wait until the delivery actually arrived, also an order that contains the correct items does not suffer from the inconvenience of having to arrange to return incorrect items.

The performance of compiling the order and delivering it correctly and promptly forms part of the prompt, reliable service dimension in the study by Cai & Jun (2003). The

study finds that as expected, the prompt, reliable service dimension has a significant positive impact on perceived service quality. This is confirmed by Yang et al (2004).

Jun et al (2004) determine that reliable, prompt responses are the most important factor in establishing overall service quality and customer satisfaction. Online consumers expect the right quantity and quality of items ordered and they expect to receive them in the time frame promised by the retailer and to be billed correctly.

2.8.12 Variety

Janda et al (2002) include product variety in their access dimension along with universality which implies that the product selection contains items from all over the world. Although this factor appeared to hold some relevance in the qualitative data, the quantitative study showed that this construct had little value as a predictor of customer satisfaction, word of mouth or purchase intentions. The authors propose that the number of reputable online retailers could mean that consumers are willing to source their diverse products from a number of different vendors rather than looking for everything at a single site. However Chen & Chang (2003) find that product variety does have an influence on purchase intentions and Yang et al (2004) find that product variety has a significant influence on overall service quality perceptions.

Chen & Chang (2003) include variety as a convenience factor in their study. The question pertaining to product variety scores relatively high amongst the respondents and contributes to the overall finding that convenience is the most important factor driving consumer intention to purchase online.

Product variety forms part of the merchandise dimension in the study by Lim & Dubinsky (2004) and was found to be very important in consumers' decisions to shop online.

2.8.13 Benefits – Price, Convenience and Value

Reichheld & Scheffer (2000) realised that although price is often an important benefit in shopping online, typical online shoppers are not price-obsessed but merely price-

conscious and that they are willing to pay for the convenience that online shopping brings.

Although value is defined in terms of price in Chen & Chang's (2003) study, it is clear that value is about much more than price and that it would mean different things to different people. There is also a large interdependency between convenience and value, the convenience of shopping online, or of having purchases immediately, could add considerable value to the purchase, far in excess of the monetary value that might be realised by any mere price consideration. Chen & Chang (2003) discover that convenience is the biggest factor influencing the decision to purchase online.

There are links between price and the satisfaction or quality perceived in other areas, too, for example, online consumers may be willing to pay a little more if the information available at one site answers all of their questions more satisfactorily than another site (Lim & Dubinsky, 2004) and customers may well be willing to pay more to use an online retailer that they trust rather than use a retailer they are not familiar with. Another example is that complicated but necessary security measures could make it difficult to log in, impacting on ease of use and perhaps convenience (Yang et al, 2004). Therefore it is essential that, in attempting to assess the overall quality of the service that they are providing, companies do not concentrate on any single service quality dimension, but strive to attain a good balance at a high level across all dimensions.

Price has been defined as one of the big advantages of purchasing online, as pure online retailers may well be able to offer the best price since the physical store overheads do not need to be recovered. An example much cited in the literature is Amazon, originally an online book and music retailer which has diversified into various other fields such as electronic goods and cameras. A local example is Kalahari (www.kalahari.net) which is an online retailer in a similar vein. Kalahari have no physical store, many of the products are ordered from their suppliers when orders for those items are placed so inventory is kept to a minimum, they use a courier service to deliver the orders so they have no capital investment in a fleet of their own and they make the customers pay for shipping for orders under a certain amount. Kalahari thus has minimal overhead expenditure which means that they can mark up

their products less than traditional stores and thus undercut many of the physical outlet stores. Customers who don't mind waiting a few days for their purchases may consider the cheaper price to be good value, others who miss the whole experience of browsing through bookstores and being able to read extracts from the books before purchasing would not consider the cheaper price to be sufficient incentive for them to adopt online shopping for this particular product.

Something that is not mentioned in any of the literature reviewed is that if the price was significantly lower, there is a chance that the information searchers on the Internet could exist in reverse: an Internet information searcher is a consumer that searches the Internet to decide what product they want and which physical outlet they wish to purchase it from and then visit the store and make their purchase. Someone who enjoys the physical experience of traditional shopping could conceivably visit a traditional retail store, evaluate the various products by physical examination and comparison, and then return home to find the cheapest online source of the product they have decided to purchase and make the purchase online. This is not purely speculation either, the researcher has had personal experience of associates that have been offered good deals on products through online loyalty programs who first assess the product on offer in a traditional store before taking advantage of the online special.

This means that the online retailer's strategy need not be to provide products at the lowest possible price, but to create perceived value for the premium they may charge over another Web store. This is extremely important in the next section, online grocery retailing, where online grocery stores need not necessarily be competing with other online stores, but with the physical store where the pricing may be cheaper. In order to make online grocery shopping viable for those consumers who wish to utilise such a service out of convenience, it is necessary that the extra costs incurred over the traditional channels are recouped and that the volumes are sufficient to warrant the extra investment in personnel and infrastructure. This means that, although the online grocery retailers do not want to cannibalise the traditional business channels, they need to be able to create sufficient value so that the more expensive online shopping does not discourage potential customers of this channel.

2.9 Online Groceries

Factors that have contributed to the need for online grocery shopping include time and resource constraints caused by an increasing number of dual income households, a greater involvement in the workforce by women who have been the traditional primary food shoppers and a greater number of single-parent and elderly households (Morganosky & Cude, 2000). Their research found that 73% of respondents cited factors relating to convenience as the driving force behind their online purchases. It was observed that convenience does not necessarily equate to time-saving – some respondents claimed shopping online took longer than going to the store but that it was more convenient than having to go shopping with children. Others claimed that the real time saving was not in the actual shopping time but in the time spent driving to and from the store. Other claimed benefits were greater accuracy, a more peaceful experience, easier comparison shopping, easier monitoring of spending and better planning leading to more meals being prepared and eaten at home. The study also determined that better educated and somewhat higher-income consumers may be more likely to shop online, primarily because of the benefits of time and convenience.

Dholakia & Uusitalo (2002) confirm some, but not all, of the findings of Morganosky & Cude (2000), in that the socio-demographic variables of age, household income and family composition had a significant effect on the perception of benefits of online shopping, whereas gender and education had no influence. Their findings supported their own hypotheses that younger age groups are likely to view online shopping more positively, that there is a positive relationship between income and the perception of online shopping and that families with pre-school children are more likely to perceive benefits from online shopping. Dholakia & Uusitalo (2002) hypothesised that women would be more likely to perceive benefit in online shopping where it is time saving and convenient, but would be less likely to accept online shopping if it is perceived as less fun and recreational, but this was not proved by the study. The lack of a positive relationship between education and perceived benefits from online shopping was also against expectation, although income and education are positively related and income and perceived benefits are positively related.

There are differing opinions about grocery e-tailing, and the demise of many online grocers and the lack of profitability in the market seem to add weight to the

pessimistic view. The suitability of shopping for groceries online is questionable; firstly, groceries are tangibles so a full commercial cycle cannot be completed in the virtual environment. Secondly, the perishable nature of groceries makes it decidedly difficult to specify your preferences when it comes to fresh goods – some people will purchase fruit and vegetables for immediate consumption, others may want to allow time for the ripening process to complete; when purchasing limited life items, the grocery store would like to implement the first-in-first-out approach, whereas the consumer will look for the freshest items with the longest remaining shelf-life. Thirdly, the perishable nature of the produce means the service can only be delivered locally. Fourthly, the high operational costs involved in grocery e-tailing means that online prices are unlikely to be competitive (Anckar, Walden & Jelassi, 2002). In contrast to these problems, grocery shopping is often seen as stressful and onerous so the convenience of being able to select your purchases in the comfort of your own home, away from crowds and queues counts for a lot, and as Reichheld & Scheffer (2000) observed, online shoppers are willing to pay for the convenience and are merely price conscious not price obsessed.

Anckar et al (2002) offer the following four areas in which customer value can be created for an online grocery retailer:

- 1) competitive prices
- 2) a broad and / or specialised assortment
- 3) superior shopping convenience
- 4) superior customer service

A commonly identified benefit of shopping online is cheaper pricing resulting from increased competition as the reduced operational costs allow more companies to enter the market. In physical grocery stores, price is the leading form of competitive differentiation. However, online grocery stores as extensions of physical traders are not able to compete on price as the operational costs in picking the stock and delivering it to the consumer must be recovered, and there are no reductions in the costs of operating the physical store (Anckar et al, 2002). Anckar et al (2002) conclude that it is not essential for online grocery stores to undercut their physical counterparts as online shoppers are willing to pay a slightly higher price or delivery fee in order to realise the convenience of this shopping channel.

In a study of seven focus groups of experienced and inexperienced online grocery shoppers across the United Kingdom and Denmark, Ramus & Nielsen (2005) found high consistency in both positive and negative conceptions of internet grocery shopping:

- 1) Almost everyone agreed it was convenient
- 2) Prices were generally believed to be lower on the Internet although consumers admit to missing out on in-store promotional sales.
- 3) A disadvantage was found to be the increased risk of having to accept or return items that were in a bad condition or did not meet expectations. This as a result of entrusting the selection, packaging and transportation of perishables to someone else. This is an important determinant in purchasing groceries online for inexperienced shoppers but for experienced shoppers it may have only impacted on the selection of products they were prepared to order. Providers need to set up stringent quality control measures and a replacement policy for unsatisfactory products.
- 4) There was a common belief that the fun and enjoyment associated with physical shopping was lost when purchasing online. However for some, the fun and excitement of Internet shopping countered this loss.
- 5) Supermarket shopping has a social aspect which is lacking in Internet shopping. The authors suggest that the time saved could be spent organising non-shopping related social activities.
- 6) Among non-online shoppers there was a distrust of payment security. Obviously the experienced shoppers were happy with the levels of security otherwise they would not be purchasing in this way. This is a barrier that should erode in time as payment methods become more secure and the non-adopters see more and more safe transactions being processed around them.
- 7) Experienced shoppers in both countries believed that certain boxed, organic meat and vegetables ordered online were fresher as they were supplied almost directly from the farmers and didn't lie around in the store before being purchased.

Ramus & Nielsen (2005) highlight the point that the weighting of different criteria would vary from individual to individual, for some customers bruised fruit could be an extremely negative aspect. For someone unemployed, the time saving aspect would not be as important as a busy worker and the lack of social activity might be a bigger

setback than for someone who manages to create social activities among people from the workplace. Carrying heavy parcels would not be as much of a problem for someone fit and healthy as for someone frail.

Online grocery retailing is more complex than the online retailing of most other products as a grocery basket is likely to consist of many more items than books or electronics. This complexity makes customer satisfaction more difficult to obtain since there are many more things that can go wrong, or items that could be out of stock.

Rafiq & Fulford (2005) found that for loyalty to exist, repeat purchase behaviour is typically coupled also with a positive attitude towards the business. The greater the length of time customers shopped with their online supermarket, the more positive their feelings towards that store became. This positive emotion towards the online grocer was found to be related to the proportion of loyal shoppers who recommended the site to others. Customers who expressed greater feelings towards their main online grocer were more likely to recommend it to others. Grocery customers were more likely to place more emphasis on convenience than on the range of merchandise and the price of the service. Price was also found to be less significant than web-site design and financial security.

2.10 Web site Quality

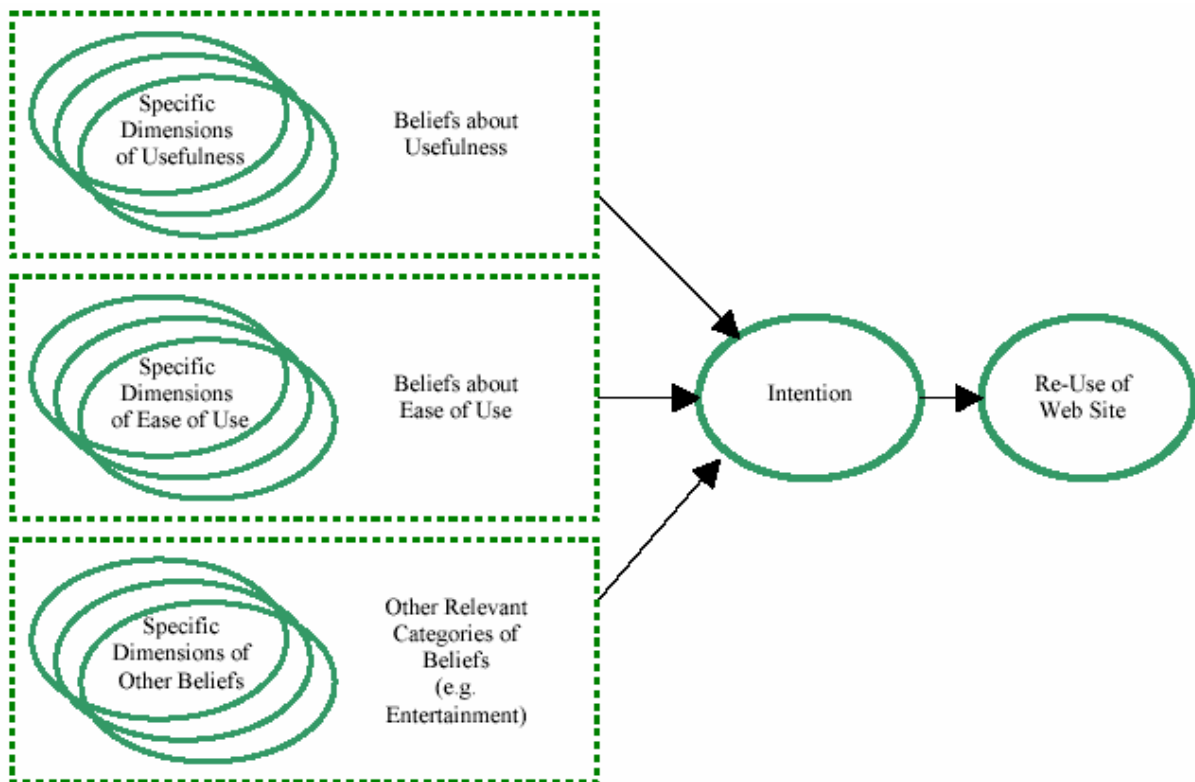
Although much of the literature reviewed earlier in this chapter pertaining to online retail service quality investigated aspects of Web design or online performance, many measurement instruments, out of necessity for conciseness, did not investigate all of the aspects of a Web site in any great detail. Since the need to measure customer satisfaction in the online browsing environment and Web site quality became evident, many groups have been trying to create a SERVQUAL type model for assessing Web sites.

Many groups and authors lay claim to a "WebQual" instrument. Loiacono, Watson and Goodhue (2002) have registered a trademark over the term WebQual, and their research is examined in more detail here.

2.10.1 WebQual

This particular body of research recognises the conceptual basis for a link between user perceptions of a Web site and the future intention to reuse that Web site. The model goes beyond the generally accepted Web assessment concepts of ease of use and usefulness and attempts to define exactly what makes a Web site easy to use or useful (Figure 2.3). This model exhibits a significant level of fit with the literature reviewed in the section on online retail service quality.

Figure 2.3: WebQual Measurement Framework



From Loiacono, Watson & Goodhue (2002)

The WebQual instrument contains thirty six questions, three in each of the twelve dimensions or areas of concern. All responses are on a seven point Likert scale, where one equates to strongly disagree and seven equates to strongly agree.

The twelve dimensions are defined in four broader categories as follows:

Usefulness

Informational fit-to-task

This area deals with the concern that the information provided on the Web site is accurate, up to date, appropriate and meets the user's needs. Organisations should conduct market research to determine what information consumers want to find on a website.

QUESTIONS:

- 1) The information on the Web site is pretty much what I need to carry out my tasks.
- 2) The Web site adequately meets my information needs.
- 3) The information on the Web site is effective.

Tailored communications

This area deals with the extent to which communications can be tailored to meet the user's requirements. Organisations should provide interactive capabilities on their Web sites.

QUESTIONS:

- 1) The Web site allows me to interact with it to receive tailored information.
- 2) The Web site has interactive features, which help me accomplish my task.
- 3) I can interact with the Web site in order to get information tailored to my specific needs.

Trust

This area is concerned with secure communications and the observance of information privacy. Organisations should adopt and promote privacy and security policies that make the customers feel secure in their dealings with the company.

QUESTIONS:

- 1) I feel safe in my transactions with the Web site.
- 2) I trust the Web site to keep my personal information safe.
- 3) I trust the Web site administrators will not misuse my personal information.

Response time

This dimension is concerned with the response times of the Web site, which is defined as the time taken to receive a response after a request or an interaction with the Web site. Organisations should ensure that they have sufficient hardware and software resources available to meet peak demands and ensure that downloaded content is not of excessive size.

QUESTIONS:

- 1) When I use the Web site there is very little waiting time between my actions and the Web site's response.
- 2) The Web site loads quickly.
- 3) The Web site takes long to load.

Ease of use

Ease of understanding

This dimension deals with how easy the Web site content is to read and understand.

QUESTIONS:

- 1) The display pages within the Web site are easy to read.
- 2) The text on the Web site is easy to read.
- 3) The Web site labels are easy to understand.

Intuitive operations

This dimension is concerned with how easy it is to operate and navigate the Web site. Organisations should develop an intuitive navigation system that is easy to master.

QUESTIONS:

- 1) Learning to operate the Web site is easy for me.
- 2) It would be easy for me to become skilful at using the Web site.
- 3) I find the Web site easy to use.

Entertainment

Visual appeal

This area pertains to the aesthetics of the Web site. Organisations should use colours, graphics and text that are pleasing to the eye and ensure that the Web pages are not cluttered.

QUESTIONS:

- 1) The Web site is visually pleasing.
- 2) The Web site displays visually pleasing design.
- 3) The Web site is visually appealing.

Innovativeness

This dimension is concerned with how creative and unique the Web site is. Organisations should attempt to be innovative and creative in their Web site design in order to differentiate their online offering.

QUESTIONS:

- 1) The Web site is innovative.
- 2) The Web site design is innovative.
- 3) The Web site is creative.

Emotional appeal

This area deals with the emotional effects of using the Web site and the intensity of user involvement. Organisations should utilise a Web site design that promotes a positive consumer experience.

QUESTIONS:

- 1) I feel happy when I use the Web site.
- 2) I feel cheerful when I use the Web site.
- 3) I feel sociable when I use the Web site.

Complimentary Relationship

Consistent image

This dimension pertains to how the Web site reflects the organisation's corporate identity and image. Organisations should ensure that their Web site design does not create dissonance for the user by portraying an image incompatible with that projected by the firm through other media.

QUESTIONS:

- 1) The Web site projects an image consistent with the company's image.
- 2) The Web site fits with my image of the company.
- 3) The Web site's image matches that of the company.

On-line completeness

This dimension deals with the capability of important business transaction processing being available on the Web site. Organisations should develop facilities that allow all or most necessary transactions to be completed online (e.g., purchasing over the Web site).

QUESTIONS:

- 1) The Web site allows transactions on-line.
- 2) All my business with the company can be completed via the Web site.
- 3) Most all business processes can be completed via the Web site.

Relative advantage

This dimension deals with whether there are advantages to dealing with the organisation through the Web site. Organisations should ensure that Web site interaction is just as easy for consumers to use as any other form of interaction with the organisation.

QUESTIONS:

- 1) It is easier to use the Web site to complete my business with the company than it is to telephone, fax, or mail a representative.
- 2) The Web site is easier to use than calling an organizational representative agent on the phone.
- 3) The Web site is an alternative to calling customer service or sales.

2.11 Branding

Branding of a Web service was seen as an important factor in this particular study as Woolworths initially chose to launch their online shopping service under a separate brand: “InTheBag” (www.inthebag.co.za).

According to Reichheld et al (2000) and Reichheld & Scheffer (2000), shoppers do not distinguish between a company’s online and offline offerings, but purchase from the business, not from the website. Confusion and disappointment can result from a web presence that is not effectively linked to an organisation’s traditional presence, leading to a negative effect on customer loyalty. This is concurrent with Gulati & Garino (2000) who find that the key to successful companies lies in integrating their traditional and e-business channels. Even if the two channels are operationally separate, rather than competing with each other, cross channel promotions and advertising can benefit both channels and boost overall business. Extending a company’s current brand to the Internet gives instant credibility to a respected and recognised brand, resulting in immediate high levels of trust. However, integrating the brand can result in a loss of flexibility and the expectation may be that exactly the same products, prices and promotions should be available across all retail channels (Gulati & Garino, 2000). Rafiq & Fulford (2005) also found support for the view that customers who support and trust a particular brand are more likely to adopt brand extensions because of name awareness, perceived quality and other brand associations with the same resultant lack of flexibility, while disassociating the online service from the physical store may serve to attract customers from competitors.

By using “InTheBag” as the online shopping outlet, Woolworths were obviously hoping to create enough tie-in with the Woolworths brand so that existing customers of Woolworths would identify with the online version while at the same time promoting a “new” shopping experience to the online community at large in the hope of attracting some non-Woolworths customers to the stable.

2.12 Summary

This chapter reviewed various journal articles pertaining to general service quality and customer satisfaction assessment, online retail service quality, online grocery retailing, web site quality and corporate branding in the online retail environment.

Based on much of the theoretical background reviewed here, the following chapter provides the detailed structure of how the research was conducted, including the development of the model and measurement instrument that was used, the population and sample and the method of data collection.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

Based on the literature reviewed in the previous chapter, this chapter defines the research methodology followed in conducting this research. The chapter begins with a statement of the problems and continues with a definition of a model to be used to resolve those problems. Following the definition of the model, the measurement instrument is explained, the population and sample population is defined and the method of distributing the measurement instrument is explained. The chapter concludes with a discussion of the limitations of the study.

3.2 Problem Statement

3.2.1 Research Problem 1

The main research problem is to establish the current customer satisfaction levels across all dimensions and across all respondents. In addition to the overall satisfaction rating specific areas for improvement may be identified.

Hypothesis 1: *Most satisfaction ratings will be significantly above 3 on a 5-point scale.*

3.2.2 Research Problem 2

To determine the perceived benefits of utilising the online shopping service that may increase the likelihood of using the service again in future.

Proposition 1: *The ratio of perceived benefits to sacrifices will be higher than 1.*

3.2.3 Research Problem 3

To determine whether the demographic variables of age, income, language or gender have an effect on the overall customer satisfaction or on any specific areas of the online shopping service.

Hypothesis 2: *There will be no significant differences between the various categories of demographic variables with respect to the overall customer satisfaction ratings, Website Quality, Service Quality or Overall Quality Dimensions.*

3.2.4 Research Problem 4

To determine whether a consumer's Internet connection speed has an influence on their satisfaction with the service.

Proposition 2: *A faster Internet connection will have a positive effect on perceived customer satisfaction, specifically in the Website Quality Dimension.*

3.2.5 Research Problem 5

To determine whether the branding of the online shopping extension of Woolworths as "InTheBag" has had an impact on company image.

Proposition 3: *The Consistent Company Image sub-dimension will be significantly below 3 on a 5-point scale.*

3.3 Development of Research Model

This research is not intended to solve the service quality versus customer satisfaction debate. The researcher believes that there is sufficient theoretical and empirical evidence of a strong relationship between the two constructs and many studies seem to use the two concepts almost interchangeably. Based on the Woolworths' brand and reputation in the traditional retail market, it could be assumed that consumers would have high expectations of service in the online environment. This research is also not intended to prove loyalty; the literature again contains sufficient theoretical and empirical evidence that in order to be loyal, customers generally need to be satisfied, even though the converse is not necessarily true.

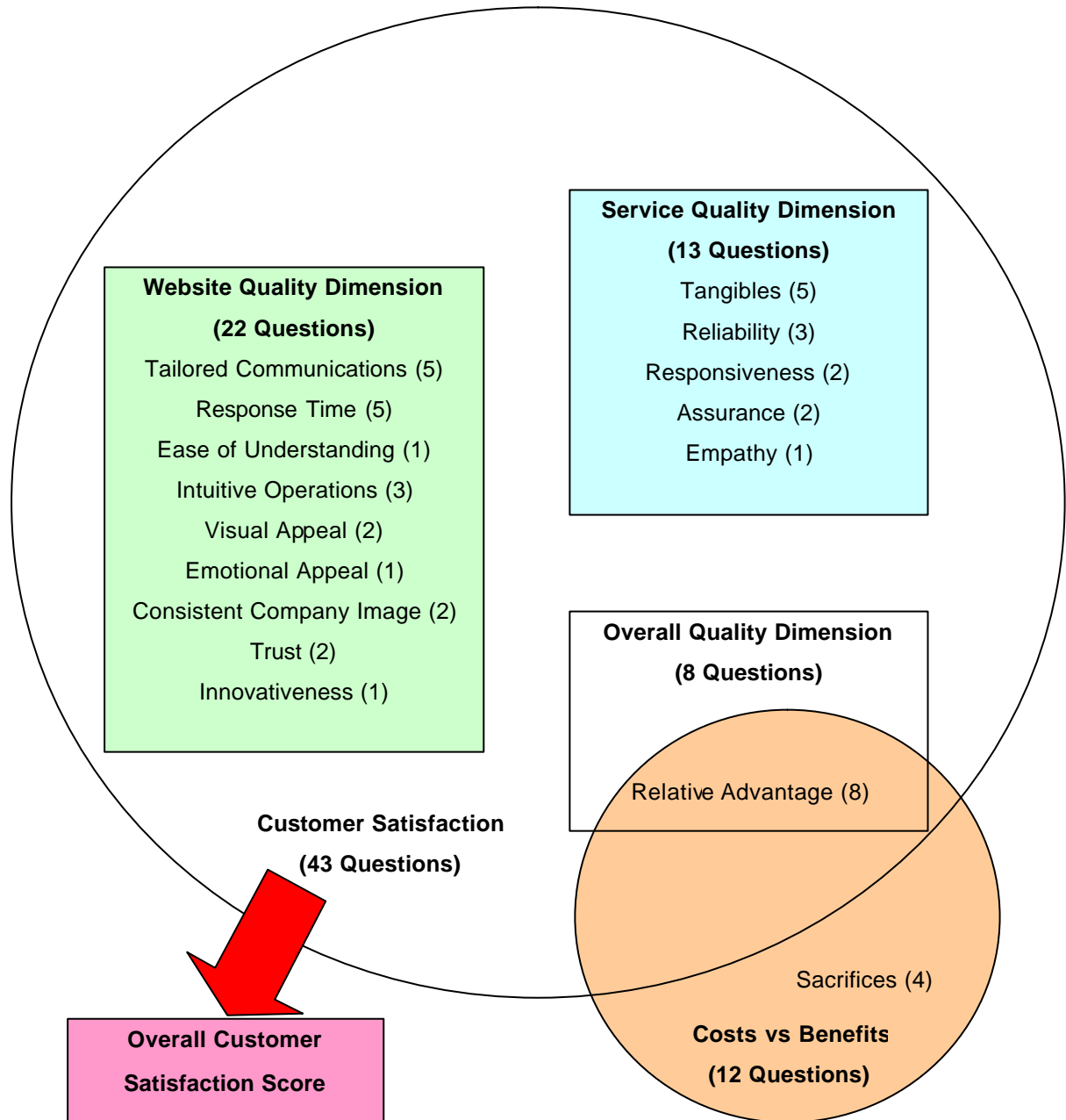
The literature demonstrates that customer satisfaction is measurable by asking consumers whether they are content with the service levels received i.e. did they receive a level of service that was up to expectation. The researcher agrees with the

work of Cronin & Taylor (1992) that in order to measure this, it is not first necessary to ascertain what the expectation of a particular service was before the service event. This also helps to simplify the measurement instrument and alleviate respondent fatigue.

The model is also not intended to be a definitive tool for measuring customer satisfaction or online service quality in any other environment; it has been designed and developed with the primary purpose of being used in the Woolworths online shopping environment.

So much of the literature pertaining to online service quality as an extension to an existing organisation with traditional retail channels revolves around the integration of the online channel into the organisational value chain. In the case of Woolworths, grocery deliveries were not offered as part of the general retail service prior to the online initiative, so there were two new aspects to be created – the online shopping interface and the order fulfilment and delivery. Based on the literature reviewed, there is no consistency in the classification of the various aspects of an online retail investigation, so the researcher opted to assess these two new departments separately, which is partly in keeping with how the consumer could perceive the online shopping model depicted in Figure 1.1 – first there is the customer interactive shopping experience, then it is up to the retailer to make sure the order arrives as expected. This separate classification has allowed for the drawing of information from the literature that pertains to each section, so the customer satisfaction model depicted in Figure 3.1 contains elements of the SERVQUAL model to assess satisfaction with the order and delivery service as well as elements of the WebQual model to assess satisfaction with the online shopping environment.

Figure 3.1: Customer Satisfaction Model



The model consists of five important components:

3.3.1 Website Quality Dimension

This component of the model is designed to assess customer satisfaction with the online component of the Woolworths online shopping offering in nine sub-dimensions adapted from the WebQual model discussed in Chapter 2:

- Tailored Communications
- Response Time
- Ease of Understanding

- Intuitive Operations
- Visual Appeal
- Emotional Appeal
- Consistent Company Image
- Trust
- Innovativeness

This component derives information relevant to Research Problem 1 and the Consistent Company Image category provides insight into Research Problem 5.

3.3.2 Service Quality Dimension

This component of the model is designed to determine customer satisfaction with the order and delivery performance aspect of the Woolworths online shopping service in five sub-dimensions which are derived from SERVQUAL and SERVPERF:

- Tangibles
- Reliability
- Responsiveness
- Assurance
- Empathy

This component also provides insight into Research Problem 1.

3.3.3 Overall Quality Dimension

This part of the model assesses the relative advantage experienced by customers of the Woolworths online shopping service and provides further information for Research Problem 1.

3.3.4 Overall Customer Satisfaction Score

This is an overall measure across all dimensions of customer satisfaction with the Woolworths online shopping experience, and is derived from the three preceding Quality dimensions. This overall measure establishes a result for Hypothesis 1.

3.3.5 Costs versus Benefits

This component rates the benefits received from shopping online against the sacrifices made by not visiting the physical store and corresponds to Research Problem 2 and Proposition 1.

In addition to these constructs, certain demographic information is required which provides the data necessary to resolve Research Problem 3. This information includes a connection type which is necessary for the resolution of Research Problem 4.

3.4 Measurement Instrument

The measurement instrument used can be divided into sections that largely correspond with those in the model. The full measurement instrument as used is in Appendix 1. The measurement instrument contains only a perception section, not an expectation section following the research by Cronin & Taylor (1992), Boulding et al (1993) and Cronin & Taylor (1994) disproving the requirement of an Expectations section in a SERVQUAL investigation.

Apart from the demographic information and the last three general Yes/No questions, all questions in the measurement instrument utilise a five point Likert scale with the following rating:

- 1- Strongly disagree
- 2- Disagree
- 3- Neither agree nor disagree
- 4- Agree
- 5- Strongly agree

3.4.1 Biographic Information

This section of the measurement instrument has no corresponding component in the model, and the data collected is used in the resolution of Hypothesis 2, by determining the effects of gender, age, income, language and Internet connection on customer satisfaction. The Internet connection question is also used to validate Proposition 3.

3.4.2 Service Quality Dimension

The measurement instrument utilises the dimensions of the SERVQUAL model to categorise questions pertaining to Service Quality. The sub-dimensions examined in this section are:

- **Tangibles** (5 questions): The physical facilities such as the products, packaging, personnel and vehicles.
- **Reliability** (3 questions): The ability to provide what was promised, dependably and accurately.
- **Responsiveness** (2 questions): The willingness to help customers and provide prompt service.
- **Assurance** (2 questions): The ability of the company to convey trust and confidence.
- **Empathy** (1 question): The degree of caring and individual attention provided to customers.

3.4.3 Website Quality Dimension

The measurement instrument comprises elements derived from the WEBQUAL model pertaining to the quality of the Web site. The sub-dimensions included in this section are:

- **Tailored Communications** (5 questions): The information and functionality available on the Web site.
- **Response Time** (5 questions): Availability of Web site and services, including response times.
- **Ease of Understanding** (1 question): The Web content is easy to read and understand.
- **Intuitive Operations** (3 questions): The Web site is easy to navigate and operate.
- **Visual Appeal** (2 questions): The aesthetics of the Web site.
- **Emotional Appeal** (1 question): The emotional effect of using the online shopping site.
- **Consistent Company Image** (2 questions): The projected image of the online shopping Web site is compatible with the company's image.

- **Trust** (2 questions): Secure communication and observance of information privacy.
- **Innovativeness** (1 question): The creativity and uniqueness of the Web site.

Since the WebQual dimension of On-line completeness discusses the ability to conduct business through the Web site in question and since the primary purpose of the Woolworths online shopping Web site is to conduct business, the measurement instrument does not include questions relating to this dimension.

The WebQual dimension of Response Time addresses the availability of a Web site in terms of the time taken to respond to actions and load pages, but does not address the possibility that a Web site may be down altogether or that certain functions may not be available at certain times. For the purposes of this research, the Response Time dimension has been expanded to contain questions relating to these aspects.

The Customer Service dimension is typically excluded from the WebQual model as it is usually dependent on multiple visits. Since not all respondents may have availed themselves of customer support, it is feared that an attempt to assess this dimension as part of the overall customer satisfaction assessment may yield a skewed result as those customers that can respond to questions in this dimension have already experienced a problem, and it is the resolution of this problem that is to be assessed. It is recommended that an assessment of customer problem solving be conducted as a separate study.

3.4.4 Overall Quality Dimension

The WebQual model contains the dimension of Relative Advantage which compares online communication to traditional forms of communication. For the purposes of this study the Relative Advantage sub-dimension investigates some of the advantages of shopping online over shopping in a traditional Woolworths store. The relative advantage therefore asks the respondent to make a judgement about the overall experience, so this category has been separated from the Web site quality dimension to form a new dimension together with sacrifices.

- **Relative Advantage** (8 questions): Comparison with traditional methods of shopping.
- **Sacrifices** (4 questions): Compromises that are made when shopping online.

3.4.5 General

The measurement instrument ends with three questions about general purchasing habits of respondents, to determine whether they use more than one online store, whether they use a combination of online and traditional shopping and whether they use the Internet to gather information before making purchases through other channels.

3.4.6 Validity and Reliability

Content validity – the researcher believes that the instrument adequately covers the relevant dimensions that have been designed, and the instrument has been reviewed by a panel of three professionals and amended according to their recommendations. These are deemed sufficient to establish good content validity.

There is ample evidence in the literature that the dimensions contained in the measurement instrument have significant impact on customer satisfaction and perceived service quality. The measurement instrument does not contain additional questions requiring the respondent to gauge their overall perception or satisfaction to be used to further validate the instrument.

Reliability of the instrument was proved using the test-retest method, the results of which are included in Appendix 2. Of the first fifty respondents to the original questionnaire, sixteen agreed to be retested. Two weeks after the original questionnaire was completed, these volunteers were requested to again complete the questionnaire, and ten responses were received.

One positive aspect of the convenience sample is that people with whom one has a close association are more willing to discuss the measurement instrument. After a formal panel of three associates reviewed the instrument and revisions were made based on their suggestions, there was no additional feedback from anyone in the

convenience sample that required any further adjustments to the content of the measurement instrument.

3.5 Population and Sample

The population for the research consists of all customers that have registered for Woolworths' online shopping service.

Although a census of this population would have been feasible, it was not necessary and for purposes of expediency a probability sample of 400 Woolworths online shoppers was recommended.

Unfortunately, Woolworths chose not to participate in this customer satisfaction survey and was unwilling to distribute the questionnaire to their customers, claiming that this particular study did not fit their own strategic plans for service quality assessment and that online questionnaires are over-utilised as a survey tool.

The researcher resorted to a convenience sample of family, friends, colleagues and fellow students who use the service and accepted the first 50 responses.

3.6 Distribution Method

The Woolworths online shopping departmental manager was approached to enlist their support in distributing the measurement instrument to a convenience sample of their customers. It was intended that the questionnaire would either be emailed to the sample population or that links to the Web based questionnaire would be sent, with reminders being displayed on the Woolworths shopping Web site. For the sake of privacy it was proposed that the distribution of the questionnaires and the collection of the results be handled by Woolworths themselves. In order to promote responses, it was suggested that a small discount be offered to respondents on their next delivery charges.

However, with Woolworths opting not to participate, the researcher loaded the measurement instrument on to a Web site and emailed the convenience sample a link to the instrument. The request via the email was that each member of the

convenience sample forward the link to everyone they knew that might use the service.

The online version of the measurement instrument validated user input to ensure all questions were completed. An option was included for a respondent to enter their email address if they were willing to participate in the retest. As the completed questionnaires were submitted online, an email of the responses was sent to the researcher.

3.7 Limitations

This study is limited to a convenience sample of Woolworths online shoppers, and as such is not representative of online grocery shopping in South Africa.

The decision to focus on Woolworths was due to time constraints and followed an initial positive response from Woolworths that this study would be of interest to the organisation.

The researcher was concerned that the convenience sample may not be representative of Woolworths' online customer base, in terms of demographic data. However, the demographic data indicates that the sample obtained is in line with expectations as discussed in the following chapters.

The study is limited to an assessment of customer satisfaction with the shopping process in its entirety, therefore, information searchers were omitted from the study.

In the demographic details, the specific household composition should have been queried. A correct analysis of the Income variable requires the detail as to whether it is a single income or a dual income that is being selected. Another use of the household structure information would be to determine whether there is a relationship between the number of children in a household and any of the Quality Dimensions in the model.

3.8 Summary

This chapter provided the detailed structure of how the research was conducted, beginning with the problems that were investigated together with the development of a model and measurement instrument to resolve those problems, the target population for the instrument and the method of distribution. Limitations of the study have also been highlighted.

The next chapter contains the survey results. The number of received responses is discussed and the research results are displayed in graphical and tabular form accompanied by a narrative which relates the results back to the problems that were investigated.

CHAPTER 4: RESEARCH RESULTS

4.1 Introduction

The previous chapter contained the specific details of how the research was conducted, from the problem statement to the collection of data and the methodologies applied at all stages in between.

This chapter covers the results from the actual responses obtained from the study, beginning with the demographic data, followed by the results of each dimension. The detailed survey results are in Appendix 3, while Appendix 4 contains the frequencies for all variables.

The measurement instrument was distributed to a convenience sample and the first 50 responses received have been used in this study.

4.2 Reliability Test Results

Ten respondents completed the fifty question retest, resulting in two sets of 500 responses to be compared (Appendix 2). Of these, 140 answers differed between the test and the retest, indicating a reliability score of only 72%. However this is to be expected when using a Likert scale where the intervals express a degree of qualitative assessment. A respondent's state of mind and emotional feeling toward the subject matter may change so that a response of "Strongly agree" on one occasion may well be a response of "Agree" on another occasion. Responses that move in either direction between a 4 and 5 still indicate agreement; it is the degree of agreement that is in question. Similarly, a response that moves in either direction between 1 and 2 still indicates disagreement. Of more concern are those questions that skip an interval or move from agreement to disagreement, this would seem to indicate a new experience between the test and retest that had significant influence on the respondent's opinion.

Of the responses in the test-retest scenario, only four exhibited a move of more than one interval. These are shown along with any pertinent remarks in Table 4.1.

Table 4.1: Measurement Instrument Reliability Issues

Respondent	Question	R1	R2	Notes
Shopper 3	25	2	4	Question 25 considers the ease of operation of the Web site. Interestingly, Shopper 3 upgraded her Internet connection from a modem to ADSL during the period between the test and retest, perhaps the faster connection speed led to an impression of easier operability.
Shopper 6	10	5	3	Question 10 relates to the method of collecting and replacing goods. The fact that the response moves from 5 to 3 indicates that this respondent may have had no need to return goods, and made an error in the original test.
Shopper 6	19	5	3	Question 19 relates to the response time of the Web site. A bad connection between the test and retest could lead to this large change in opinion.
Shopper 7	47	2	4	Question 47 relates to the inconvenience of the consumer not being able to use cash when shopping online. This respondent didn't think it was inconvenient in the original test, but believed it to be inconvenient in the retest.

The researcher concludes that the test-retest method has indicated that the measurement instrument exhibits an acceptable level of reliability.

4.3 Demographic Information

Demographic information was gathered and the demographic spread of each variable is illustrated graphically. The impact of each demographic variable on the various dimensions of the study is discussed here, while the complete analysis of variation (ANOVA) to identify significant differences between the demographic levels is contained in Appendix 5. The information from this section will contribute to the resolution of Hypothesis 2.

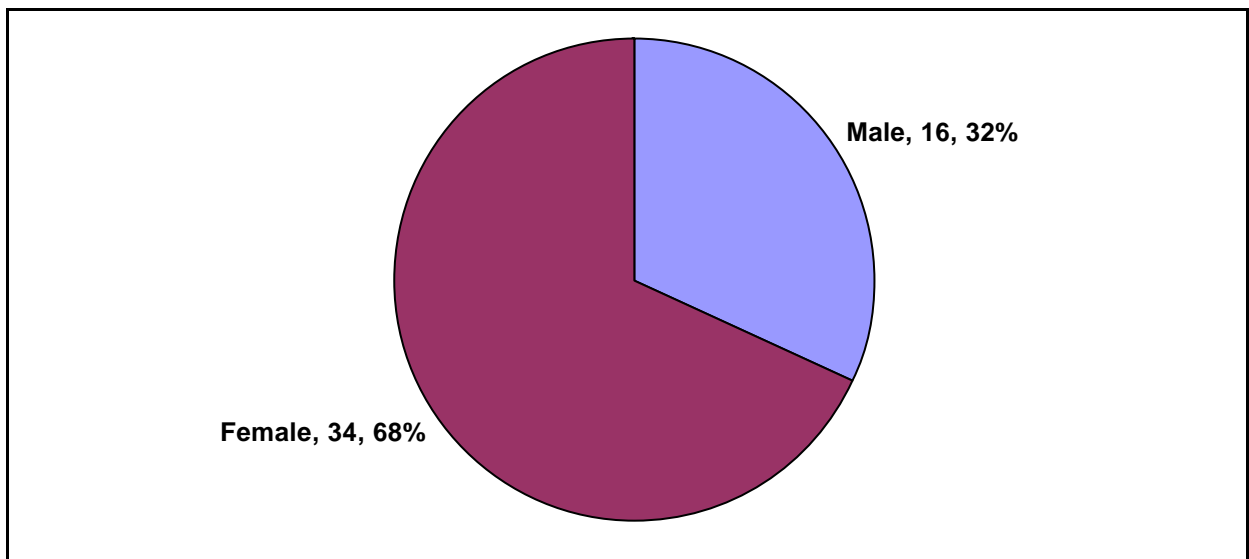
A one-way ANOVA (Appendix 5) is used to formally test whether subgroups differ significantly with respect to the dimensions and demographic levels. The Scheffe's

procedure for pair-wise comparison with a significance level of 5% is used to identify the source of significant differences and the chosen confidence level is 95%.

4.3.1 Gender

The results of the gender analysis were not unexpected as women are still the primary food shoppers in South Africa.

Figure 4.1: Gender in Sample (n=50)

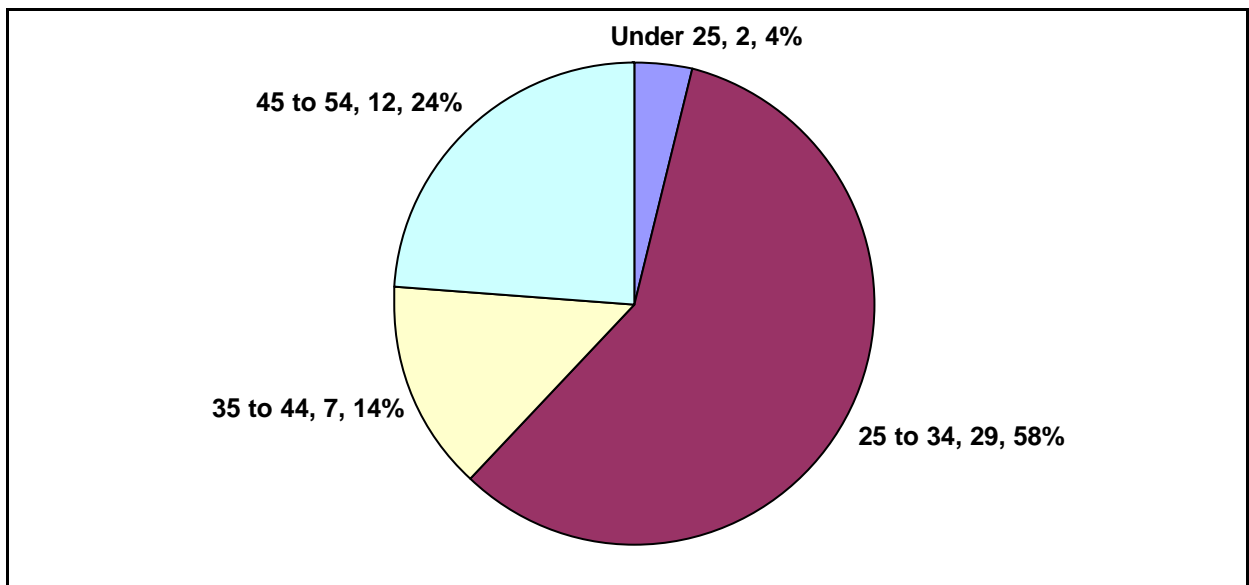


According to the ANOVA, there are no significant differences between males and females regarding their perceptions of Service Quality, Website Quality, the Customer Satisfaction Assessment or the Overall Quality, indicating that gender does not have a significant effect on any of the constructs defined in the model.

4.3.2 Age

The demographic distribution in the Age category also showed the expected result. Even though the “Under 25” age group may be more ready to adopt technology, the fact that many South Africans in this age group still live at home and hence do not purchase their own groceries, as well as the upmarket reputation of the Woolworths putting it out of the realm of most students and younger workers, could explain the low frequency in this category.

Figure 4.2: Age in Sample (n=50)



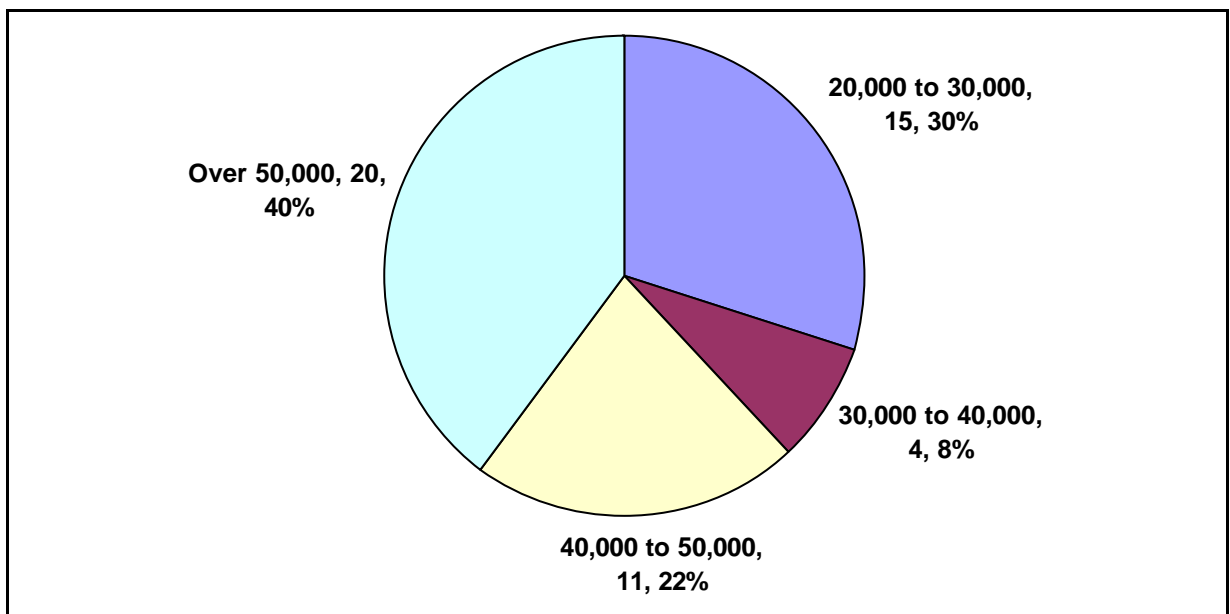
According to the ANOVA, there are no significant differences between age groups with respect to Service Quality, Website Quality, the Customer Satisfaction Assessment or the Overall Quality Dimension, indicating that age does not have a significant effect on any of the constructs defined in the model.

4.3.3 Income

The results of the income category were also predictable. At first glance it would appear that the scale should be linear and that the “R30,000 to R40,000” level has a suspiciously low result, yet the question asks for the household income. The researcher is aware that the respondents in the “R20,000 to R30,000” are mostly single income households. “R30,000 to R40,000” would be a high income for a single person and for a dual income household it again puts the individuals in the “R10,000 to R20,000” tier, which is an income group that was not returned in the study. Therefore, the researcher proposes that the “R30,000 to R40,000” income level is unusual for single income households in that as people reach that level of income they are settling down into a dual income environment, and that dual income households in this category generally consider Woolworths to be too expensive.

In addition to the Woolworths upmarket reputation, private Internet access is still not cheap in South Africa and this may also account for the lack of respondents in the lower than R20,000 per month categories.

Figure 4.3: Monthly Household Income in Sample (n=50)



According to the ANOVA, there are significant differences when contrasting the income group of “R40,000 to R50,000” with all other income groups (“R20,000 to R30,000”, “R30,000 to R40,000”, “over R50,000”) for the Service Quality Dimension, the Website Quality Dimension and Customer Satisfaction. There are also significant

differences when contrasting the “R40,000 to R50,000” income group with the “R20,000 to R30,000” and “over R50,000” income groups in the Overall Quality Dimension.

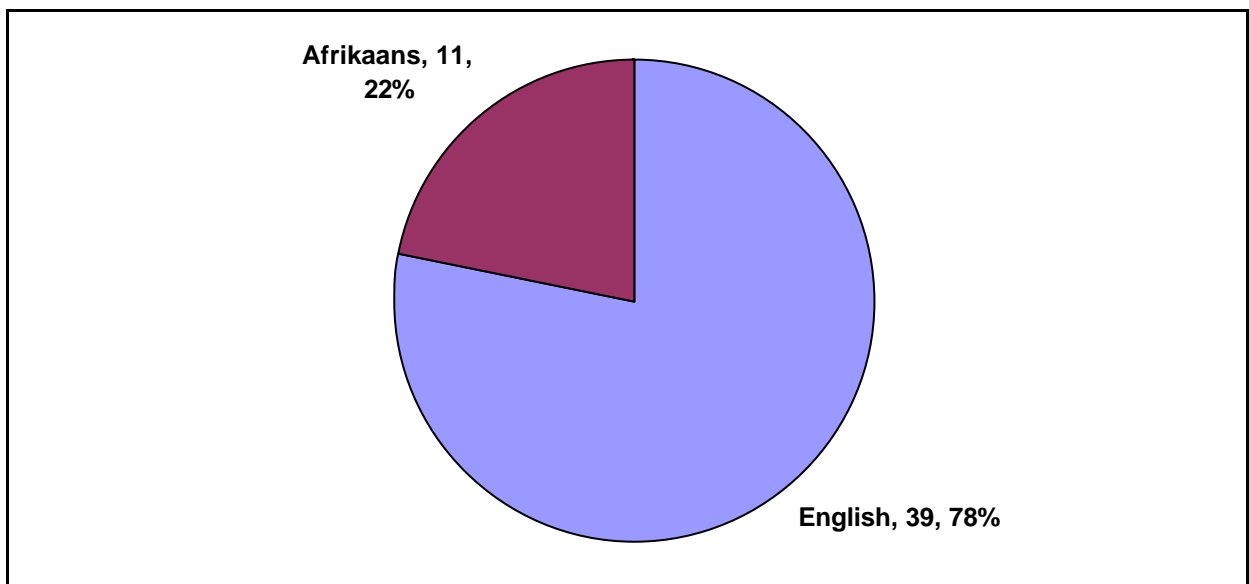
The mean values for the “R40,000 to R50,000” income group were significantly higher across the board than for all other income categories, giving the impression that income has an impact on customer satisfaction. However, no linear relationship between income and customer satisfaction can be found in any of the dimensions, although this could partly be due to the low response rate of the “R30,000 to R40,000” income group.

4.3.4 Language

The ratio of English to Afrikaans speakers making use of Woolworths' online shopping was not considered prior to the results. However, the convenience sample consisted mainly of English and Afrikaans speakers which could partly account for responses being only in these two language groups.

A more important factor would be to determine the level of adoption of the Woolworths brand and Internet usage by other cultural groups, even those that are members of the new, emerging middle and upper class of South Africans.

Figure 4.4: Language in Sample (n=50)



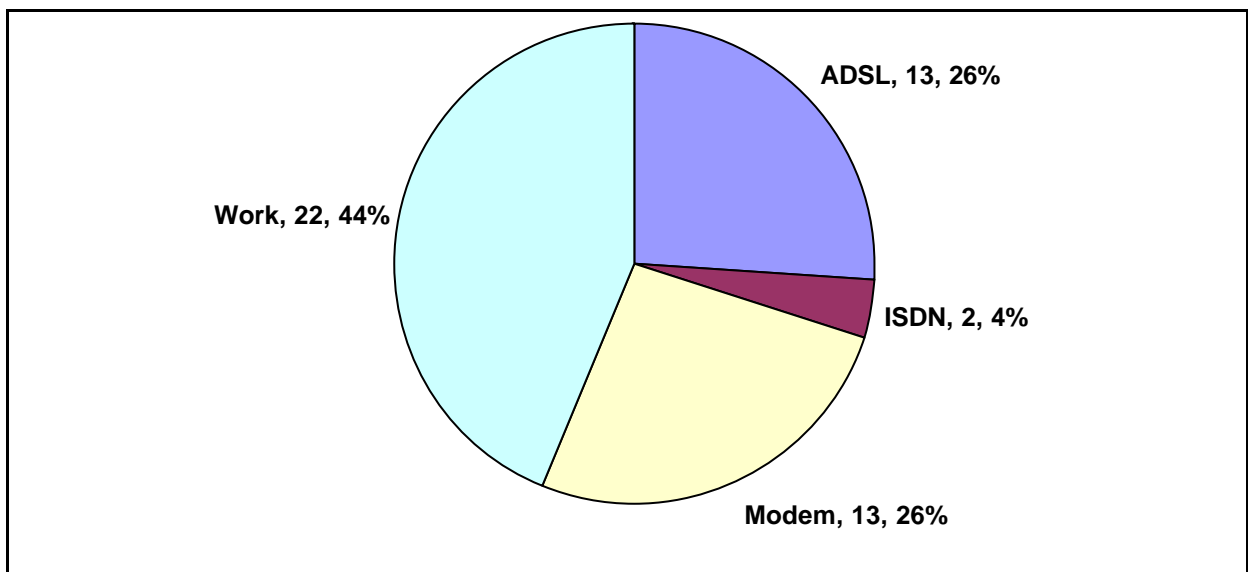
According to the ANOVA, there are no significant differences between Afrikaans and English speaking respondents regarding their perceptions of Service Quality, Website Quality, the Customer Satisfaction Assessment or the Overall Quality, indicating that language does not have a significant impact on any of the constructs defined in the model.

4.3.5 Connection Type

Again, the results of the connection type study were not surprising. Even though broadband connectivity is still extremely expensive in South Africa, the sample contained an equal number of modem users and ADSL users.

The high number of respondents that shop from their work environment was also expected since one of the prime reasons for shopping online is convenience and that people that have little time outside of work for physical shopping. Either they spend most of their time working and can only shop online from there, or they consider that since they cannot leave work to go shopping, they can justify using work time and resources to shop online.

Figure 4.5: Connection Type in Sample (n=50)



According to the ANOVA, there are significant differences between connection type values on the Service Quality Dimension.

There are significant differences when comparing a modem connection with an ADSL connection and when comparing a modem connection with a work connection in the Website Quality Dimension and in the Customer Satisfaction Assessment. This indicates that respondents using faster ADSL or work (typically Diginet) connections are significantly more satisfied than respondents using a modem connection. Since these faster connection speeds should improve Internet performance, this finding is

in keeping with the literature where Web site performance has a significant impact on customer satisfaction and perceived service quality.

Significant differences are also observed when comparing a work connection with an ADSL connection, as well as when a work connection is compared with a modem connection in the Overall Quality Dimension. The Overall Quality Dimension is a measure of Benefits less Sacrifices and this finding indicates that respondents with a work connection perceive significantly more value in online shopping than respondents with ADSL or modem connections. At first, this does not make any sense; a connection type should not have any bearing on perceived benefits. However, this accidental by-product of determining the connection type gives more insight into where the respondent is shopping from. When the shopping is typically done using a work connection (i.e. the respondent is at work), the perceived benefit is greater. This is in keeping with the literature that respondents with busy work schedules are more likely to recognise the convenience benefit of shopping online.

The impact of the connection type on satisfaction therefore supports Proposition 2.

4.3.6 Last Utilisation of Woolworths' Online Shopping

The researcher had no expectations of the distribution of time lapse since the last time that the respondent utilised Woolworths' online shopping service. The high number of respondents that have not purchased within the last two years seems to indicate that there is a negative influence on purchase intentions for those respondents.

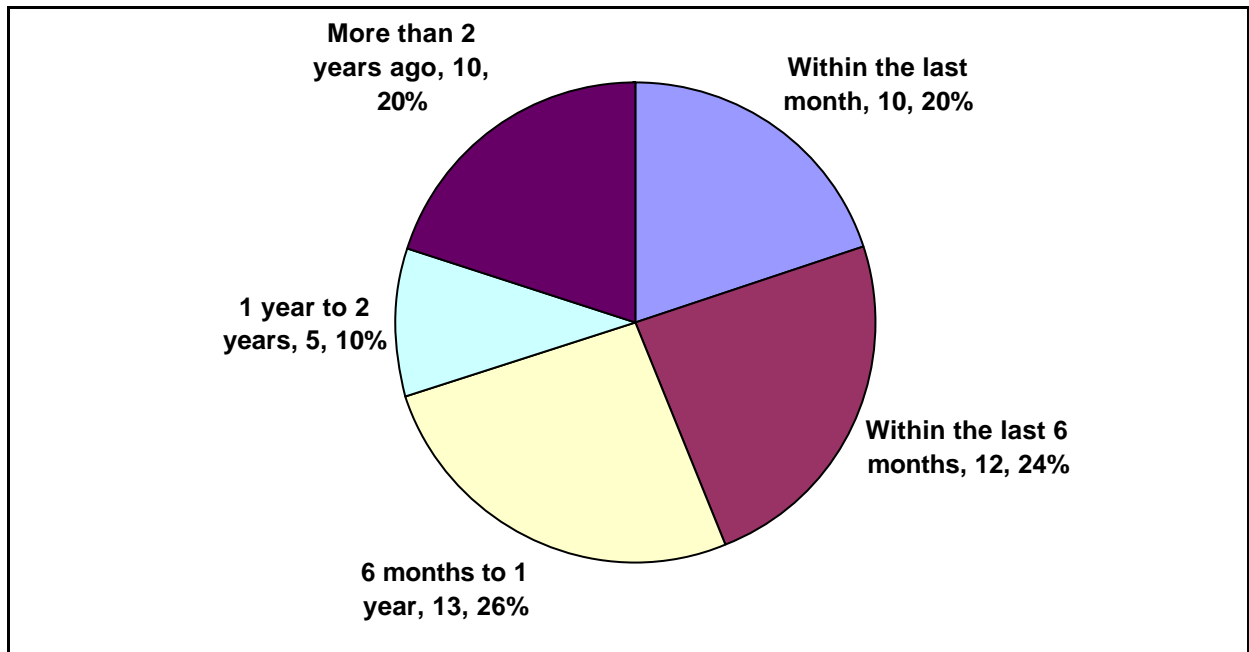
A closer investigation revealed that three of the ten respondents that have not used the service in the last two years users recorded a score in the Cost versus Benefits Analysis of less than 1. This indicates that their perception is that the Sacrifices outweigh the Relative Advantages which could have caused their reluctance to purchase again.

Of the remaining seven respondents, four agreed with the statement about missing the ability to physically assess and compare products for themselves. From the literature review, this is seen as one of the major factors influencing purchase intentions, so it is entirely possible that this factor is what has caused these respondents to effectively stop utilising the service.

Of the remaining three respondents, one strongly disagreed with the statements that Woolworths' groceries are fresh and well within their sell-by-date and that Woolworths has an efficient, caring call centre. Since the respondent was positive in most other areas, it is possible that a single purchase of poor quality items was not responded to in an efficient and caring manner causing the respondent to stop shopping with Woolworths online.

The remaining two respondents both scored item 8 as a 1, which indicates they have had experiences where either the incorrect items have been delivered or the orders have been mixed up with other customers. As discussed in the literature review, order and delivery fulfilment are essential to customer satisfaction, it is highly likely that, since all other responses from these two respondents appeared to be somewhat better than average, that this single factor has been enough to lose their online patronage.

Figure 4.6: Last Used Woolworths Online Shopping in Sample (n=50)



According to the ANOVA, there are no significant differences between Last Used groups on the Service Quality Dimension. There are significant differences when comparing the “this month” value to the “last 6 months” value and to the “6 months – 1 year” value in the Website Quality Dimension and the Customer Satisfaction Assessment. There are significant differences when comparing the “this month” value to the “last 6 months” value in the Overall Quality Dimension.

Checking the mean scores for these values reveals that the value “last 6 months” and “6 months – 1 year” have significantly higher mean scores in the Website Quality Dimension and Customer Satisfaction Assessment than the value “this month” and that the value “last 6 months” has a significantly higher mean score than the value “last month” in the Overall Quality Dimension. Attempting to establish a relationship between these when the service was last used and customer satisfaction can only lead to one horrifying conclusion: the level of satisfaction is declining at the present moment.

4.4 Customer Satisfaction Dimensions

The response results used in the application of the model are presented in their various dimensions and sub-dimensions in this section. Since the five point Likert scale was utilised in the collection of data, the mid-point is the value 3, which corresponds to the attitude “neither agree nor disagree”. This study therefore considers the value 3 to be the neutral point or average. Scores above 3 would indicate increasing levels of satisfaction while scores below 3 would indicate increasing levels of dissatisfaction.

Research Problem 1 is investigated in this section; the Overall Customer Satisfaction section reveals an overall Customer Satisfaction Score that assesses at a glance the level of satisfaction with Woolworths’ online shopping service. The results of each dimension and sub-dimension are also displayed graphically allowing for a more detailed assessment of Research Problem 1 .

Sub-section 4.4.5, Costs versus Benefits, addresses Research Problem 5 with a graphical representation of the balance between Advantages and Sacrifices.

4.4.1 Overall Customer Satisfaction

Overall Customer Satisfaction is defined as the mean score for all respondents for the first 43 questions, expressed as a percentage.

Figure 4.7: Overall Customer Satisfaction Results

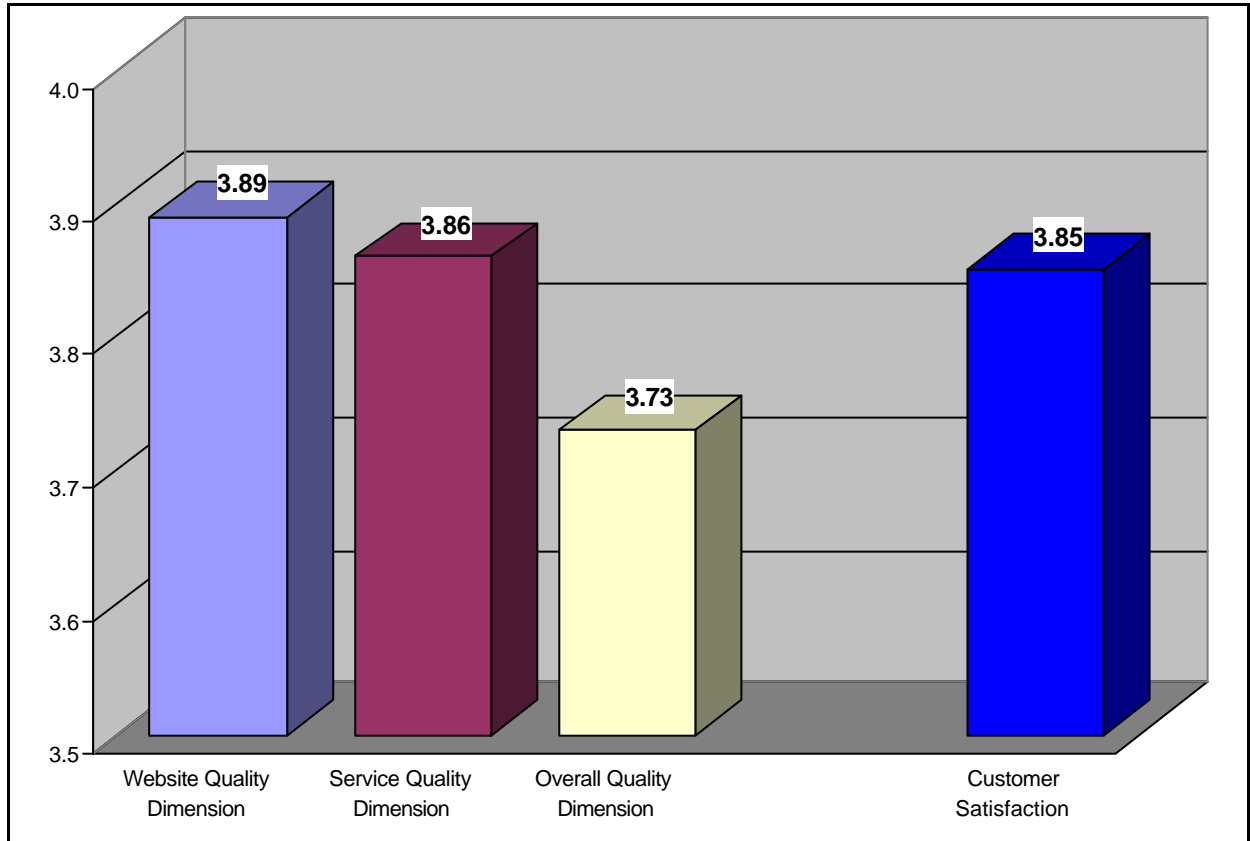


Table 4.2: Mean Scores on Customer Satisfaction Dimension (n=50)

<u>Dimension</u>	<u>Mean Score (%)</u>	<u>Mean</u>	<u>Standard Deviation</u>
Customer Satisfaction	71.25%	3.85	0.38
Website Quality	72.25%	3.89	0.44
Service Quality	71.50%	3.86	0.36
Overall Quality	68.25%	3.73	0.44

The mean across all respondents from questions 1 to 43 is 3.85 where the maximum score achievable was 5 and the minimum score 1. If one considers the minimum, 1, to equate to 0% and the maximum, 5 to 100%, then a score of 3 would indicate 50%, and this is the level which is considered average for this research – the customer is neither particularly satisfied with the service, nor particularly dissatisfied with it.

In order to express the value 3.85 as a percentage, we first subtract the lowest score (1) from it, and divide by the number of intervals from 0% to 100% ($5 - 1 = 4$) and multiply by 100.

When expressed as a percentage, the overall Customer Satisfaction Score is calculated to be 71.25%.

In order to validate Hypothesis 1, a simple t-test was used:

Null Hypothesis:	Hypothesis 1 ₀ : Customer Satisfaction Score = 3.
	Hypothesis 1 _A : Customer Satisfaction Score > 3.
Significance Level:	$\alpha = 0.05$ with $n = 50$, d.f. = 49
Sample Deviation:	0.38
Critical Value:	1.68
Calculated Value:	$t = 17$

The calculated value exceeds the critical value, so the null hypothesis is rejected and we conclude that the average Customer Satisfaction Score is greater than 3, which validates Hypothesis 1.

As a confirmation that the weighting of the questions in the different sub-dimensions has little effect on the overall satisfaction score, the mean across all respondents for all of the sub-dimensions in the Service Quality Dimension, the Website Quality Dimension and the Overall Quality Dimension is 3.88 (72%). The mean across all respondents across the Service Quality Dimension, the Website Dimension and the Overall Quality Dimension is 3.83 (70.75%).

4.4.2 Website Quality Dimension

The Website Quality Dimension comprises a total of 22 questions (Question 14 to Question 35), split across 9 sub-dimensions. In assessing overall satisfaction with the Website Quality Dimension, the mean score for all 22 questions is considered, not the mean scores for each of the individual sub-dimensions.

The overall mean score for the **Website Quality Dimension** is **3.89**.

Figure 4.8: Website Quality Dimension Results

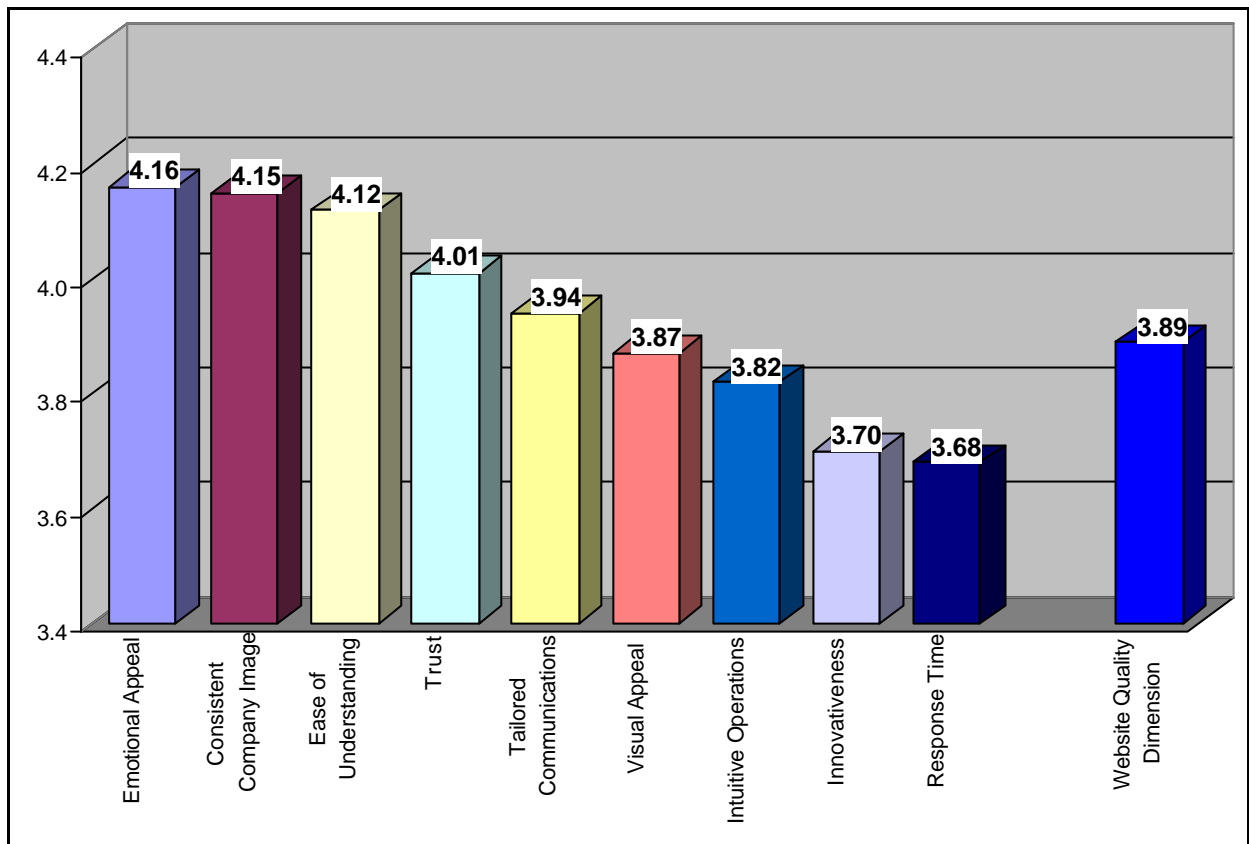


Table 4.3: Mean Scores on Website Quality Dimension (n=50)

<u>Dimension</u>	<u>Mean Score (%)</u>	<u>Mean</u>	<u>Standard Deviation</u>
Website Quality Dimension	72.25%	3.89	0.38
Emotional Appeal	79.00%	4.16	0.62
Consistent Company Image	78.75%	4.15	0.54
Ease of Understanding	78.00%	4.12	0.59
Trust	75.25%	4.01	0.71
Tailored Communications	73.50%	3.94	0.62
Visual Appeal	71.75%	3.87	0.71
Intuitive Operations	70.50%	3.82	0.62
Innovativeness	67.50%	3.70	0.81
Response Time	67.00%	3.68	0.55

The results indicate above average levels of satisfaction in the Website Quality Dimension and all of its sub-dimensions. The sub-dimension Response Time had the lowest mean, while the Emotional Appeal sub-dimension had the highest.

Emotional Appeal

The Emotional Appeal sub-dimension consists of a single question which reflects an above-average level of satisfaction:

Question 30: Shopping on the Woolworths website is a pleasant experience.

Mean: 4.16

Standard Deviation: 0.62

Ease of Understanding

The Ease of Understanding sub-dimension consists of a single question which reflects an above-average level of satisfaction:

Question 24: Text information and labels on Woolworths' web pages are easy to read and understand.

Mean: 4.12

Standard Deviation: 0.59

Innovativeness

The Innovativeness sub-dimension consists of a single question which reflects an above-average level of satisfaction:

Question 35: The Woolworths website presents online shopping in an innovative and creative manner.

Mean: 3.70

Standard Deviation: 0.81

Consistent Company Image

Figure 4.9: Consistent Company Image Results

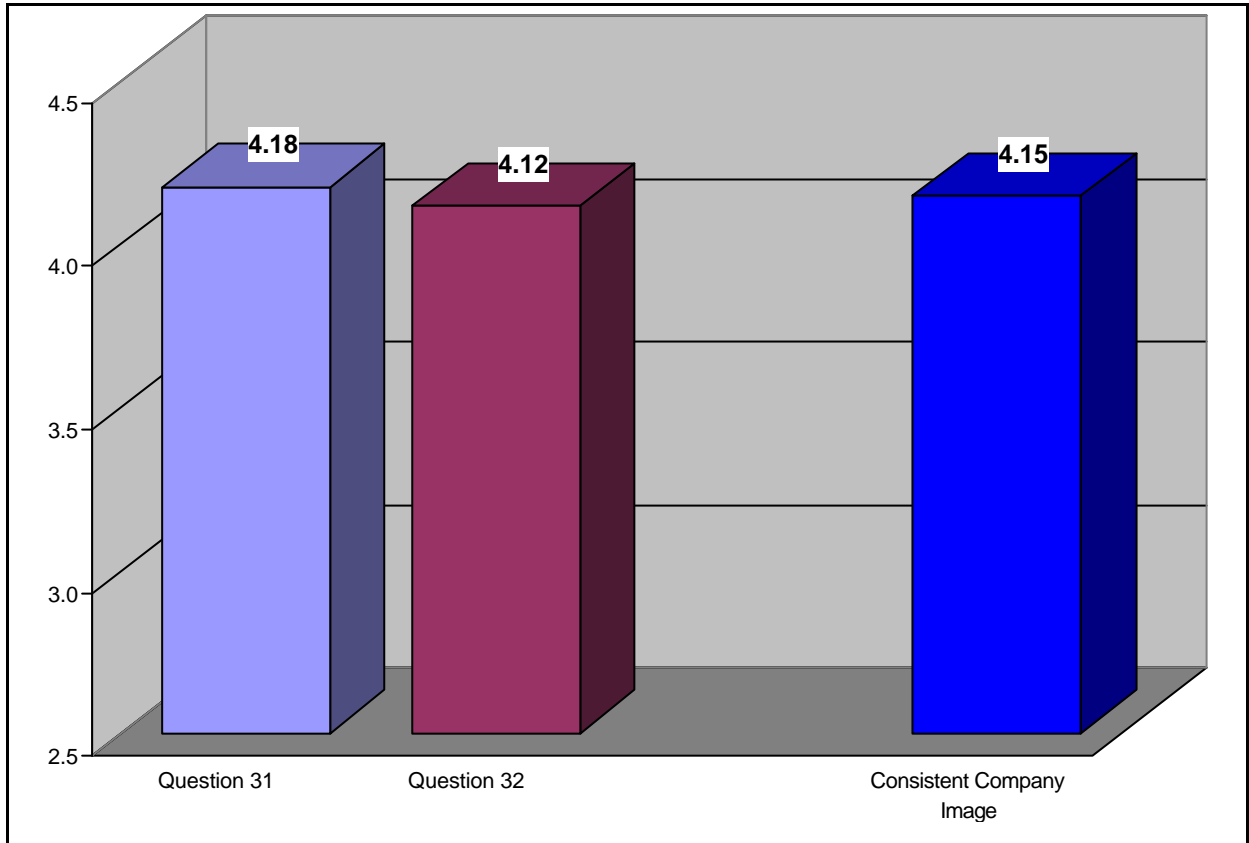


Table 4.4: Mean Scores on Consistent Company Image Sub-dimension (n=50)

Description	Mean	Standard Deviation
Consistent Company Image	4.15	0.54
Question 31: The Woolworths website fits with my image of the Woolworths company.	4.18	0.52
Question 32: Woolworths' email communications fit with my image of the Woolworths company	4.12	0.59

The results indicate above average levels of satisfaction in all questions in the Consistent Company Image sub-dimension. This refutes Proposition 3 in Chapter 3.

Trust

Figure 4.10: Trust Results

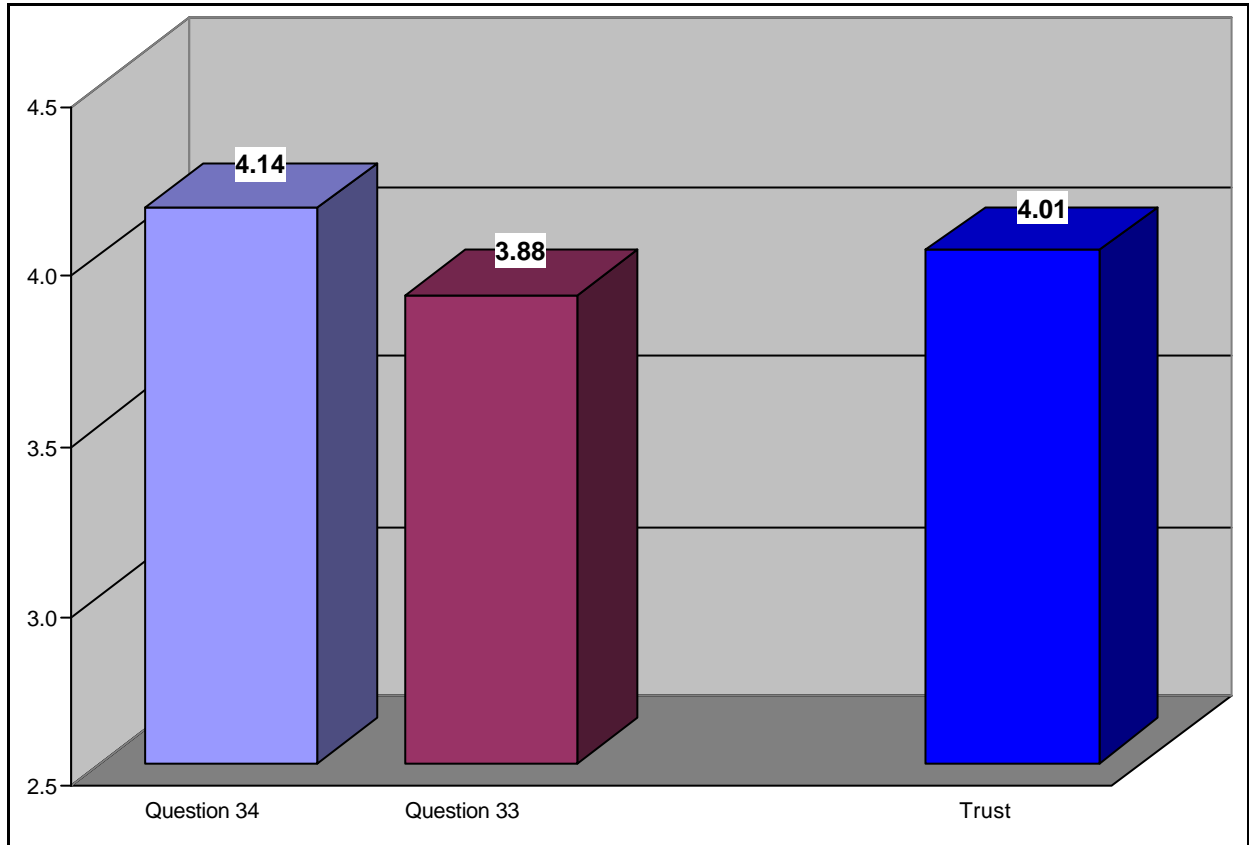


Table 4.5: Mean Scores on Trust Sub-dimension (n=50)

<u>Question</u>	<u>Mean</u>	<u>Standard Deviation</u>
Trust	4.01	0.71
Question 34: I am confident that my payment details are secure when transacting online with Woolworths.	4.14	0.70
Question 33: I am confident that Woolworths respects my privacy and that details supplied online remain private.	3.88	0.94

The results indicate above average levels of satisfaction for all questions in the Trust sub-dimension.

Tailored Communications

Figure 4.11: Tailored Communications Results

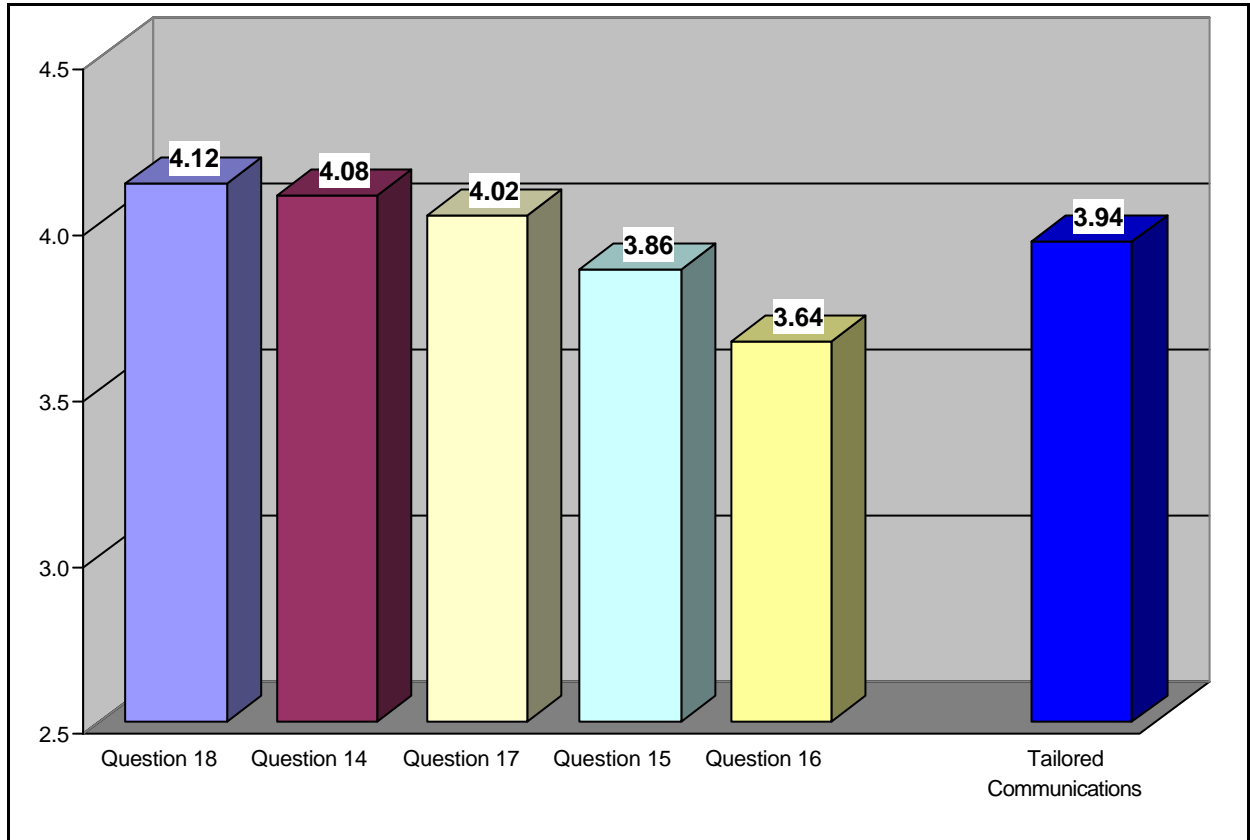


Table 4.6: Mean Scores on Tailored Communications Sub-dimension (n=50)

<u>Question</u>	<u>Mean</u>	<u>Standard Deviation</u>
Tailored Communications	3.94	0.62
<i>Question 18: Woolworths sends effective email communications advising me of specials and enhancements to the service.</i>	4.12	0.69
<i>Question 14: Woolworths' website contains information about the products and shopping service that is accurate, up-to-date and appropriate.</i>	4.08	0.75
<i>Question 17: Woolworths provides me with a choice of numerous methods of effecting payment.</i>	4.02	0.55
<i>Question 15: Woolworths' website contains features that improve efficiency and simplify the online shopping experience.</i>	3.86	0.86
<i>Question 16: Woolworths' website contains interactive features that assist me in completing my orders.</i>	3.64	0.98

The results indicate above average levels of satisfaction for all questions in the Tailored Communications sub-dimension.

Visual Appeal

Figure 4.12: Visual Appeal Results

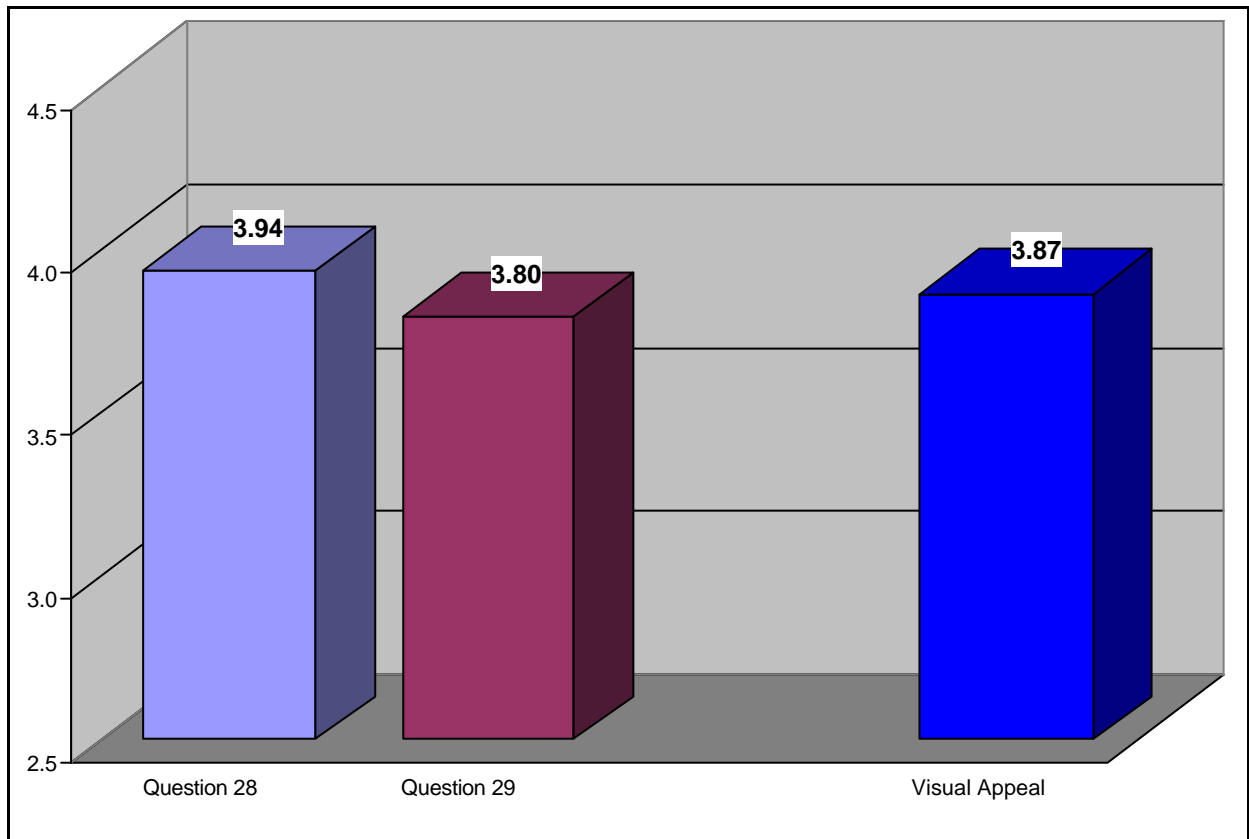


Table 4.7: Mean Scores on Visual Appeal Sub-dimension (n=50)

<u>Question</u>	<u>Mean</u>	<u>Standard Deviation</u>
Visual Appeal	3.87	0.71
<i>Question 28: The Woolworths website is visually appealing.</i>	3.94	0.71
<i>Question 29: The Woolworths product catalogue is clearly displayed in a visually pleasing fashion.</i>	3.80	0.86

The results indicate above average levels of satisfaction for all questions in the Visual Appeal sub-dimension.

Intuitive Operations

Figure 4.13: Intuitive Operations Results

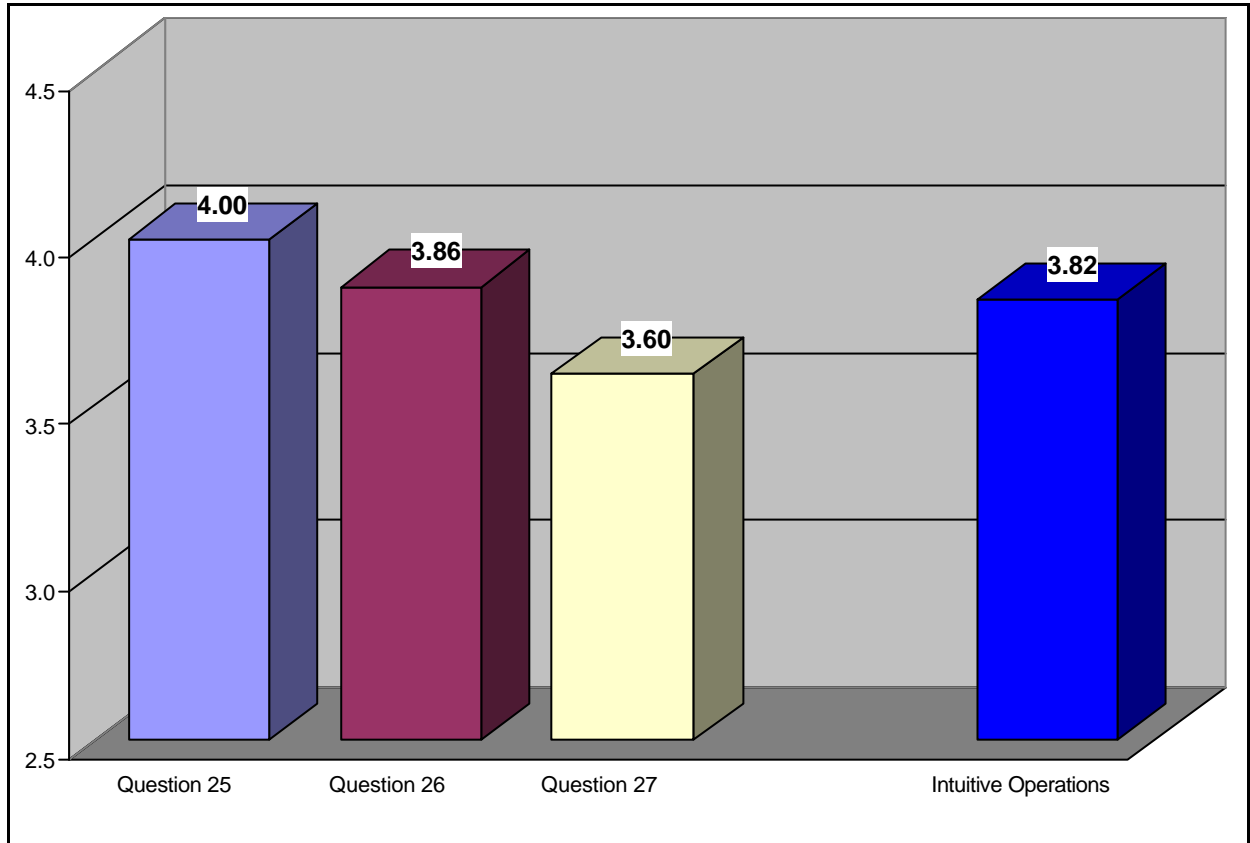


Table 4.8: Mean Scores on Intuitive Operations Sub-dimension (n=50)

<u>Question</u>	<u>Mean</u>	<u>Standard Deviation</u>
Intuitive Operations	3.82	0.62
<i>Question 25: The Woolworths online shopping service is easy to operate.</i>	4.00	0.67
<i>Question 26: Navigation between the web pages and the online features on the Woolworths website is intuitive.</i>	3.86	0.64
<i>Question 27: There is adequate online help available detailing the operation of the Woolworths website.</i>	3.60	0.81

The results indicate above average levels of satisfaction for all questions in the Intuitive Operations sub-dimension.

Response Time

Figure 4.14: Response Time Results

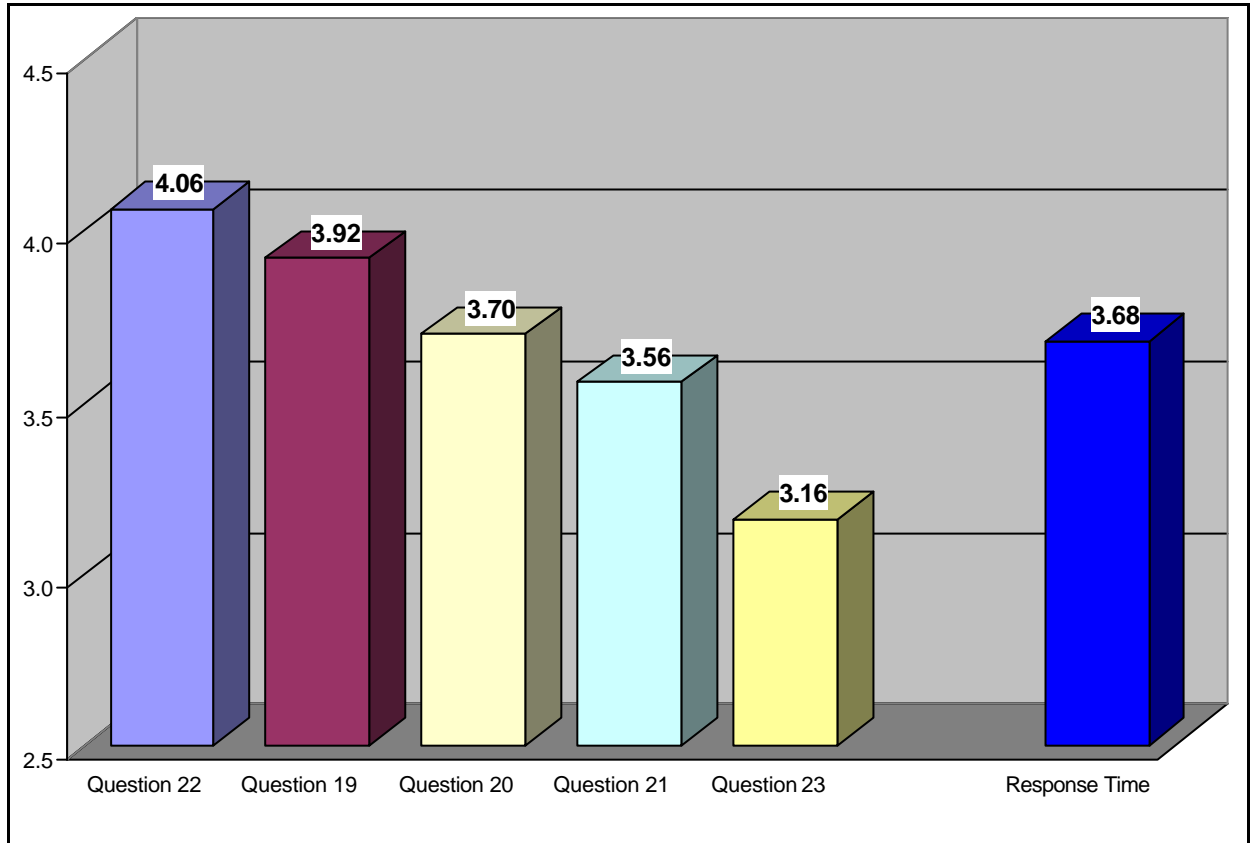


Table 4.9: Mean Scores on Response Time Sub-dimension (n=50)

<u>Question</u>	<u>Mean</u>	<u>Standard Deviation</u>
Response Time	3.68	0.55
Question 22: Woolworths' online shopping facility is always available when I wish to place an order.	4.06	0.71
Question 19: There is very little delay between selecting an action and receiving confirmation that the Woolworths website is processing that action.	3.92	0.78
Question 20: Woolworths' website exhibits no discernible drop in performance during what I would consider to be peak shopping times.	3.70	0.97
Question 21: The web pages on the Woolworths website load quickly.	3.56	0.86
Question 23: I am always notified of any lengthy planned downtime when the website or online services will not be available.	3.16	0.55

The results indicate above average levels of satisfaction for all questions in the Response Time sub-dimension.

4.4.3 Service Quality Dimension

The Service Quality Dimension comprises a total of 13 questions (Question 1 to Question 13), split across 5 sub-dimensions. In assessing overall satisfaction with the Service Quality Dimension, the mean score for all 13 questions is considered, not the mean scores for each of the individual sub-dimensions.

The mean score for the **Service Quality Dimension** is **3.86**.

Figure 4.15: Service Quality Dimension Results

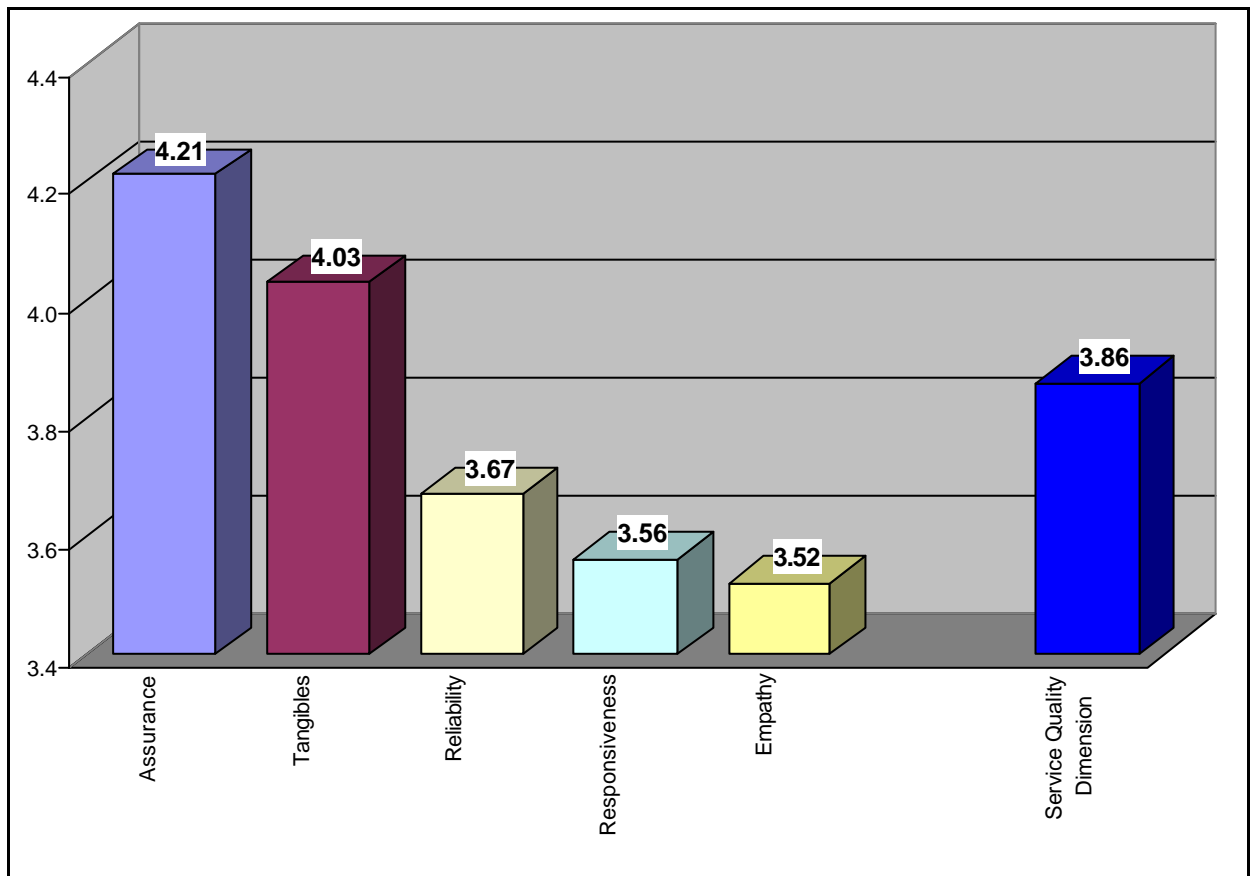


Table 4.10: Mean Scores on Service Quality Dimension (n=50)

<u>Dimension</u>	<u>Mean Score (%)</u>	<u>Mean</u>	<u>Standard Deviation</u>
Service Quality Dimension	71.50%	3.86	0.36
Assurance	80.25%	4.21	0.51
Tangibles	75.75%	4.03	0.44
Reliability	66.75%	3.67	0.52
Responsiveness	64.00%	3.56	0.59
Empathy	63.00%	3.52	0.97

The results indicate above average levels of satisfaction in the Service Quality Dimension and all of its sub-dimensions. The sub-dimension Empathy had the lowest mean, while the Assurance sub-dimension had the highest.

Empathy

The Empathy sub-dimension consists of a single question which reflects an above-average level of satisfaction:

Question 13: Woolworths has an efficient, caring call centre to resolve problems relating to grocery deliveries.

Mean: 3.52

Standard Deviation: 0.97

Assurance

Figure 4.16: Assurance Results

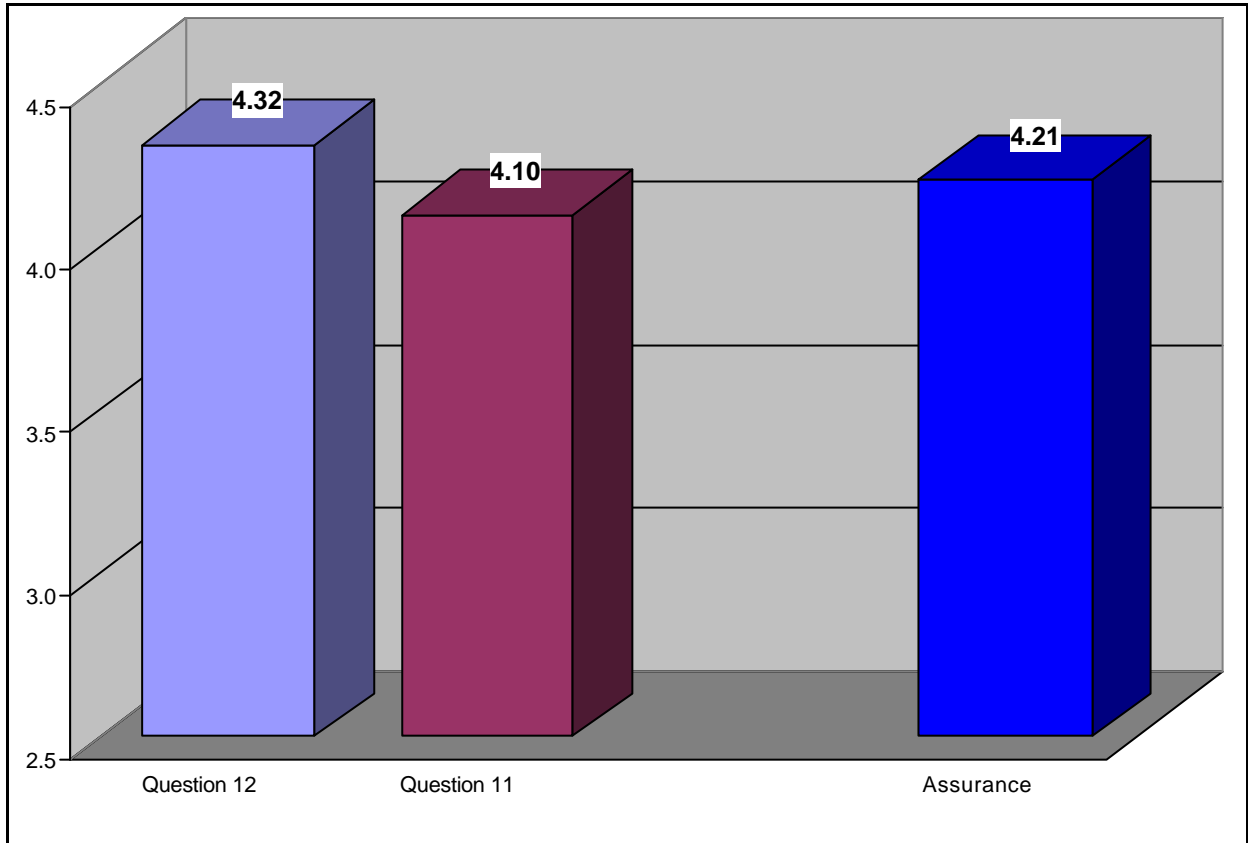


Table 4.11: Mean Scores on Assurance Sub-dimension (n=50)

<u>Question</u>	<u>Mean</u>	<u>Standard Deviation</u>
Assurance	4.21	0.51
<i>Question 12: Woolworths always charges the correct amount for their deliveries.</i>	4.32	0.51
<i>Question 11: Charges are levied by Woolworths at a time that is in accordance with the receipt of the groceries.</i>	4.10	0.58

The results indicate above average levels of satisfaction for all questions in the Assurance sub-dimension.

Tangibles

Figure 4.17: Tangibles Results

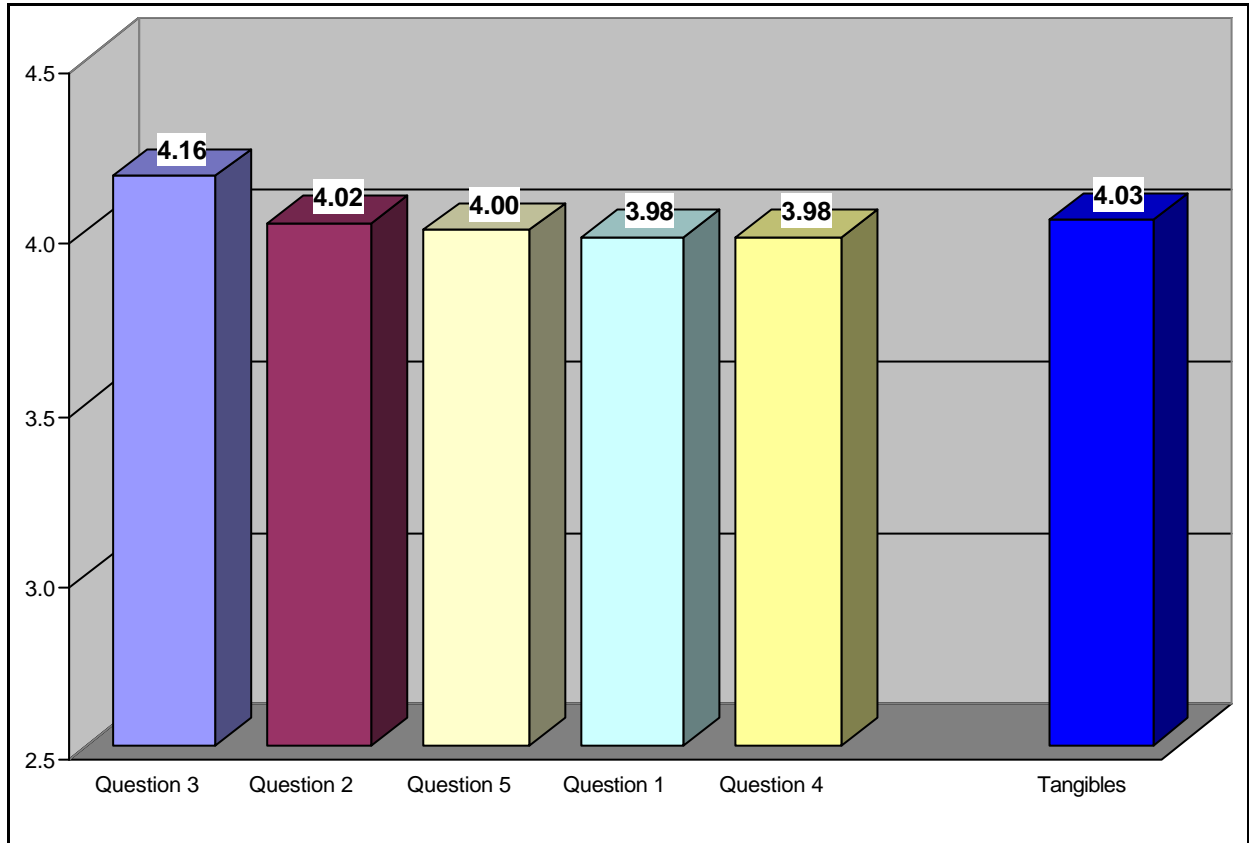


Table 4.12: Mean Scores on Tangibles Sub-dimension (n=50)

<u>Question</u>	<u>Mean</u>	<u>Standard Deviation</u>
Tangibles	4.03	0.44
<i>Question 3: Woolworths always package their groceries appropriately, cold things are refrigerated and other articles are packaged in such a way that they do not damage each other.</i>	4.16	0.62
<i>Question 2: The vehicles used by Woolworths to deliver are clean, undamaged and easily identifiable as belonging to Woolworths.</i>	4.02	0.82
<i>Question 5: Woolworths' groceries are always fresh and well within their sell by date.</i>	4.00	0.86
<i>Question 1: The drivers of Woolworths, who deliver the online purchases, are always presentable and conduct themselves in a professional and courteous manner.</i>	3.98	0.62
<i>Question 4: Woolworths' groceries and packaging are always neat, clean and undamaged.</i>	3.98	0.68

The results indicate above average levels of satisfaction for all of the questions in the Tangibles sub-dimension.

Reliability

Figure 4.18: Reliability Results

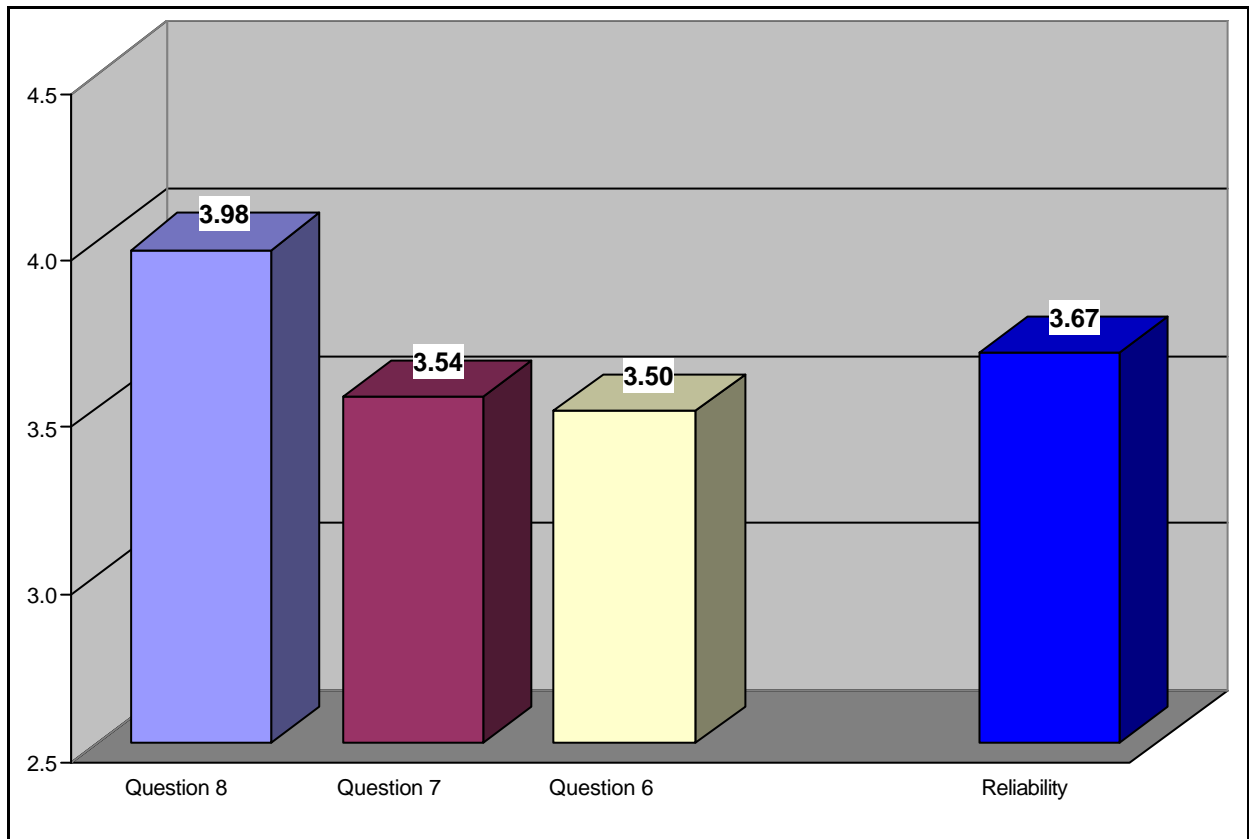


Table 4.13: Mean Scores on Reliability Sub-dimension (n=50)

<u>Question</u>	<u>Mean</u>	<u>Standard Deviation</u>
Reliability	3.67	0.52
<i>Question 8: Woolworths never deliver incorrect items or mix up orders with other customers.</i>	3.98	0.87
<i>Question 7: Woolworths make suitable substitutions with products that are comparable with the requested product in terms of price.</i>	3.54	0.50
<i>Question 6: Woolworths are rarely out of stock of an item I have ordered.</i>	3.50	0.89

The results indicate above average levels of satisfaction for all questions in the Reliability sub-dimension.

Responsiveness

Figure 4.19: Responsiveness Results

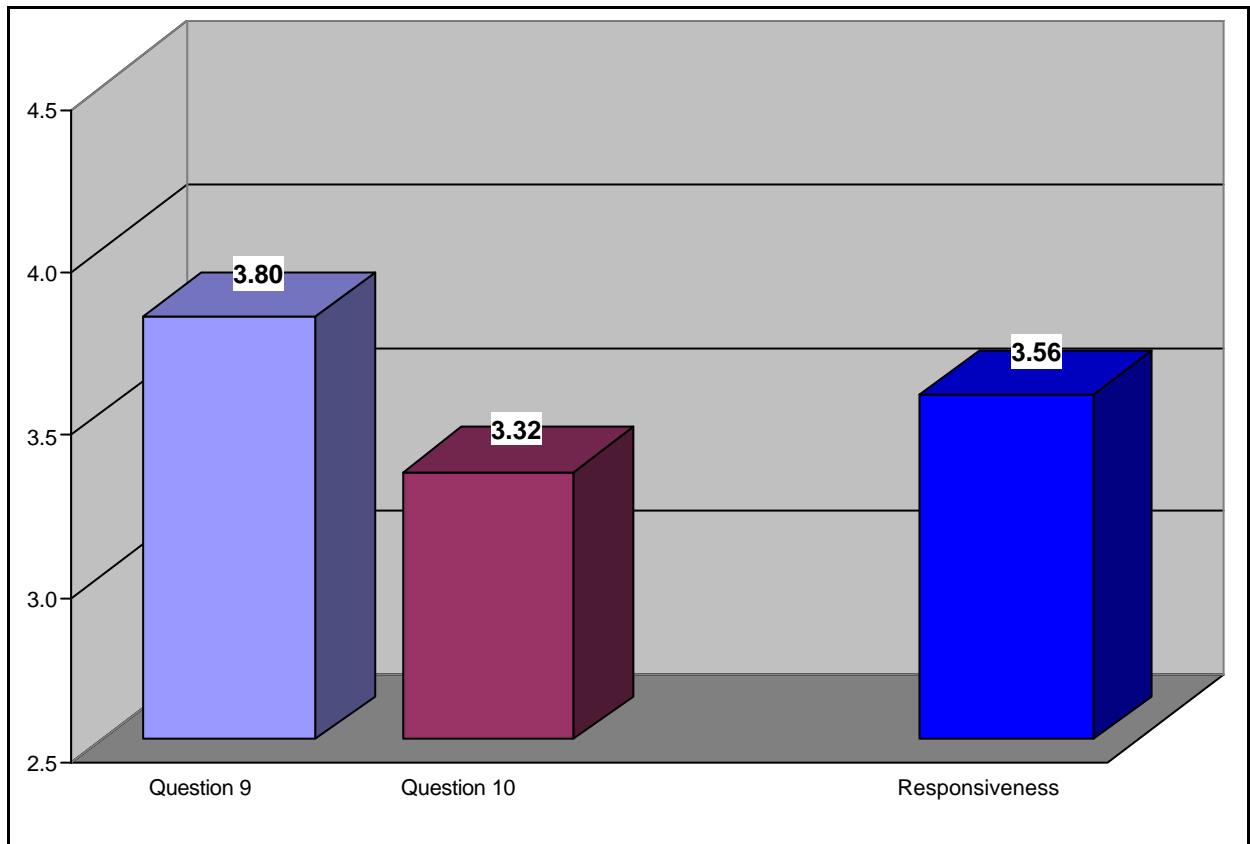


Table 4.14: Mean Scores on Responsiveness Sub-dimension (n=50)

<u>Question</u>	<u>Mean</u>	<u>Standard Deviation</u>
Responsiveness	3.56	0.59
<i>Question 9: Woolworths' deliveries always arrive when expected.</i>	3.80	1.01
<i>Question 10: Woolworths has an acceptable method of arranging for the collecting and replacing unsatisfactory goods.</i>	3.32	0.77

The results indicate above average levels of satisfaction for all questions in the Responsiveness sub-dimension.

4.4.4 Overall Quality Dimension

The Overall Quality Dimension comprises a total of 8 questions (Question 36 to Question 43), from the Relative Advantage sub-dimension.

The mean score for the **Overall Quality Dimension** is **3.73** or **68.25%**.

Relative Advantage

Figure 4.20: Relative Advantage Results

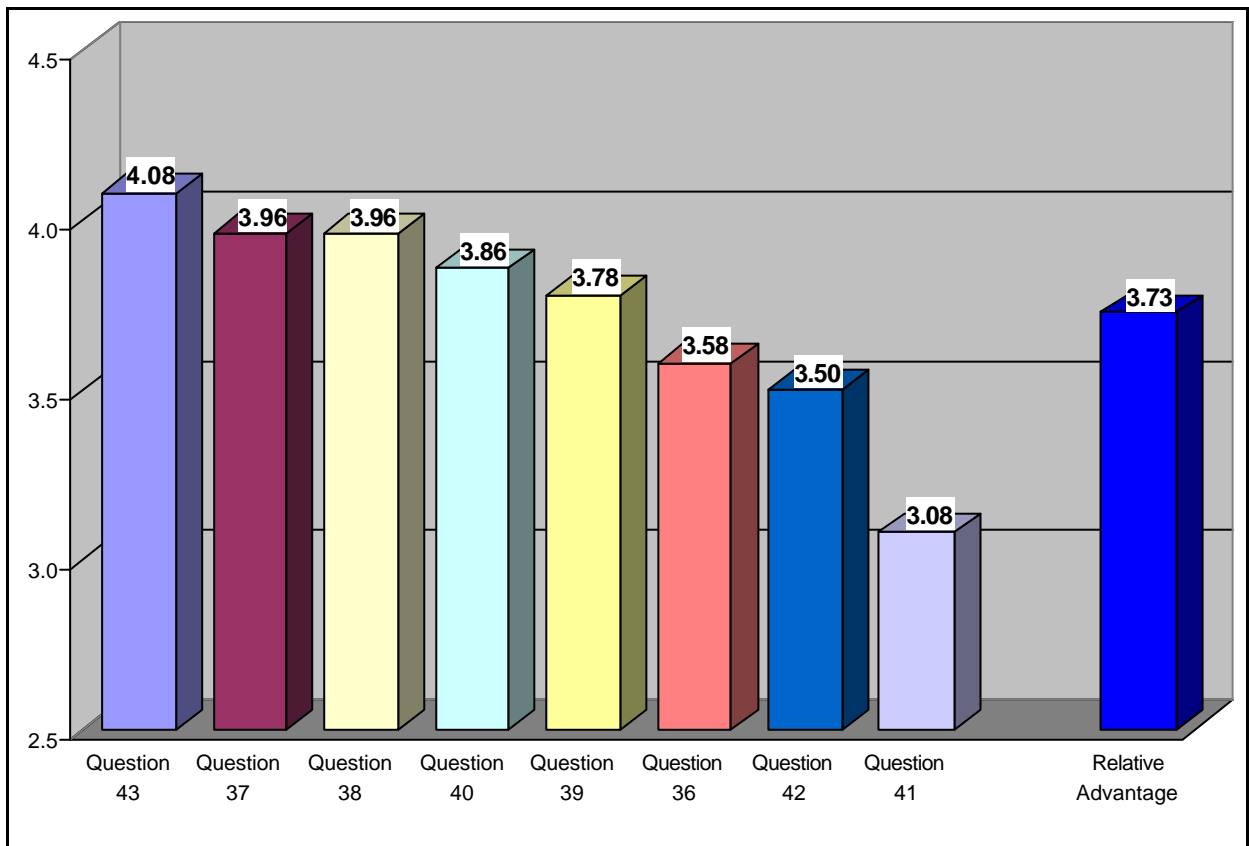


Table 4.15: Mean Scores on Relative Advantage Sub-dimension (n=50)

Question	Mean	Standard Deviation
Relative Advantage	3.73	0.44
Question 43: Shopping online is less stressful than shopping in-store (parking, queues, shopping with children etc).	4.08	0.83
Question 37: Woolworths offers a wide selection of convenient delivery times.	3.96	0.53
Question 38: The earliest available delivery for my Woolworths	3.96	0.53

<i>order is within a reasonable time period.</i>		
<i>Question 40: The prices of items purchased from Woolworths online shopping are in line with the prices of items in a Woolworths store.</i>	3.86	0.57
<i>Question 39: I consider Woolworths' delivery charges to be value for money.</i>	3.78	0.79
<i>Question 36: Shopping online at Woolworths is just as easy as shopping in-store at Woolworths.</i>	3.58	1.01
<i>Question 42: Shopping online is far more convenient than shopping in-store.</i>	3.50	0.93
<i>Question 41: Sale items in Woolworths' stores can be purchased for similar prices through the Woolworths online shopping website.</i>	3.08	0.72

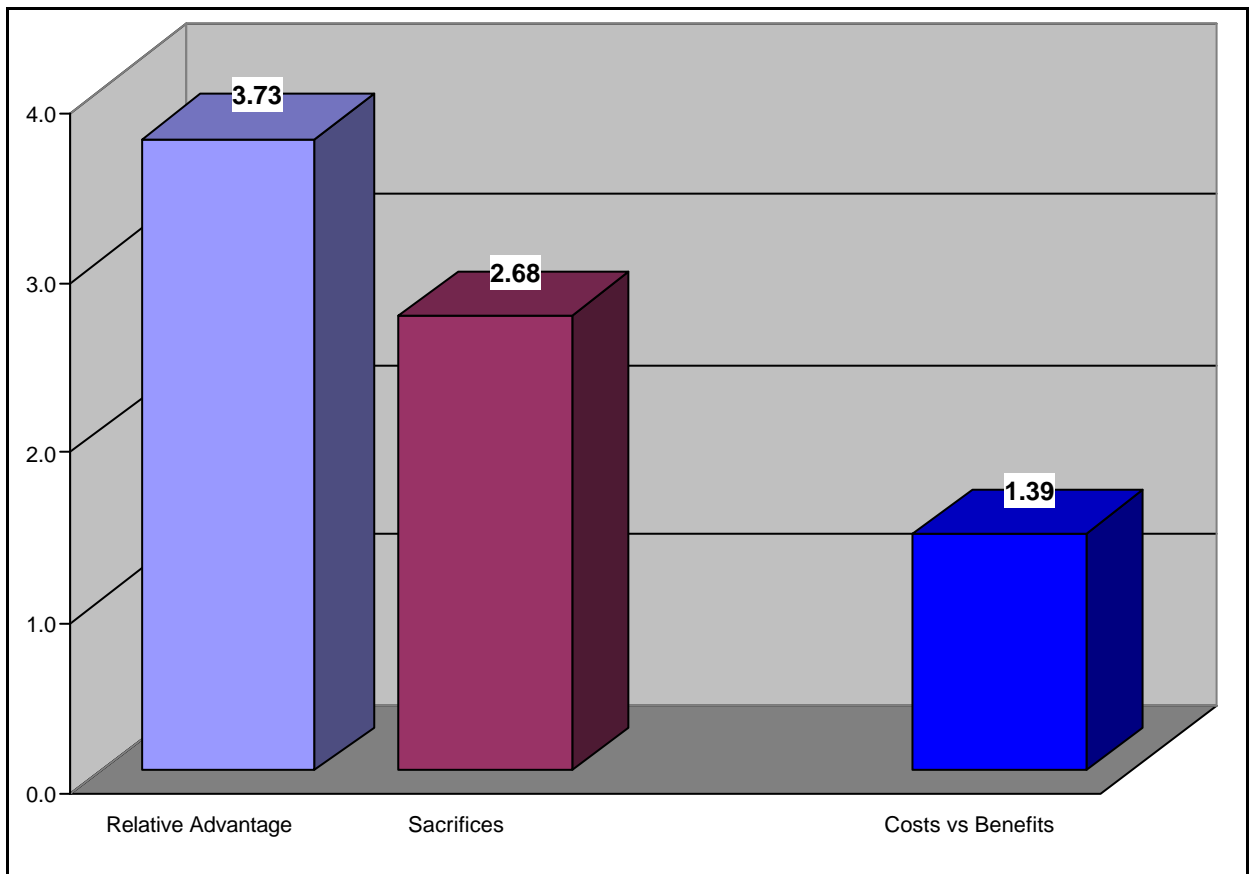
The results indicate above average levels of satisfaction for all questions in the Relative Advantage sub-dimension.

4.4.5 Costs versus Benefits

The Costs versus Benefits assessment comprises a total of 12 questions (Question 36 to Question 47), split across Relative Advantage and Sacrifices. In assessing Costs versus Benefits, the mean score for the Relative Advantage sub-dimension is expressed as a ratio against the mean score for the Sacrifices section.

The ratio for Costs versus Benefits is 1.39:1 which means that the advantages outweigh the sacrifices in the ratio of 1.39 to 1. Expressed another way, the advantages exceed the sacrifices by 39%. This is the answer to Research Problem 2 and supports Proposition 1 in Chapter 3.

Figure 4.21: Costs vs Benefits Results



Sacrifices

Figure 4.22: Sacrifices Results

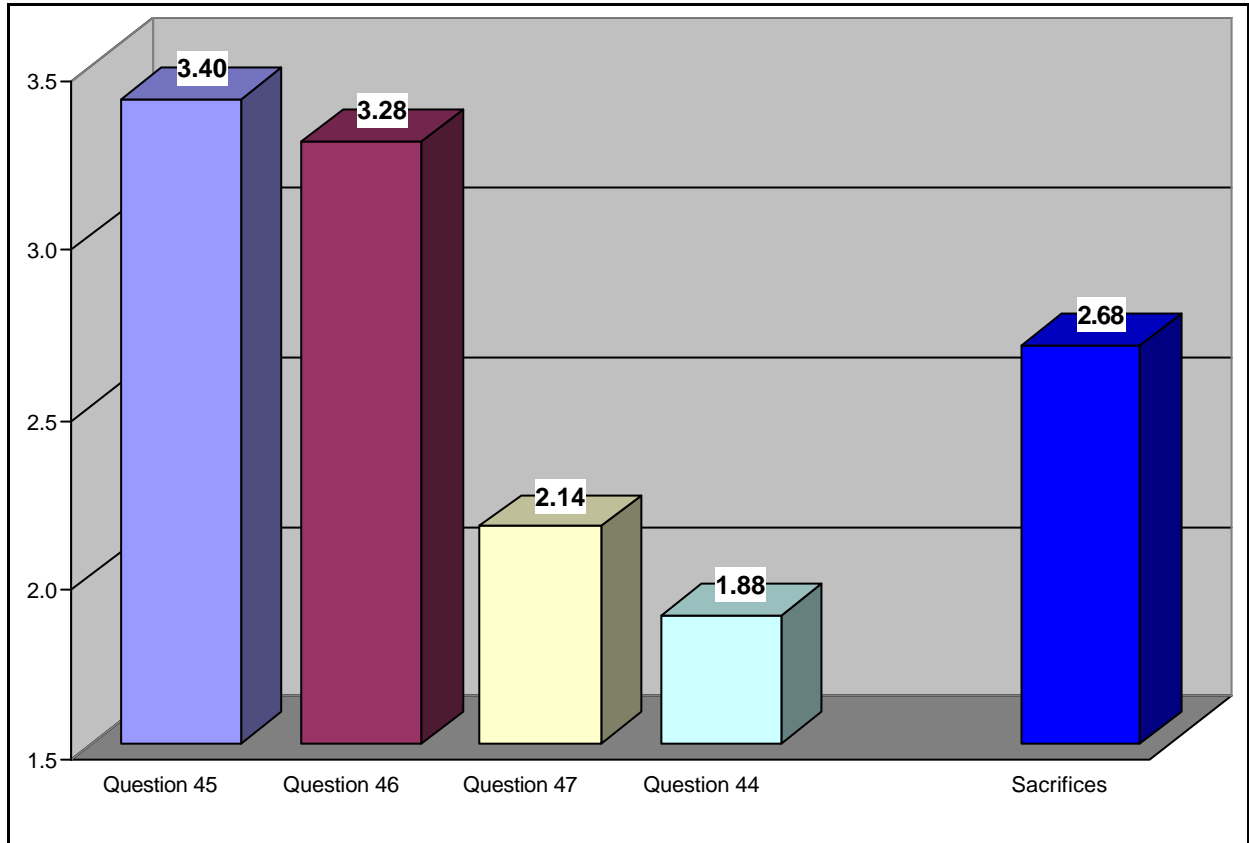


Table 4.16: Mean Scores on Sacrifices Sub-dimension (n=50)

<u>Question</u>	<u>Mean</u>	<u>Standard Deviation</u>
Sacrifices	2.68	0.72
<i>Question 45: I miss the physical experience of shopping in-store where I can assess and compare products for myself.</i>	3.40	1.39
<i>Question 46: I miss being able to have my purchases immediately.</i>	3.28	1.01
<i>Question 47: It is inconvenient not being able to pay with cash when shopping online.</i>	2.14	1.20
<i>Question 44: I miss the anonymity of in-store shopping where the store does not know who I am or my purchasing habits.</i>	1.88	0.87

The results indicate that the online grocery shoppers in the sample consider not being able to physically assess and compare their own products to be the most significant sacrifice that is made when shopping online. This is closely followed by the

problem of not being able to have one’s purchases immediately. Of less significance were the surrender of anonymity and not being able to pay with cash.

4.5 General Habits

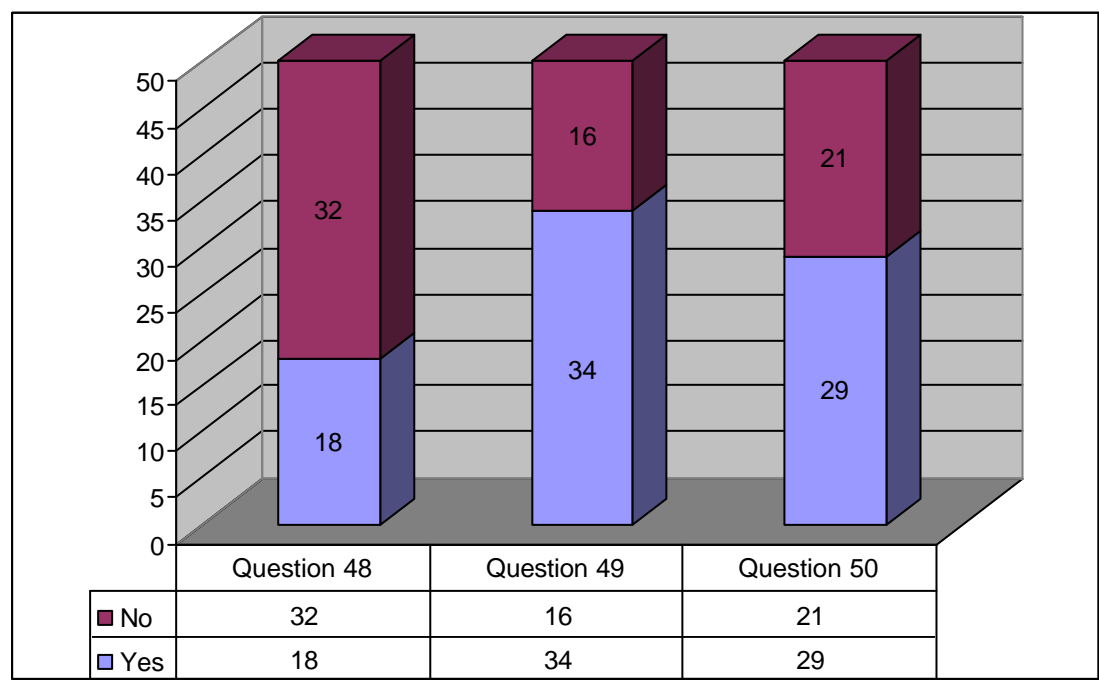
The measurement instrument included three questions intended to gauge the online habits of the Woolworths’ online customers.

To the question, “I utilise more than one online grocery store on a regular basis” (Question 48), 18 of the 50 respondents responded “Yes”.

To the question, “I utilise a combination of online and in-store shopping on a regular basis to complete my grocery shopping requirements” (Question 49), 34 of the 50 respondents responded “Yes”. Of the 16 that responded “No”, four claimed to have shopped online at Woolworths “this month”.

To the question, “I utilise online shopping sites to gather information for making in-store purchases” (Question 50), 29 of the 50 respondents responded “Yes”.

Figure 4.23: General Online Habits



4.6 Summary

This chapter covered the survey results in graphical form beginning with the demographic information followed by the satisfaction measures. Where applicable, the relevance of the results in addressing the problems raised in Chapter 3 were highlighted.

The next chapter contains a detailed discussion of the results and the conclusions that can be derived. Recommendations are made in terms of the research problems from Chapter 3 and the results from this chapter.

CHAPTER 5: DISCUSSION AND RECOMMENDATIONS

5.1 Introduction

The previous chapter illustrated the survey results and related them back to the research problems defined in Chapter 3. This chapter contains an in-depth discussion of relevant results, the resolution of the research problems and conclusions that can be drawn. The chapter concludes with recommendations for Woolworths as well as defining areas for possible future study.

5.2 Discussion

5.2.1 Research Problem 1 (Hypothesis 1)

The first problem to be resolved was that of finding an overall customer satisfaction rating for the Woolworths' online shopping service.

Based on the literature reviewed in Chapter 2, a model and a measurement instrument were defined in Chapter 3 and the results obtained through the measurement instrument were detailed in Chapter 4.

For all satisfaction measurement questions, a mean score of 3.85 was obtained across all respondents. Each dimension scored significantly above 3 and Hypothesis 1 was found to hold. Since a score of 3 would indicate a neutral satisfaction score, where customers would be classified as neither particularly satisfied nor particularly dissatisfied, anything above 3 indicates a measure of positive satisfaction with the service. It can therefore be concluded that the results of this study indicate that Woolworths' online customers are generally satisfied. In order to aid interpretation, the five-point Likert scale was transformed to a percentage satisfaction score. The calculation yielded a Customer Satisfaction Score of 71.25%.

Once an overall measure of satisfaction was obtained, the identification of issues that required attention was simple.

The model explained in Chapter 3 was developed in specific dimensions and sub-dimensions to be able to provide insight into just this problem. The results in Chapter

4 can be examined at any level to determine areas that score below the overall measure of satisfaction score of 3.85. The first step would be to identify any main dimensions that score below this value, the Overall Quality Dimension scores 3.73.

The only sub-dimension in the Overall Quality Dimension is the Relative Advantage sub-dimension which is a measure of the benefits that the customer receives by shopping online. An analysis of the sub-dimension reveals that Questions 36, 39, 41 and 42 all score below 3.85. The lowest score of these four is Question 41 which scores 3.08, which is extremely close to the midpoint of 3 and is the single lowest mean score for any of the satisfaction questions. The questions are:

Question 36: Shopping online at Woolworths is just as easy as shopping in-store at Woolworths.

Question 39: I consider Woolworths' delivery charges to be value for money.

Question 41: Sale items in Woolworths' stores can be purchased for similar prices through the Woolworths online shopping website.

Question 42: Shopping online is far more convenient than shopping in-store.

These results indicate that a specific area for Woolworths to focus on would be customers' perceptions around the value they are receiving by shopping online. The area which is seen as the lowest benefit is the availability of sale items in the online environment. Customers miss the end-of-aisle sale items when shopping online as identified by Ramus & Nielsen (2005) and the reasons for this have to do with stock levels. Often sale items are either promotional "once-off" special packaging items or they are overstock items that are reduced to clear and may vary from store to store. An online shopper can specify to take delivery of their purchases in two weeks time, so there is no guarantee that sale items will still be available. Woolworths could make sale items available provided the consumer's delivery was within a certain schedule.

Questions 36, 39 and 42 relate to the perceived ease of online shopping, perceived convenience to shop online and how expensive it is perceived to be to shop online. Woolworths' need to focus more on communicating the benefits customers receive

by shopping online and some ideas are outlined in the Recommendations section towards the end of this chapter.

Other areas that scored below the 3.85 level were:

- 1) The number of times that Woolworths were out of stock of items and the substitutions made.
- 2) Punctuality of deliveries.
- 3) Returning or replacing unsatisfactory goods. Respondents may not have had occasion to return items so may not have been able to agree or disagree with this question.
- 4) The call centre. Respondents may not have had occasion to utilise the call centre and may not have been able to agree or disagree with this question.
- 5) Interactive Website features.
- 6) Web site performance, especially peak times and downtime notifications. This is impacted by the customer's connection as was observed in Chapter 4. The downtime notifications may not be applicable; it is possible Woolworths have not had any planned downtime to provide notification for.
- 7) Online help.
- 8) Product catalogue.
- 9) Innovativeness.

By contrast areas where Woolworths generated notably higher satisfaction scores were:

- 1) Correct and appropriate packaging of goods.
- 2) Charging the correct amount.
- 3) Shopping online at Woolworths is a pleasant experience.
- 4) Identifiable corporate image on Web site.

5.2.2 Research Problem 2 (Proposition 1)

The second research problem was to measure the perceived benefit of shopping for groceries online at Woolworths. It was noted that online shoppers have to give up

many features of the traditional channel, so the perceived benefit of shopping online must exceed these sacrifices.

The model described in Chapter 2 contains a section designed to solve this problem, the Costs versus Benefits analysis. Essentially, the overall score for the Relative Advantages sub-dimension was expressed as a ratio of the overall score for the Sacrifices section. The conclusion was that the benefits of shopping online outweigh the sacrifices made, according to existing consumers, by a factor of 39%, the ratio of 1.39 to 1 supporting Proposition 1 in Chapter 3.

This perceived ratio of benefits against costs means that the sacrifices made when shopping online should not be significant enough to drive customers away. Unfortunately, this measure cannot be used to attract customers, as it is a perception after the fact, so one must have tried the service to realise these benefits.

5.2.3 Research Problem 3 (Hypothesis 2)

The third problem to be investigated by this study was the impact of demographic variables and connection type on the various dimensions of satisfaction. An analysis of variance was done to determine this, the results of which were discussed in Chapter 4, in the Demographic Information section.

The demographic variables of gender, age and language were found to have no significant differences and no significant impact on the levels of satisfaction supporting Hypothesis 2 in Chapter 3.

Income was found to exhibit significant differences between the different variable groups, most particularly the “R40,000 to R50,000” interval when compared to all other intervals. No linear relationship could be found between Income and any of the Quality dimensions. An observation was made that there appeared to be a low response rate in the “R30,000 to R40,000” income interval. A possible explanation could be that individuals who earn these levels of income may be at a stage in their lives where they are settling down to dual income households, so the household income could be significantly higher. For Woolworths’ customers, this interval would be a relatively low income for a dual income household. The researcher suggests

that the income variable be revisited in a future study where the household structure is also investigated.

The information gained from the Income variable was limited. It did however serve to confirm that the profile of the typical Woolworths customer is a middle-to-high income earner. Future studies should include questions on the household structure, marital status, number of children and number of income earners in order to make better use of this variable.

5.2.4 Research Problem 4 (Proposition 2)

Customers using a modem to access the Internet were less satisfied with online shopping at Woolworths than customers using faster connections such as ADSL or their work connection. This result supports Proposition 2 in Chapter 3.

As an example of how the Internet connection speed could affect customer satisfaction the following case where one of the retest respondents upgraded their Internet connection from a modem to a broadband connection between the two tests adds some interesting information as outlined below:

Question 20: Woolworths' website exhibits no discernible drop in performance during what I would consider to be peak shopping times.

This item increased from a 3 to a 4. This could be an ISP related issue, where the ISP may exhibit poorer performance during peak times.

Question 22: Woolworths' online shopping facility is always available when I wish to place an order.

This item increased from a 4 to a 5. Poor connection speeds and poor ISP performance could impact connectivity to certain sites at times.

Question 25: The Woolworths online shopping service is easy to operate.

This item increased from a 2 to a 4. The increased performance could lead to a perception that the site is easier to operate especially if Web pages were timing out with the modem connection.

Question 26: Navigation between the web pages and the online features on the Woolworths website is intuitive.

This item increased from a 2 to a 3. Again the increased performance could result in the Web site behaving in the manner that is expected.

Question 27: There is adequate online help available detailing the operation of the Woolworths website.

This item increased from a 2 to a 3. Probably not performance related, but if the online help was particularly slow, a poor connection may prohibit one from using it.

Question 28: The Woolworths website is visually appealing.

This item increased from a 3 to a 4. The speed with which graphics load would be far superior with a broadband connection. This respondent's previous ISP was MWeb, if the respondent had installed MWeb's "Download Accelerator", the quality of the images loaded into their Web browser would have been degraded as this is what that particular software does. Also, on a slow Internet connection, very often one does not wait for the images to load before trying to navigate to the next page.

This upgrade also involved a change in Internet Service Provider (ISP) which could also impact online performance (Chen & Chang, 2003).

An interesting by-product of including work as a connection type was that this study revealed that customers who use the work connection for Internet shopping at Woolworths, perceive a greater benefit from the service than those who shop from home. This is in keeping with the literature that expects that those with busy work schedules are more likely to see the convenience in online shopping (Morganosky & Cude, 2000; Reichheld & Scheffer, 2000; Anckar et al, 2002; Dholakia & Uusitalo, 2002; Ramus & Nielsen, 2005).

The most worrying observation to come from the analysis of demographic information was the section on when last the Woolworths online service was used. The results in Chapter 4 indicate that Woolworths' customers that last used the online service 6 months to a year ago or within the last 6 months, exhibited higher levels of satisfaction than those that used the service within the last month. One would expect that, as time passes, memories of the experience are likely to fade and a high

satisfaction rating may degrade to an average satisfaction rating. This could indicate that there was a decline in the levels of satisfaction during 2005.

5.2.5 Research Problem 5 (Proposition 3)

When Woolworths launched their online shopping service, a large part of the marketing did not identify it as a Woolworths service; it was advertised as “InTheBag”. Since the issue of corporate branding was so prevalent in the literature (Gulati & Garino, 2000; Reichheld & Scheffer, 2000; Loiacono et al, 2002; Rafiq & Fulford, 2005), it was important to investigate whether customers identified the online service as being part of the Woolworths brand. The possible reasons behind the decision by Woolworths’ to create a separate brand are discussed in the section on Branding in Chapter 2.

Two questions were specifically included in the measurement instrument in the sub-dimension Consistent Company Image. Question 31 asks whether the website is consistent with the customer’s impression of the Woolworths corporate image and brand (mean score: 4.15) and Question 32 asks whether email received from Woolworths is consistent with the customer’s impression of the Woolworths corporate image and brand (mean score 4.12).

The results indicate that customers clearly identify the “InTheBag” online offering with the Woolworths brand and image, and this impression includes the Web site and email communications. The high scores in the Consistent Company Image sub-dimension refute Proposition 3 in Chapter 3.

5.2.6 General Observations

One of the more interesting observations made by the researcher is the number of people that do not use Woolworths online shopping. Being a convenience sample, the researcher knows many of the respondents personally and is able to provide a little more insight into some of their responses. The researcher specifically requested responses from people that are known to shop at Woolworths and are known to have Internet access (at the very least – many are working in the Information Technology industry). For every completed questionnaire received, the researcher received at

least two email notifications or telephone calls from other individuals who do not use the service, they do however shop in Woolworths regularly and many of them use Internet shopping for other items, typically books and music from Kalahari and some utilise Pick 'n Pay online. A suggested theme for additional research would be to attempt to assess this “reluctance” to use Woolworths online shopping, when the same individuals are willing to shop online, even to buy groceries online. Perhaps it is the difference in perceptions of the two stores that have transferred to their online offerings – Woolworths has always been seen as a quality food retailer, with prices higher than the traditional supermarket. The Pick 'n Pay supermarket or hypermarket is where one would go and do a bulk shop for the monthly shopping items, Woolworths is a store where one might shop to purchase fresh food for a special meal. Historically Woolworths did not stock household items such as cleaners and detergents although that changed prior to the introduction of their online shopping service. Possibly the experience of shopping in Woolworths is seen as less of a chore than going to a supermarket – certainly Woolworths revolutionised the South African grocery shopping market with its innovative, attractive displays and quality packaging – perhaps Woolworths clientele enjoy the experience of visiting a Woolworths store and do not wish to give up that experience. From that point of view, perhaps the physical offering is Woolworths online shopping's worst enemy.

5.3 Recommendations

Although the initial indications are that Woolworths' online customers are generally satisfied, Woolworths should not allow themselves to become complacent. The observation that satisfaction levels are lower among more recent shoppers is an important area for concern. Even though every factor analysed had a positive overall score, there are some isolated incidents that may require attention before they become trendsetting and there are some areas that did not score as well as they should have. For example there is no reason why anyone should not be completely satisfied with the punctuality of the deliveries, since there is an hour allocated, yet this question scored 3.8, marginally below the overall score of 3.85.

As discussed, the dimension that scored the lowest overall was the Relative Advantages dimension. This is the dimension that needs to go beyond satisfying the customer to ensure future purchase intentions, because as Mittal & Lassar (1998)

observed, satisfaction is not enough to guarantee loyalty, and Woolworths, having satisfied their online customers, now need to instil that extra incentive to keep their business.

This should not be a difficult process, the benefits are there and customers are receiving them and simply not perceiving them to be as significant as they are. Woolworths need to find ways to make customers think of them and their online service as “Wow-worths” in order to grow their online customer base.

Since customers are not entirely convinced that the delivery fee charged offers good value for money, some anecdotal or investigative type information could be posted on the Website that explains all the costs involved in performing all aspects of shopping yourself, not just the petrol involved in driving, also the wear and tear on the vehicle and your nerves, the time spent travelling, shopping and loading, the energy expended, the cost of coffee to calm your nerves afterwards, the cost of babysitters and of course the cost of shopping bags that are now charged for. Make it humorous, make it tongue-in-cheek, but reinforce the message – the delivery costs are good value for money.

Customers are missing out on in-store sales and it is not easy to bring those same sale items to the online experience and the reasons for this have been discussed. Woolworths should invent online sales and have specials on the Web. If the online customer is satisfied they are getting bargains on the Internet that are not available in the stores, they would not mind if they lose out on in-store promotions. This would also help out with the innovativeness aspect.

To complement the service and to try and bring some of the entertainment value of traditional shopping to the home, Woolworths should arrange with suppliers that perform in-store demonstrations, to package “tasters” of their products to be sent along with the deliveries. This could lead to business for the suppliers, just as the in-store promotions do. If this could be done according to the customer’s dietary requirements or purchasing habits, so much the better.

The policies for returning or replacing unsatisfactory goods need to be clearly communicated, a possible reason for the low score in this area is that customers

have chosen a neutral response since they have not required this facility. Another reason is the inconvenience associated with having to go to the store to return items that were purchased online for the convenience of not having to go to the store in the first place. A special trip by a Woolworths staff member or driver to replace an unsatisfactory item could be considered provided controls existed that would hold the customer liable for the additional expense should they be wrong about the claimed defect or fault. Having this type of back up service available, would ensure that the items that are picked and delivered to the customer are of extremely high quality. Woolworths could institute a scheme whereby the costs of replacing unsatisfactory goods become the responsibility of their supplier which would also ensure the continued good quality of their purchases.

The concept of access to retailer was discussed in the literature review and the question in the measurement instrument pertaining to this aspect is another that received a relatively low score. Again, it could be the case that customers have not made use of the facility, or haven't looked for it, and have responded neutrally to the question. Details of the call centre or help desk or links to those details need to be prominently displayed on the Woolworths Web pages so that customers are aware that the service exists.

The product catalogue and interactive Web features need constant revising, enhancing and updating to keep customers excited, entertained and involved. Personalisation of Web sites is another persistent theme of the literature on Online Retail Service Quality. Catalogue options such as being able to search on all products with specific ingredients, or all products without specific ingredients, would be useful to find products that satisfy certain dietary requirements, this could be implemented simply at first, such as having the ability to disregard all products that contain certain allergens, or having a warning that advises the customer if they select a product that contains ingredients on a predefined, personalised list of unwanted substances. Woolworths could provide quick recipes for meals, with an easy click option to add all the ingredients necessary to prepare the meal into your online shopping basket. The products are then delivered together with a hardcopy printout of the recipe for easy reference. This could be especially useful for the festive season where people prepare a traditional meal that is typically only enjoyed once a year. A festive season menu could contain various options for preparing turkey, so that the

shopper can “custom-build” their entire Christmas menu and have all the ingredients delivered to their door at the click of a mouse (and of course the swipe of an electronic card).

5.4 Directions for Future Research

This research study has laid the groundwork for future investigations into the online grocery retailing market in South Africa by establishing a basic framework for it.

The questions regarding the respondent’s grocery purchasing habits, although not quantified in this research, raise some interesting points for future research. These questions were included for general interest and, in retrospect, should have been more specific:

Only 18 of the 50 respondents indicated that they use more than one online grocery store on a regular basis. The idea of a regular basis is open to interpretation; the intention behind this question was to ascertain whether respondents used both Woolworths and Pick ‘n Pay for their online shopping.

Twenty-nine of the 50 respondents claimed to use the Internet for information searching for in-store purchases. This was a general question that could have been limited to grocery shopping or even Woolworths in particular and expanded to establish the type of information that is searched. Chapter 3 admits the limitation of not including Information Searchers in this study.

Thirty-four respondents indicated that they use a combination of online and in-store grocery shopping on a regular basis. Again the regular basis is open for interpretation, but of further interest, is of the 16 that responded “No” to this question, 4 claimed to have used Woolworths’ online shopping service “this month”. It is unlikely that these respondents only use the Web for grocery shopping; it is far more likely that they have only used Internet grocery shopping once or twice and do not consider it a regular habit. The researcher is aware that at least one respondent used Woolworths online shopping for the first time specifically to be able to answer the questionnaire!

The effect of using the “InTheBag” brand is another area for further investigation. Did the brand attract customers who were not customers of Woolworths, if so was it the online facility that was the attraction, or was it because the customer disassociated the service from the Woolworths brand?

5.5 Summary

This final chapter contained a detailed discussion of the problems raised in Chapter 3 and the resolutions thereof. Some limitations were acknowledged and some directions for possible future research were provided. Recommendations were made for Woolworths to enhance their service, improve customer satisfaction but above all to promote loyalty. Woolworths have made the investment in the online service offering, they need to ensure that the customers they attract keep coming back (Reichheld et al, 2000).

REFERENCES

- Anckar B, Walden P & Jelassi T. 2002: Creating customer value in online grocery shopping. *International Journal of Retail & Distribution Management*, 30(4): 211-220.
- Boulding W, Kalra A, Staelin R & Zeithaml VA. 1993: A Dynamic Process Model of Service Quality: From Expectations to Behavioral Intentions. *Journal of Marketing Research*, 30(1): 7-27.
- Cai S & Jun M. 2003: Internet users' perceptions of online service quality: a comparison of online buyers and information searchers. *Managing Service Quality*, 13(6): 504-519.
- Carman JM. 1990: Consumer Perceptions of Service Quality: an Assessment of the SERVQUAL Dimensions. *Journal of Retailing*, 66(1): 33-55
- Chen S & Chang T. 2003: A descriptive model of online shopping process: some empirical results. *International Journal of Service Industry Management*, 14(5): 556-569.
- Cronin JJ Jr & Taylor SA. 1992: Measuring Service Quality: A Reexamination and Extension. *Journal of Marketing*, 56(3): 55-68.
- Cronin JJ Jr & Taylor SA. 1994: SERVPERF Versus SERVQUAL: Reconciling Performance-Based and Perceptions-Minus-Expectations Measurement of Service Quality. *Journal of Marketing*, 58(1): 125-131.
- Dholakia RR & Uusitalo O. 2002: Switching to electronic stores: consumer characteristics and the perception of shopping benefits. *International Journal of Retail & Distribution Management*, 30(10): 459-469.
- Frain EH & Grady DB. 1997: Internet shoppers: is there a surfer gender gap? *Direct Marketing*, 59(9): 46-51.

Grönroos C. 1984: A Service Quality Model and its Marketing Implications. *European Journal of Marketing*, 18(4): 36-44.

Gulati R & Garino J. 2000: Get the Right Mix of Bricks & Clicks. *Harvard Business Review*, 78(3): 107-114.

ITWeb. 2005. *E-Business*

<http://www.itweb.co.za/sections/internet/2005/0503181147.asp?S=e-Business&A=EBU&O=FRGN>

Accessed on 2005/03/18

Janda S, Trocchia PJ & Gwinner KP. 2002: Consumer perceptions of Internet retail service quality. *International Journal of Service Industry Management*, 13(5): 412-431.

Jun M, Yang Z & Kim D. 2004: Customers' perceptions of online retailing service quality and their satisfaction. *International Journal of Quality & Reliability Management*, 21(8): 817-840.

Kotler P. 2000: *Marketing Management*, International Edition. New York: Prentice Hall

Lim H & Dubinsky AJ. 2004: Consumers' perceptions of e-shopping characteristics: an expectancy-value approach. *Journal of Services Marketing*, 18(7): 500-513.

Loiacono ET, Watson RT & Goodhue DL. 2002: WebQual: A Measure of Web Site Quality. Unpublished.

Mittal B & Lassar WM. 1998: Why do customers switch? The dynamics of satisfaction versus loyalty. *The Journal of Services Marketing*, 12(3):177-194.

Moolla MI & du Plessis PJ. 1997: Service quality measurement: A critical review of the SERVQUAL model. *SBL Research Review*, 1(8): 64-74.

- Morganosky MA & Cude BJ. 2000: Consumer response to online grocery shopping. *International Journal of Retail & Distribution Management*, 28(1): 17-26.
- Parasuraman A, Zeithaml VA & Berry LL. 1985: A Conceptual Model of Service Quality and Its Implications for Future Research. *Journal of Marketing*, 49: 41-50.
- Parasuraman A, Zeithaml VA & Berry LL. 1988: SERVQUAL: A Multiple-Item Scale for Measuring Consumer Perceptions of Service Quality. *Journal of Retailing*, 64(1): 12-40.
- Parasuraman A, Zeithaml VA & Berry LL. 1991: Refinement and Reassessment of the SERVQUAL Scale. *Journal of Retailing*, 67(4): 420-450.
- Perreault WD Jr. & McCarthy EJ. 2002: *Basic Marketing a Global-Managerial Approach*, 14th Edition. New York: McGraw-Hill.
- Rafiq M & Fulford H. 2005: Loyalty transfer from offline to online stores in the UK grocery industry. *International Journal of Retail & Distribution Management*, 33(6): 444-460.
- Ramus K & Nielsen NA. 2005: Online grocery retailing: what do consumers think? *Internet Research*, 15(3): 335-352.
- Reichheld FF, Markey RG Jr. & Hopton C. 2000: E-customer loyalty – applying the traditional rules of business for online success. *European Business Journal*, 12(4): 173-179.
- Reichheld FF & Scheffer P. 2000: E-Loyalty Your Secret Weapon on the Web. *Harvard Business Review*, July-August: 105-113.
- Robinson S. 1999: Measuring service quality: current thinking and future requirements. *Marketing Intelligence & Planning*, 17(1): 21-32.
- Smith AD. 2002: Customer Retention on the Web. *Quarterly Journal of Electronic Commerce*, 3(2): 149-161.

Trocchia PJ & Janda S. 2003: How do customers evaluate Internet retail service quality? *Journal of Services Marketing*, 17(3): 243-253.

Van Iwaarden J, van der Wiele T, Ball L & Millen R. 2003: Applying SERVQUAL to Web sites: an exploratory study. *International Journal of Quality & Reliability Management*, 20(8): 919-935.

Webchek. 2002. *Archive*

http://www.webchek.co.za/library_trends.html

Accessed on 2005/03/18

Webchek. 2004. *Archive*

http://www.webchek.co.za/library_airline.html

Accessed on 2005/03/18

Weinstein A. 2002: Customer retention: A usage segmentation and customer value approach. *Journal of Targeting, Measurement and Analysis for Marketing*, 10(3): 259-268.

Yang Z, Jun M & Peterson RT. 2004: Measuring customer perceived online service quality. *International Journal of Operations & Production Management*, 24(11):1149-1174.

BIBLIOGRAPHY

Ahmad R & Buttle F. 2001: Customer retention: a potentially potent marketing management strategy. *Journal of Strategic Marketing*, 9: 29-45.

Asubonteng P, McCleary KJ & Swan JE. 1996: SERVQUAL revisited: a critical review of service quality. *The Journal of Services Marketing*, 10(6): 62-81.

Ballantine PW. 2005: Effects of interactivity and product information on consumer satisfaction in an online retail setting. *International Journal of Retail & Distribution Management*, 33(6): 461-471.

Blake BF, Neuendorf KA & Valdiserri CM. 2003: Innovativeness and variety of Internet shopping. *Internet Research: Electronic Networking Applications and Policy*, 13(3): 156-169.

Dennis C, Harris L & Sandhu B. 2002: From bricks to clicks: understanding the e-consumer. *Qualitative Market Research: An International Journal*, 5(4): 281-190

Dixon T & Marston A. 2005: Taking the shopping centre online: new models in e-commerce. *Property Management*, 23(2): 97-109.

Doherty NF, Ellis-Chadwick F & Hart CA. 1999: Cyber retailing in the UK: the potential of the Internet as a retail channel. *International Journal of Retail & Distribution Management*, 27(1): 22-36.

Grunert KG & Ramus K. 2005: Consumers' willingness to buy food through the Internet. *British Food Journal*, 107(6): 381-403.

Hansen T. 2005: Consumer adoption of online grocery buying: a discriminant analysis. *International Journal of Retail & Distribution Management*, 33(2): 101-121.

Jiang P & Rosenbloom B. 2005: Customer intention to return online: price perception, attribute-level performance, and satisfaction unfolding over time. *European Journal of Marketing*, 39(1/2): 150-174.

Kim EB & Eom SB. 2002: Designing effective cyber store user interface. *Industrial Management & Data Systems*, 102(5): 241-251.

Kim J & Park J. 2005: A consumer shopping channel extension model: attitude shift toward the online store. *Journal of Fashion Marketing and Management*, 9(1): 106-121.

Kim M & Stoel L. 2005: Salesperson roles: are online retailers meeting customer expectations? *International Journal of Retail & Distribution Management*, 33(4): 284-297.

Lee GG & Lin HF. 2005: Customer perceptions of e-service quality in online shopping. *International Journal of Retail and Distribution Management*, 33(2): 161-176.

Lin CC. 2003: A critical appraisal of customer satisfaction and e-commerce. *Managerial Auditing Journal*, 18(3): 202-212.

Morganosky MA & Cude BJ. 2002: Consumer demand for online food retailing: is it really a supply side issue? *International Journal of Retail & Distribution Management*, 30(10): 451-458.

Perea y Monsuwe T, Dellaert BGC & de Ruyter K. 2004: What drives consumers to shop online: A literature review. *International Journal of Service Industry Management*, 15(1): 102-121.

Rowley J. 1998: Internet food retailing: the UK in context. *British Food Journal*, 100(2): 85-95.

Shahin A. 2004: SERVQUAL and Model of Service Quality Gaps: A Framework for Determining and Prioritizing Critical Factors in Delivering Quality Services. Unpublished.

Tamimi N, Rajan M & Sebastianelli R. 2003: The state of online retailing. *Internet Research: Electronic Networking Applications and Policy*, 13(3): 146-155.

APPENDICES

Appendix 1: Measurement Instrument

Biographic Information

1. Gender:	Male	Female				
2. Age group:	Under 25	25 - 34	35 - 44	45 - 54	55 or Over	
3. Household income per month (R):	Less than 10,000	10,000 - 20,000	20,000 - 30,000	30,000 - 40,000	40,000 - 50,000	Over 50,000
4. Home Language:	English	Afrikaans	Zulu	Sotho	Xhosa	Other
5. Internet connection:	Work	Diginet	ADSL	ISDN	Modem	Other
6. Last use of Woolworths online shopping	Within the last month	Within the last 6 months	6 months – 1 year	1 year – 2 years	More than 2 years ago	

Customer Perception

The following statements relate to your perceptions of your online shopping experience with Woolworths. Please indicate the extent to which you believe Woolworths exhibits the following features by selecting a number from **1** to **5** for each statement where:

1 = "Strongly disagree"

2 = "Disagree"

3 = "Neither agree nor disagree"

4 = "Agree"

5 = "Strongly agree"

Service Quality Dimension

Tangibles (*The physical facilities such as the products, packaging, personnel and vehicles*)

1. The drivers of Woolworths, who deliver the online purchases, are always presentable and conduct themselves in a professional and courteous manner	1	2	3	4	5
2. The vehicles used by Woolworths to deliver are clean, undamaged and easily identifiable as belonging to Woolworths	1	2	3	4	5
3. Woolworths always package their groceries appropriately, cold things are refrigerated and other articles are packaged in such a way that they do not damage each other	1	2	3	4	5
4. Woolworths' groceries and packaging are always neat, clean and undamaged	1	2	3	4	5
5. Woolworths' groceries are always fresh and well within their sell by date	1	2	3	4	5

Reliability (*The ability to provide what was promised, dependably and accurately*)

6. Woolworths are rarely out of stock of an item I have ordered	1	2	3	4	5
---	---	---	---	---	---

7. Woolworths make suitable substitutions with products that are comparable with the requested product in terms of price	1	2	3	4	5
8. Woolworths never deliver incorrect items or mix up orders with other customers	1	2	3	4	5

Responsiveness *(The willingness to help customers and provide prompt service)*

9. Woolworths' deliveries always arrive when expected	1	2	3	4	5
10. Woolworths has an acceptable method of arranging for the collecting and replacing unsatisfactory goods	1	2	3	4	5

Assurance *(The ability of the company to convey trust and confidence)*

11. Charges are levied by Woolworths at a time that is in accordance with the receipt of the groceries	1	2	3	4	5
12. Woolworths always charges the correct amount for their deliveries	1	2	3	4	5

Empathy *(The degree of caring and individual attention provided to customers)*

13. Woolworths has an efficient, caring call centre to resolve problems relating to grocery deliveries	1	2	3	4	5
--	---	---	---	---	---

Website Quality Dimension

Tailored Communications *(The information and functionality available on the website)*

14. Woolworths' website contains information about the products and shopping service that is accurate, up-to-date and appropriate	1	2	3	4	5
15. Woolworths' website contains features that improve efficiency and simplify the online shopping experience	1	2	3	4	5
16. Woolworths' website contains interactive features that assist me in completing my orders	1	2	3	4	5
17. Woolworths provides me with a choice of numerous methods of effecting payment	1	2	3	4	5
18. Woolworths sends effective email communications advising me of specials and enhancements to the service	1	2	3	4	5

Response Time *(Availability of web site and services including response times)*

19. There is very little delay between selecting an action and receiving confirmation that the Woolworths website is processing that action	1	2	3	4	5
20. Woolworths' website exhibits no discernible drop in performance during what I would consider to be peak shopping times	1	2	3	4	5
21. The web pages on the Woolworths website load quickly	1	2	3	4	5
22. Woolworths' online shopping facility is always available when I wish to place an order	1	2	3	4	5
23. I am always notified of any lengthy planned downtime when the website or online services will not be available	1	2	3	4	5

Ease of Understanding *(Easy to read and understand)*

24. Text information and labels on Woolworths web pages are easy to read and understand	1	2	3	4	5
---	---	---	---	---	---

Intuitive Operations (Easy to navigate and operate)

25. The Woolworths online shopping service is easy to operate	1	2	3	4	5
26. Navigation between the web pages and the online features on the Woolworths website is intuitive	1	2	3	4	5
27. There is adequate online help available detailing the operation of the Woolworths website	1	2	3	4	5

Visual Appeal (The aesthetics of an online shopping website)

28. The Woolworths website is visually appealing	1	2	3	4	5
29. The Woolworths product catalogue is clearly displayed in a visually pleasing fashion	1	2	3	4	5

Emotional Appeal (The emotional effect of using the online shopping site)

30. Shopping on the Woolworths website is a pleasant experience	1	2	3	4	5
---	---	---	---	---	---

Consistent Company Image (The projected image of the online shopping website is compatible with the company's image)

31. The Woolworths website fits with my image of the Woolworths company	1	2	3	4	5
32. Woolworths' email communications fit with my image of the Woolworths company	1	2	3	4	5

Trust (Secure communication and observance of information privacy)

33. I am confident that Woolworths respects my privacy and that details supplied online remain private	1	2	3	4	5
34. I am confident that my payment details are secure when transacting online with Woolworths	1	2	3	4	5

Innovativeness (The creativity and uniqueness of an online shopping site)

35. The Woolworths website presents online shopping in an innovative and creative manner	1	2	3	4	5
--	---	---	---	---	---

Overall Quality Dimension

Relative Advantage (Comparison with traditional methods of shopping)

36. Shopping online at Woolworths is just as easy as shopping in-store at Woolworths	1	2	3	4	5
37. Woolworths offers a wide selection of convenient delivery times	1	2	3	4	5
38. The earliest available delivery for my Woolworths order is within a reasonable time period	1	2	3	4	5
39. I consider Woolworths' delivery charges to be value for money	1	2	3	4	5
40. The prices of items purchased from Woolworths online shopping are in line with the prices of items in a Woolworths store	1	2	3	4	5

- | | | | | | |
|---|---|---|---|---|---|
| 41. Sale items in Woolworths' stores can be purchased for similar prices through the Woolworths online shopping website | 1 | 2 | 3 | 4 | 5 |
| 42. Shopping online is far more convenient than shopping in-store | 1 | 2 | 3 | 4 | 5 |
| 43. Shopping online is less stressful than shopping in-store (parking, queues, shopping with children etc) | 1 | 2 | 3 | 4 | 5 |

Sacrifices

- | | | | | | |
|--|---|---|---|---|---|
| 44. I miss the anonymity of in-store shopping where the store does not know who I am or my purchasing habits | 1 | 2 | 3 | 4 | 5 |
| 45. I miss the physical experience of shopping in-store where I can assess and compare products for myself | 1 | 2 | 3 | 4 | 5 |
| 46. I miss being able to have my purchases immediately | 1 | 2 | 3 | 4 | 5 |
| 47. It is inconvenient not being able to pay with cash when shopping online | 1 | 2 | 3 | 4 | 5 |

General

- | | | |
|---|-----|----|
| 48. I utilise more than one online grocery store on a regular basis | Yes | No |
| 49. I utilise a combination of online and in-store shopping on a regular basis to complete my grocery shopping requirements | Yes | No |
| 50. I utilise online shopping sites to gather information for making in-store purchases | Yes | No |

Appendix 2: Results of the Consistency Check

Question	Discrepancies	Shopper 1		Shopper 2		Shopper 3		Shopper 4		Shopper 5		Shopper 6		Shopper 7		Shopper 8		Shopper 9		Shopper 10	
		R1	R2	R1	R2	R1	R2	R1	R2	R1	R2	R1	R2	R1	R2	R1	R2	R1	R2	R1	R2
1	1	3	3	4	4	4	4	4	4	4	4	5	4	4	4	3	3	4	4	4	4
2	3	4	4	4	4	4	4	4	4	4	4	2	2	5	4	4	4	3	2	4	5
3	2	4	4	4	4	4	4	4	4	4	4	4	5	4	4	4	4	5	4	4	4
4	4	4	3	4	4	4	3	4	4	3	4	4	4	4	4	3	4	4	4	4	4
5	2	4	4	4	4	4	4	4	4	4	4	4	4	5	4	4	4	4	4	4	5
6	5	2	1	3	4	3	4	3	3	4	3	4	4	4	4	1	2	4	4	4	4
7	2	3	3	4	4	3	4	4	4	4	3	4	4	4	4	3	3	4	4	4	4
8	1	3	3	5	4	4	4	5	5	4	4	4	4	4	4	3	3	4	4	4	4
9	5	4	4	5	4	5	4	5	5	4	5	4	4	4	5	4	4	4	4	5	4
10	2	3	3	3	3	3	4	3	3	3	3	5	3	4	4	3	3	3	3	4	4
11	3	4	3	5	5	4	4	5	5	4	4	5	4	4	4	4	4	4	5	4	4
12	3	4	3	5	5	4	4	5	5	4	4	5	4	5	5	4	4	4	5	5	5
13	1	2	2	4	3	4	4	4	4	4	4	4	4	4	4	2	2	4	4	4	4
14	3	3	3	5	4	3	3	5	5	3	3	5	4	4	4	3	3	4	5	4	4
15	4	2	3	4	4	3	3	4	4	3	3	5	4	4	4	3	2	4	5	4	4
16	2	2	2	4	4	3	2	4	4	2	3	4	4	4	4	2	2	4	4	4	4
17	3	4	3	4	4	3	4	4	4	4	3	4	4	4	4	4	4	4	4	4	4
18	4	4	3	5	4	4	4	5	5	4	4	5	5	4	5	4	4	5	5	5	4
19	3	4	4	5	4	4	4	5	5	4	4	5	3	4	4	4	4	4	5	4	4
20	3	3	4	4	4	3	4	4	4	4	4	4	4	5	5	4	3	4	4	5	5
21	3	3	2	3	4	4	4	3	3	4	4	4	4	4	4	2	3	4	4	4	4
22	4	4	4	4	4	4	5	4	4	5	4	4	4	5	4	4	4	4	4	4	5

Question	Discrepancies	Shopper 1		Shopper 2		Shopper 3		Shopper 4		Shopper 5		Shopper 6		Shopper 7		Shopper 8		Shopper 9		Shopper 10	
		R1	R2	R1	R2	R1	R2	R1	R2	R1	R2	R1	R2	R1	R2	R1	R2	R1	R2	R1	R2
23	2	2	2	3	3	3	3	3	3	3	3	3	4	4	4	2	2	4	3	4	4
24	4	4	3	4	4	4	4	4	4	4	4	4	4	5	4	3	4	4	4	4	5
25	4	3	3	4	4	2	4	5	4	4	4	5	4	4	4	3	3	4	5	4	4
26	4	3	3	4	4	2	3	5	4	3	3	5	4	4	4	3	3	4	5	4	4
27	5	3	3	4	4	2	3	4	4	2	2	5	4	4	5	3	3	4	5	5	4
28	5	4	4	4	4	3	4	5	4	3	4	5	4	4	4	4	4	4	5	4	4
29	2	3	3	4	4	2	2	4	4	2	2	4	4	5	4	3	3	4	4	4	5
30	6	4	3	4	5	4	4	5	4	4	4	5	5	5	4	3	4	5	5	4	5
31	2	4	3	5	4	4	4	5	5	4	4	5	5	4	4	4	4	5	5	4	4
32	3	4	4	5	4	3	4	5	5	4	3	5	5	4	4	4	4	5	5	4	4
33	2	4	4	5	5	4	4	5	5	4	4	4	4	5	4	4	4	4	4	4	5
34	2	4	4	5	5	4	4	5	5	4	4	4	4	5	4	4	4	4	4	4	5
35	3	3	3	3	4	3	3	3	3	3	3	5	4	5	5	3	3	4	5	5	5
36	2	3	2	4	4	3	3	4	4	3	3	5	5	4	4	2	3	5	5	4	4
37	1	4	4	5	4	4	4	5	5	4	4	4	4	4	4	4	4	4	4	4	4
38	1	4	4	5	4	4	4	5	5	4	4	4	4	4	4	4	4	4	4	4	4
39	2	4	3	5	5	4	4	5	5	4	4	4	4	4	4	3	4	4	4	4	4
40	3	4	4	3	4	4	4	3	3	4	4	4	5	4	4	4	4	5	4	4	4
41	6	3	2	2	2	3	4	2	2	4	3	3	4	4	4	2	3	4	3	4	4
42	4	2	3	5	5	3	3	5	5	3	3	4	4	4	3	3	2	4	4	3	4
43	0	4	4	5	5	3	3	5	5	3	3	5	5	4	4	4	4	5	5	4	4
44	1	3	3	1	1	1	1	1	1	1	1	1	1	2	3	3	3	1	1	2	2
45	5	4	4	4	4	4	5	4	4	5	4	2	1	2	3	4	4	1	2	2	2
46	5	4	3	3	4	3	3	3	3	3	3	2	2	2	3	3	4	2	2	3	2

Question	Discrepancies	Shopper 1		Shopper 2		Shopper 3		Shopper 4		Shopper 5		Shopper 6		Shopper 7		Shopper 8		Shopper 9		Shopper 10	
		R1	R2	R1	R2	R1	R2	R1	R2	R1	R2	R1	R2	R1	R2	R1	R2	R1	R2	R1	R2
47	3	3	4	1	1	2	2	1	1	2	2	1	1	2	4	4	3	1	1	2	2
48	0	No	No	No	No	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes
49	0	No	No	No	No	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes
50	0	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	No	No	No	No	No
	140	18		16		16		4		11		17		16		13		16		13	

Appendix 3: Survey Results

[illegible]

Appendix 4: Frequency Analysis

Service Quality Dimension

Tangibles						Option					Total	
						1	2	3	4	5		
1. The drivers of Woolworths, who deliver the online purchases, are always presentable and conduct themselves in a professional and courteous manner						Count	0	0	10	31	9	50
						%	0	0	20	62	18	100
Mode:	4	Mean:	3.98	SD:	0.62							
2. The vehicles used by Woolworths to deliver are clean, undamaged and easily identifiable as belonging to Woolworths						Count	0	5	1	32	12	50
						%	0	10	2	64	24	100
Mode:	4	Mean:	4.02	SD:	0.82							
3. Woolworths always package their groceries appropriately, cold things are refrigerated and other articles are packaged in such a way that they do not damage each other						Count	0	0	6	30	14	50
						%	0	0	12	60	28	100
Mode:	4	Mean:	4.16	SD:	0.62							
4. Woolworths' groceries and packaging are always neat, clean and undamaged						Count	0	2	6	33	9	50
						%	0	4	12	66	18	100
Mode:	4	Mean:	3.98	SD:	0.68							
5. Woolworths' groceries are always fresh and well within their sell by date						Count	2	2	0	36	10	50
						%	4	4	0	72	20	100
Mode:	4	Mean:	4	SD:	0.86							

Reliability						Option					Total	
						1	2	3	4	5		
6. Woolworths are rarely out of stock of an item I have ordered						Count	2	4	14	27	3	50
						%	4	8	28	54	6	100
Mode:	4	Mean:	3.5	SD:	0.89							
7. Woolworths make suitable substitutions with products that are comparable with the requested product in terms of price						Count	0	0	23	27	0	50

						%	0	0	46	54	0	100
Mode:	4	Mean:	3.54	SD:	0.5							
8. Woolworths never deliver incorrect items or mix up orders with other customers						Count	2	0	7	29	12	50
						%	4	0	14	58	24	100
Mode:	4	Mean:	3.98	SD:	0.87							

Responsiveness						Option					Total	
						1	2	3	4	5		
9. Woolworths' deliveries always arrive when expected						Count	0	9	4	25	12	50
						%	0	18	8	50	24	100
Mode:	4	Mean:	3.8	SD:	1.01							
10. Woolworths has an acceptable method of arranging for the collecting and replacing unsatisfactory goods						Count	2	2	25	20	1	50
						%	4	4	50	40	2	100
Mode:	3	Mean:	3.32	SD:	0.77							

Assurance						Option					Total	
						1	2	3	4	5		
11. Charges are levied by Woolworths at a time that is in accordance with the receipt of the groceries						Count	0	0	6	33	11	50
						%	0	0	12	66	22	100
Mode:	4	Mean:	4.1	SD:	0.58							
12. Woolworths always charges the correct amount for their deliveries						Count	0	0	1	32	17	50
						%	0	0	2	64	34	100
Mode:	4	Mean:	4.32	SD:	0.51							

Empathy						Option					Total	
						1	2	3	4	5		
13. Woolworths has an efficient, caring call centre to resolve problems relating to grocery deliveries						Count	2	6	11	26	5	50
						%	4	12	22	52	10	100
Mode:	4	Mean:	3.52	SD:	0.97							

Website Quality Dimension

Tailored Communications						Option					Total	
						1	2	3	4	5		
14. Woolworths' website contains information about the products and shopping service that is accurate, up-to-date and appropriate						Count	0	0	12	22	16	50
						%	0	0	24	44	32	100
Mode:	4	Mean:	4.08	SD:	0.75							
15. Woolworths' website contains features that improve efficiency and simplify the online shopping experience						Count	0	4	10	25	11	50
						%	0	8	20	50	22	100
Mode:	4	Mean:	3.86	SD:	0.86							
16. Woolworths' website contains interactive features that assist me in completing my orders						Count	0	10	6	26	8	50
						%	0	20	12	52	16	100
Mode:	4	Mean:	3.64	SD:	0.98							
17. Woolworths provides me with a choice of numerous methods of effecting payment						Count	0	0	7	35	8	50
						%	0	0	14	70	16	100
Mode:	4	Mean:	4.02	SD:	0.55							
18. Woolworths sends effective email communications advising me of specials and enhancements to the service						Count	0	0	9	26	15	50
						%	0	0	18	52	30	100
Mode:	4	Mean:	4.12	SD:	0.69							

Response Time						Option					Total	
						1	2	3	4	5		
19. There is very little delay between selecting an action and receiving confirmation that the Woolworths website is processing that action						Count	0	4	5	32	9	50
						%	0	8	10	64	18	100
Mode:	4	Mean:	3.92	SD:	0.78							
20. Woolworths' website exhibits no discernible drop in performance during what I would consider to be peak shopping times						Count	0	7	12	20	11	50
						%	0	14	24	40	22	100
Mode:	4	Mean:	3.7	SD:	0.97							
21. The web pages on the Woolworths website load quickly						Count	0	7	13	25	5	50
						%	0	14	26	50	10	100

Mode:	4	Mean:	3.56	SD:	0.86							
22. Woolworths' online shopping facility is always available when I wish to place an order						Count	0	3	2	34	11	50
						%	0	6	4	68	22	100
Mode:	4	Mean:	4.06	SD:	0.71							
23. I am always notified of any lengthy planned downtime when the website or online services will not be available						Count	0	4	34	12	0	50
						%	0	8	68	24	0	100
Mode:	3	Mean:	3.16	SD:	0.55							

Ease of Understanding						Option					Total	
						1	2	3	4	5		
24. Text information and labels on Woolworths web pages are easy to read and understand						Count	0	0	6	32	12	50
						%	0	0	12	64	24	100
Mode:	4	Mean:	4.12	SD:	0.59							

Intuitive Operations						Option					Total	
						1	2	3	4	5		
25. The Woolworths online shopping service is easy to operate						Count	0	1	8	31	10	50
						%	0	2	16	62	20	100
Mode:	4	Mean:	4	SD:	0.67							
26. Navigation between the web pages and the online features on the Woolworths website is intuitive						Count	0	1	11	32	6	50
						%	0	2	22	64	12	100
Mode:	4	Mean:	3.86	SD:	0.64							
27. There is adequate online help available detailing the operation of the Woolworths website						Count	0	3	21	19	7	50
						%	0	6	42	38	14	100
Mode:	3	Mean:	3.6	SD:	0.81							

Visual Appeal						Option					Total	
						1	2	3	4	5		
28. The Woolworths website is visually appealing						Count	0	2	8	31	9	50
						%	0	4	16	62	18	100
Mode:	4	Mean:	3.94	SD:	0.71							

29. The Woolworths product catalogue is clearly displayed in a visually pleasing fashion						Count	0	6	6	30	8	50
						%	0	12	12	60	16	100
Mode:	4	Mean:	3.8	SD:	0.86							

Emotional Appeal						Option					Total	
						1	2	3	4	5		
30. Shopping on the Woolworths website is a pleasant experience						Count	0	0	6	30	14	50
						%	0	0	12	60	28	100
Mode:	4	Mean:	4.16	SD:	0.62							

Consistent Company Image						Option					Total	
						1	2	3	4	5		
31. The Woolworths website fits with my image of the Woolworths company						Count	0	0	3	35	12	50
						%	0	0	6	70	24	100
Mode:	4	Mean:	4.18	SD:	0.52							
32. Woolworths' email communications fit with my image of the Woolworths company						Count	0	0	6	32	12	50
						%	0	0	12	64	24	100
Mode:	4	Mean:	4.12	SD:	0.59							

Trust						Option					Total	
						1	2	3	4	5		
33. I am confident that Woolworths respects my privacy and that details supplied online remain private						Count	0	7	4	27	12	50
						%	0	14	8	54	24	100
Mode:	4	Mean:	3.88	SD:	0.94							
34. I am confident that my payment details are secure when transacting online with Woolworths						Count	0	3	0	34	13	50
						%	0	6	0	68	26	100
Mode:	4	Mean:	4.14	SD:	0.7							

Innovativeness							Option					Total	
							1	2	3	4	5		
35. The Woolworths website presents online shopping in an innovative and creative manner							Count	0	2	20	19	9	50

						%	0	4	40	38	18	100
Mode:	3	Mean:	3.7	SD:	0.81							

Overall Quality Dimension

Relative Advantage						Option					Total	
						1	2	3	4	5		
36. Shopping online at Woolworths is just as easy as shopping in-store at Woolworths						Count	0	10	10	21	9	50
						%	0	20	20	42	18	100
Mode:	4	Mean:	3.58	SD:	1.01							
37. Woolworths offers a wide selection of convenient delivery times						Count	0	0	8	36	6	50
						%	0	0	16	72	12	100
Mode:	4	Mean:	3.96	SD:	0.53							
38. The earliest available delivery for my Woolworths order is within a reasonable time period						Count	0	0	8	36	6	50
						%	0	0	16	72	12	100
Mode:	4	Mean:	3.96	SD:	0.53							
39. I consider Woolworths' delivery charges to be value for money						Count	0	4	10	29	7	50
						%	0	8	20	58	14	100
Mode:	4	Mean:	3.78	SD:	0.79							
40. The prices of items purchased from Woolworths online shopping are in line with the prices of items in a Woolworths store						Count	0	0	12	33	5	50
						%	0	0	24	66	10	100
Mode:	4	Mean:	3.86	SD:	0.57							
41. Sale items in Woolworths' stores can be purchased for similar prices through the Woolworths online shopping website						Count	0	11	24	15	0	50
						%	0	22	48	30	0	100
Mode:	3	Mean:	3.08	SD:	0.72							
42. Shopping online is far more convenient than shopping in-store						Count	0	9	13	22	6	50
						%	0	18	26	44	12	100
Mode:	4	Mean:	3.5	SD:	0.93							
43. Shopping online is less stressful than shopping in-store (parking, queues, shopping with children etc)						Count	0	2	9	22	17	50

						%	0	4	18	44	34	100
Mode:	4	Mean:	4.08	SD:	0.83							

Sacrifices						Option					Total	
						1	2	3	4	5		
44. I miss the anonymity of in-store shopping where the store does not know who I am or my purchasing habits						Count	20	18	10	2	0	50
						%	40	36	20	4	0	100
Mode:	1	Mean:	1.88	SD:	0.87							
45. I miss the physical experience of shopping in-store where I can assess and compare products for myself						Count	5	12	5	14	14	50
						%	10	24	10	28	28	100
Mode:	4	Mean:	3.4	SD:	1.39							
46. I miss being able to have my purchases immediately						Count	0	12	20	10	8	50
						%	0	24	40	20	16	100
Mode:	3	Mean:	3.28	SD:	1.01							
47. It is inconvenient not being able to pay with cash when shopping online						Count	19	16	6	7	2	50
						%	38	32	12	14	4	100
Mode:	1	Mean:	2.14	SD:	1.2							

Appendix 5: Analysis of Variance

n – no. of responses	Mean – Arithmetic Mean	SD – Standard Deviation	SE – Standard Error	CI – Confidence Interval
SSq – Sum of squares	DF – Degrees of Freedom	MSq – Mean square	F – Ratio of Mean square / Mean square within	p – probability

Service Quality Dimension by Gender	n	Mean	SD	SE
female	34	3.835	0.343	0.0587
male	16	3.923	0.398	0.0996

Source of variation	SSq	DF	MSq	F	p
Gender	0.085	1	0.085	0.65	0.4239
Within cells	6.250	48	0.130		
Total	6.335	49			

Contrast	Difference	Scheffe 95% CI
female v male	-0.088	-0.308 to 0.132

Website Quality Dimension by Gender	n	Mean	SD	SE
female	34	3.854	0.474	0.0813
male	16	3.972	0.342	0.0855

Source of variation	SSq	DF	MSq	F	p
Gender	0.150	1	0.150	0.78	0.3802
Within cells	9.164	48	0.191		
Total	9.314	49			

Contrast	Difference	Scheffe 95% CI
female v male	-0.117	-0.384 to 0.149

Customer Satisfaction by Gender	n	Mean	SD	SE
female	34	3.820	0.395	0.0677
male	16	3.920	0.345	0.0863

Source of variation	SSq	DF	MSq	F	p
Gender	0.109	1	0.109	0.75	0.3898
Within cells	6.927	48	0.144		
Total	7.036	49			

Contrast	Difference	Scheffe 95% CI
female v male	-0.100	-0.332 to 0.132

Overall Quality Dimension by Gender	n	Mean	SD	SE
female	34	1.040	1.050	0.1800
male	16	1.070	0.890	0.2224

Source of variation	SSq	DF	MSq	F	p
Gender	0.010	1	0.010	0.01	0.9221
Within cells	48.240	48	1.005		
Total	48.250	49			

Contrast	Difference	Scheffe 95% CI
female v male	-0.030	-0.641 to 0.581

Service Quality Dimension by Age	n	Mean	SD	SE
25-34	29	3.809	0.398	0.0739
35-44	7	4.165	0.383	0.1448
45-54	12	3.872	0.089	0.0256
<25	2	3.538	0.000	0.0000

Source of variation	SSq	DF	MSq	F	p
Age	0.934	3	0.311	2.65	0.0598
Within cells	5.401	46	0.117		
Total	6.335	49			

Contrast	Difference	Scheffe 95% CI
25-34 v 35-44	-0.356	-0.775 to 0.063
25-34 v 45-54	-0.063	-0.404 to 0.279
25-34 v <25	0.271	-0.456 to 0.997
35-44 v 45-54	0.293	-0.180 to 0.766
35-44 v <25	0.626	-0.171 to 1.424
45-54 v <25	0.333	-0.426 to 1.093

Website Quality Dimension by Age	n	Mean	SD	SE
25-34	29	3.931	0.388	0.0721
35-44	7	4.188	0.670	0.2532
45-54	12	3.727	0.244	0.0703
<25	2	3.273	0.000	0.0000

Source of variation	SSq	DF	MSq	F	p
Age	1.751	3	0.584	3.55	0.0215
Within cells	7.562	46	0.164		
Total	9.314	49			

Contrast	Difference	Scheffe 95% CI
25-34 v 35-44	-0.257	-0.753 to 0.238
25-34 v 45-54	0.204	-0.200 to 0.608
25-34 v <25	0.658	-0.202 to 1.518
35-44 v 45-54	0.461	-0.099 to 1.021
35-44 v <25	0.916	-0.028 to 1.859
45-54 v <25	0.455	-0.444 to 1.353

Customer Satisfaction by Age	n	Mean	SD	SE
25-34	29	3.865	0.364	0.0675
35-44	7	4.066	0.579	0.2188
45-54	12	3.791	0.164	0.0474
<25	2	3.279	0.000	0.0000

Source of variation	SSq	DF	MSq	F	p
Age	1.029	3	0.343	2.63	0.0616
Within cells	6.007	46	0.131		
Total	7.036	49			

Contrast	Difference	Scheffe 95% CI	
25-34 v 35-44	-0.201	-0.643	to 0.240
25-34 v 45-54	0.075	-0.285	to 0.435
25-34 v <25	0.586	-0.180	to 1.353
35-44 v 45-54	0.276	-0.223	to 0.774
35-44 v <25	0.787	-0.053	to 1.628
45-54 v <25	0.512	-0.289	to 1.313

Overall Quality Dimension by Age	n	Mean	SD	SE
25-34	29	1.069	1.077	0.1999
35-44	7	0.571	0.994	0.3758
45-54	12	1.479	0.546	0.1575
<25	2	-0.125	0.000	0.0000

Source of variation	SSq	DF	MSq	F	p
Age	6.585	3	2.195	2.42	0.0778
Within cells	41.665	46	0.906		
Total	48.250	49			

Contrast	Difference	Scheffe 95% CI	
25-34 v 35-44	0.498	-0.665	to 1.661
25-34 v 45-54	-0.410	-1.358	to 0.538
25-34 v <25	1.194	-0.825	to 3.213
35-44 v 45-54	-0.908	-2.221	to 0.406
35-44 v <25	0.696	-1.518	to 2.911
45-54 v <25	1.604	-0.505	to 3.713

Service Quality Dimension by Income	n	Mean	SD	SE
20-30	15	3.836	0.148	0.0382
30-40	4	3.462	0.533	0.2665
40-50	11	4.203	0.251	0.0757
>50	20	3.777	0.361	0.0807

Source of variation	SSq	DF	MSq	F	p
Income	2.074	3	0.691	7.46	0.0004
Within cells	4.261	46	0.093		
Total	6.335	49			

Contrast	Difference	Scheffe 95% CI	
20-30 v 30-40	0.374	-0.123 to 0.871	
20-30 v 40-50	-0.367	-0.717 to -0.016	(significant)
20-30 v >50	0.059	-0.243 to 0.361	
30-40 v 40-50	-0.741	-1.257 to -0.226	(significant)
30-40 v >50	-0.315	-0.799 to 0.168	
40-50 v >50	0.426	0.094 to 0.757	(significant)

Website Quality Dimension by Income	n	Mean	SD	SE
20-30	15	3.739	0.272	0.0703
30-40	4	3.477	0.184	0.0919
40-50	11	4.455	0.291	0.0878
>50	20	3.780	0.367	0.0820

Source of variation	SSq	DF	MSq	F	p
Income	4.771	3	1.590	16.11	<0.0001
Within cells	4.542	46	0.099		
Total	9.314	49			

Contrast	Difference	Scheffe 95% CI	
20-30 v 30-40	0.262	-0.251 to 0.775	
20-30 v 40-50	-0.715	-1.077 to -0.353	(significant)
20-30 v >50	-0.040	-0.352 to 0.271	
30-40 v 40-50	-0.977	-1.510 to -0.445	(significant)
30-40 v >50	-0.302	-0.802 to 0.197	
40-50 v >50	0.675	0.333 to 1.017	(significant)

Customer Satisfaction by Income	n	Mean	SD	SE
20-30	15	3.758	0.229	0.0590
30-40	4	3.430	0.201	0.1007
40-50	11	4.319	0.225	0.0680
>50	20	3.750	0.342	0.0764

Source of variation	SSq	DF	MSq	F	p
Income	3.453	3	1.151	14.78	<0.0001
Within cells	3.583	46	0.078		
Total	7.036	49			

Contrast	Difference	Scheffe 95% CI	
20-30 v 30-40	0.328	-0.128 to 0.784	
20-30 v 40-50	-0.561	-0.883 to -0.240	(significant)
20-30 v >50	0.008	-0.268 to 0.285	
30-40 v 40-50	-0.889	-1.362 to -0.416	(significant)
30-40 v >50	-0.320	-0.763 to 0.124	
40-50 v >50	0.569	0.265 to 0.873	(significant)

Overall Quality Dimension by Income	n	Mean	SD	SE
20-30	15	0.767	1.129	0.2915
30-40	4	1.000	0.289	0.1443
40-50	11	1.955	0.837	0.2524
>50	20	0.775	0.775	0.1734

Source of variation	SSq	DF	MSq	F	p
Income	11.727	3	3.909	4.92	0.0048
Within cells	36.523	46	0.794		
Total	48.250	49			

Contrast	Difference	Scheffe 95% CI	
20-30 v 30-40	-0.233	-1.688 to 1.222	
20-30 v 40-50	-1.188	-2.214 to -0.161	(significant)
20-30 v >50	-0.008	-0.892 to 0.875	
30-40 v 40-50	-0.955	-2.464 to 0.555	
30-40 v >50	0.225	-1.191 to 1.641	
40-50 v >50	1.180	0.209 to 2.150	(significant)

Service Quality Dimension by Language	n	Mean	SD	SE
Afrikaans	11	3.916	0.461	0.1389
English	39	3.848	0.331	0.0531

Source of variation	SSq	DF	MSq	F	p
Language	0.040	1	0.040	0.30	0.5851
Within cells	6.295	48	0.131		
Total	6.335	49			

Contrast	Difference	Scheffe 95% CI
Afrikaans v English	0.068	-0.181 to 0.317

Website Quality Dimension by Language	n	Mean	SD	SE
Afrikaans	11	3.901	0.371	0.1118
English	39	3.889	0.457	0.0732

Source of variation	SSq	DF	MSq	F	p
Language	0.001	1	0.001	0.01	0.9391
Within cells	9.312	48	0.194		
Total	9.314	49			

Contrast	Difference	Scheffe 95% CI
Afrikaans v English	0.012	-0.291 to 0.314

Customer Satisfaction by Language	n	Mean	SD	SE
Afrikaans	11	3.890	0.352	0.1062
English	39	3.841	0.390	0.0624

Source of variation	SSq	DF	MSq	F	p
Language	0.020	1	0.020	0.14	0.7108
Within cells	7.016	48	0.146		
Total	7.036	49			

Contrast	Difference	Scheffe 95% CI
Afrikaans v English	0.049	-0.214 to 0.311

Overall Quality Dimension by Language	n	Mean	SD	SE
Afrikaans	11	1.136	0.681	0.2054
English	39	1.026	1.070	0.1713

Source of variation	SSq	DF	MSq	F	p
Language	0.105	1	0.105	0.10	0.7475
Within cells	48.145	48	1.003		
Total	48.250	49			

Contrast	Difference	Scheffe 95% CI
Afrikaans v English	0.111	-0.577 to 0.798

Service Quality Dimension by Connection	n	Mean	SD	SE
ADSL	13	3.988	0.391	0.1084
ISDN	2	3.846	0.000	0.0000
modem	13	3.633	0.311	0.0863
work	22	3.927	0.335	0.0715

Source of variation	SSq	DF	MSq	F	p
Connection	0.980	3	0.327	2.81	0.0500
Within cells	5.355	46	0.116		
Total	6.335	49			

Contrast	Difference	Scheffe 95% CI	
ADSL v ISDN	0.142	-0.610	to 0.894
ADSL v modem	0.355	-0.033	to 0.743
ADSL v work	0.062	-0.285	to 0.408
ISDN v modem	0.213	-0.539	to 0.965
ISDN v work	-0.080	-0.812	to 0.651
modem v work	-0.293	-0.640	to 0.053

Website Quality Dimension by Connection	n	Mean	SD	SE
ADSL	13	4.133	0.439	0.1216
ISDN	2	3.955	0.000	0.0000
modem	13	3.479	0.348	0.0966
work	22	3.988	0.336	0.0716

Source of variation	SSq	DF	MSq	F	p
Connection	3.180	3	1.060	7.95	0.0002
Within cells	6.133	46	0.133		
Total	9.314	49			

Contrast	Difference	Scheffe 95% CI		
ADSL v ISDN	0.178	-0.626	to 0.983	
ADSL v modem	0.654	0.238	to 1.069	(significant)
ADSL v work	0.145	-0.225	to 0.516	
ISDN v modem	0.476	-0.329	to 1.280	
ISDN v work	-0.033	-0.816	to 0.750	
modem v work	-0.509	-0.879	to -0.138	(significant)

Customer Satisfaction by Connection	n	Mean	SD	SE
ADSL	13	4.011	0.381	0.1056
ISDN	2	3.977	0.000	0.0000
modem	13	3.508	0.324	0.0898
work	22	3.950	0.303	0.0646

Source of variation	SSq	DF	MSq	F	p
Connection	2.109	3	0.703	6.56	0.0009
Within cells	4.927	46	0.107		
Total	7.036	49			

Contrast	Difference	Scheffe 95% CI	
ADSL v ISDN	0.034	-0.687 to 0.755	(significant)
ADSL v modem	0.503	0.130 to 0.875	
ADSL v work	0.060	-0.272 to 0.393	
ISDN v modem	0.469	-0.253 to 1.190	(significant)
ISDN v work	0.026	-0.675 to 0.728	
modem v work	-0.442	-0.774 to -0.110	

Overall Quality Dimension by Connection	n	Mean	SD	SE
ADSL	13	0.673	0.563	0.1560
ISDN	2	1.750	0.000	0.0000
modem	13	0.308	0.907	0.2514
work	22	1.648	0.893	0.1903

Source of variation	SSq	DF	MSq	F	p
Connection	17.850	3	5.950	9.00	<0.0001
Within cells	30.400	46	0.661		
Total	48.250	49			

Contrast	Difference	Scheffe 95% CI	
ADSL v ISDN	-1.077	-2.869 to 0.715	
ADSL v modem	0.365	-0.560 to 1.291	
ADSL v work	-0.975	-1.800 to -0.149	(significant)
ISDN v modem	1.442	-0.349 to 3.234	
ISDN v work	0.102	-1.640 to 1.844	
modem v work	-1.340	-2.165 to -0.515	(significant)

Service Quality Dimension by LastUsed	n	Mean	SD	SE
1–2 years	5	3.969	0.042	0.0188
6 months–1 year	13	4.053	0.363	0.1006
last 6 months	12	3.942	0.164	0.0475
> 2 years	10	3.662	0.456	0.1442
this month	10	3.669	0.365	0.1153

Source of variation	SSq	DF	MSq	F	p
LastUsed	1.384	4	0.346	3.14	0.0231
Within cells	4.951	45	0.110		
Total	6.335	49			

Contrast	Difference	Scheffe 95% CI
1–2 years v 6 months–1 year	-0.084	-0.645 to 0.477
1–2 years v last 6 months	0.027	-0.540 to 0.594
1–2 years v > 2 years	0.308	-0.276 to 0.891
1–2 years v this month	0.300	-0.283 to 0.883
6 months–1 year v last 6 months	0.111	-0.316 to 0.537
6 months–1 year v > 2 years	0.392	-0.056 to 0.840
6 months–1 year v this month	0.384	-0.064 to 0.832
last 6 months v > 2 years	0.281	-0.175 to 0.737
last 6 months v this month	0.273	-0.183 to 0.729
> 2 years v this month	-0.008	-0.484 to 0.469

Website Quality Dimension by LastUsed	n	Mean	SD	SE
1–2 years	5	3.909	0.249	0.1113
6 months–1 year	13	4.073	0.561	0.1557
last 6 months	12	4.106	0.205	0.0590
> 2 years	10	3.791	0.403	0.1275
this month	10	3.491	0.273	0.0862

Source of variation	SSq	DF	MSq	F	p
LastUsed	2.690	4	0.673	4.57	0.0035
Within cells	6.623	45	0.147		
Total	9.314	49			

Contrast	Difference	Scheffe 95% CI		
1–2 years v 6 months–1 year	-0.164	-0.813	to 0.484	
1–2 years v last 6 months	-0.197	-0.853	to 0.459	
1–2 years v > 2 years	0.118	-0.557	to 0.793	
1–2 years v this month	0.418	-0.257	to 1.093	
6 months–1 year v last 6 months	-0.033	-0.526	to 0.461	
6 months–1 year v > 2 years	0.283	-0.236	to 0.801	
6 months–1 year v this month	0.583	0.064	to 1.101	(significant)
last 6 months v > 2 years	0.315	-0.212	to 0.843	
last 6 months v this month	0.615	0.088	to 1.143	(significant)
> 2 years v this month	0.300	-0.251	to 0.851	

Customer Satisfaction by LastUsed	n	Mean	SD	SE
1–2 years	5	3.828	0.204	0.0911
6 months–1 year	13	4.002	0.476	0.1319
last 6 months	12	4.058	0.136	0.0393
> 2 years	10	3.742	0.409	0.1294
this month	10	3.533	0.235	0.0743

Source of variation	SSq	DF	MSq	F	p
LastUsed	1.946	4	0.487	4.30	0.0050
Within cells	5.090	45	0.113		
Total	7.036	49			

Contrast	Difference	Scheffe 95% CI		
1–2 years v 6 months–1 year	-0.174	-0.742	to 0.395	
1–2 years v last 6 months	-0.230	-0.805	to 0.345	
1–2 years v > 2 years	0.086	-0.506	to 0.678	
1–2 years v this month	0.295	-0.296	to 0.887	
6 months–1 year v last 6 months	-0.056	-0.489	to 0.376	
6 months–1 year v > 2 years	0.260	-0.194	to 0.714	
6 months–1 year v this month	0.469	0.015	to 0.924	(significant)
last 6 months v > 2 years	0.316	-0.146	to 0.779	
last 6 months v this month	0.526	0.063	to 0.988	(significant)
> 2 years v this month	0.209	-0.274	to 0.692	

Overall Quality Dimension by LastUsed	n	Mean	SD	SE
1–2 years	5	0.525	0.205	0.0919
6 months–1 year	13	0.933	0.867	0.2404
last 6 months	12	1.865	1.099	0.3174
> 2 years	10	1.013	1.084	0.3428
this month	10	0.525	0.568	0.1795

Source of variation	SSq	DF	MSq	F	p
LastUsed	12.290	4	3.072	3.84	0.0090
Within cells	35.960	45	0.799		
Total	48.250	49			

Contrast	Difference	Scheffe 95% CI		
1–2 years v 6 months–1 year	-0.408	-1.919	to 1.103	
1–2 years v last 6 months	-1.340	-2.868	to 0.189	
1–2 years v > 2 years	-0.488	-2.060	to 1.085	
1–2 years v this month	0.000	-1.573	to 1.573	
6 months–1 year v last 6 months	-0.932	-2.081	to 0.217	
6 months–1 year v > 2 years	-0.080	-1.287	to 1.128	
6 months–1 year v this month	0.408	-0.800	to 1.615	
last 6 months v > 2 years	0.852	-0.377	to 2.081	
last 6 months v this month	1.340	0.110	to 2.569	(significant)
> 2 years v this month	0.488	-0.796	to 1.771	