

**SMALL ONLINE APPAREL BUSINESSES  
IN MALAYSIA:  
A FRAMEWORK FOR CUSTOMER SATISFACTION**

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A thesis submitted in fulfillment of the requirements for the  
degree of Doctor of Philosophy

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## DECLARATION

I, Noorshella Che Nawi, declare that the PhD thesis “Small Online Apparel Businesses In Malaysia: A Framework for Customer Satisfaction” is no more than 100,000 words in length including quotes and exclusive the tables, figures, appendices, bibliography, references and footnotes. This thesis contains no material that has been submitted previously, in whole or in part, for the award of any other academic degree or diploma. Except where otherwise indicated, this thesis is my own work.

Signed.....

Noorshella Che Nawi

30<sup>th</sup> December 2012

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## **ABSTRACT**

Increasingly, customer satisfaction has been viewed as critical to the success of online businesses, with the growing understanding that customer satisfaction is the key to sustain the marketplace especially for online apparel businesses in Malaysia. The objectives of this research were to identify factors that may influence Malaysian customer's online shopping satisfaction from the perspective of the total online shopping experience, and to apply this to the online environment in the Malaysian e-retailing industry. In response, this thesis develops a model for better measuring customer satisfaction with difference purchase phases: Phase 1: exploratory study; Phase 2: at point-of-purchase and Phase 3: post-purchase, based on review of the literature and research. In particular, this thesis sought to develop a framework that represents the factors that contribute to customer satisfaction and behavioural intention, to assess the degree of customer satisfaction and behavioural intention, to investigate the mediating variables for overall satisfaction (OS) and to provide recommendations for improving customer satisfaction. The thesis presents and discusses empirical findings from a survey of 268 respondents in Phase 2 (point-of-purchase) and 154 respondents in Phase 3 (post-purchase) using structural equation modeling (AMOS 20) and non-parametric test using SPSS 20.

This study successful produced a better model for measuring customer satisfaction specifically in the measurement and comparison of overall satisfaction at each stage. This study also identified the dimensions that fit well with an e-service quality construct. The findings also largely support the hypothesized relationships proposed in the theoretical model. Specifically, the results revealed that customer satisfaction has an impact on e-service quality which in turn leads to intention to use the website, but customer attitude did not influence their behavioural intention related to the website. Further, the findings indicated that overall satisfaction supports the hypothesis as mediating variables. In addition, there is a difference in overall satisfaction between point-of-purchase and post-purchase for all respondents and only respondents who answered the survey in Bahasa Melayu shows a different level of overall satisfaction between these two phases (at point-of-purchase and post-

purchase).The results indicated that Bahasa Melayu respondents show a significant difference at point-of-purchase compared to English respondents but no difference is recorded between the two groups at the post-purchase phase.

The study therefore contributes new knowledge specifically in understanding consumer behavior and culture factors especially language that may affect the overall satisfaction of online purchasing in the context of apparel sector. Besides, this research provided a guideline which are readily been adopted for online retailers to sell their product especially selling apparel online.

## **LIST OF ABBREVIATIONS**

AMOS	Analysis of Moment Structure
AVE	Average Variance Extracted
ATT	Attitude
BI	Behavioral Intention
CFI	Comparative Fit Index
CR	Critical Ratio
CS	Customer Service
DS	Delivery Service
EC	Electronic Commerce
EDS	Expected Delivery Service
ECS	Expected Customer Service
e-SQ	Electronic Service Quality
GB	General Belief
INFO	Information Quality
MA	Merchandise Attributes
OS	Overall Satisfaction
RMSEA	Root Mean Square Error of Approximation
SEM	Structural Equation Modeling
SRMR	Standardized Root Mean Square Residual
SPSS	Statistical Package for Social Science
TC	Transaction Capability & Payment

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# **CHAPTER ONE**

## **INTRODUCTION**

### **1.0 INTRODUCTION**

This chapter provides an introduction to the scope of this thesis. It is divided into eleven sections. Section 1.1 presents a general overview of statistical analysis on Internet penetration. The second section (section 1.2) specifically discusses an overview of e-commerce in Malaysia and its culture, followed by an explanation of selling apparel online (section 1.3). The new platform for selling apparel online (Blogspots) is discussed section 1.4 and the issue of customer satisfaction on buying apparel online in section 1.5. Section 1.6 identifies the problem statement that is formulated to achieve the objectives of this research. Section 1.7 and section 1.8 describe the methodology used to achieve the objectives. The contribution to knowledge is briefly discussed in section 1.9 followed by the significance of this study. Finally, the overall structure of the thesis content is outlined in section 1.11.

### **1.1 GENERAL STATISTICAL ANALYSIS ON INTERNET PENETRATION**

It is broadly known that the Internet is the worldwide interconnection of many different computer networks. Generally, the popular activities used over the Internet include e-mail, searching for information, reading the news, communicating with people, watching movies, listening to music, studying, researching, and shopping. For researchers, the Internet is a great platform and good means for seeking and gathering information. This view is supported by Fu and Slavency (2002) who found that

activities on the Internet are mainly on gathering information (86.3%), searching (63.01%) and browsing (61.27%).

Based on statistics from the International Telecommunication Union (2012), there were around 2.4 billion Internet users worldwide in 2012. This represents about 36% of the world population. Research by Miniwatts Marketing Group (2010) shows that there are about 17 million Internet users in Malaysia. All this shows that the Internet has experienced phenomenal growth around the world, especially in Malaysia, and this growth is expected to rise from year to year.

According to Kent (2011) in his blog based on an IDC ASEAN report, Internet users in Malaysia have risen from year to year; from 16 million in 2008 to 17 million in 2011. The report also estimated that these numbers would grow to 18.9 million in 2012. Aligned with the growth of Internet users in Malaysia, the number of Internet buyers has also increased from year to year. Furthermore, Kent (2011) predicted that in 2012, the number of Internet buyers would rise to 10.5 million compared to 9.7 million in 2011.

In the emerging global economy, e-commerce has increasingly become a necessary component of business strategy and a strong channel for economic development. The integration of information and communication technology (ICT) has enhanced productivity, encouraged customer participation and enabled customization. According to Doole and Lowe (2004/2005), the Internet has had an effect on the way that individuals and organizations communicate around the world. In fact, the effect has been dramatic in the way firms carry out both their internal and international business.

One of e-commerce's impacts is the way it has changed the traditional ways of doing business as well as creating many new forms of business such as selling apparel over the Internet. In order to well understand how Internet consumers behave, several studies have been done on selling apparel online during recent years (Goldsmith and Bridges 2000; Kim and Kim 2004; Chae et al. 2006; Li and Zhang 2006; Bertha and de Klerk 2010).

## **1.2 THE OVERVIEW OF E-COMMERCE IN MALAYSIA AND ITS CULTURE**

Despite the increasing number of online shoppers in Malaysia, there are still some barriers which have prevented some of them from buying products online due to the risk of doing this (Haque and Khatibi 2006). One study conducted by Peterson et al. (1997), showed customers believed that shopping at traditional retail stores had less perceived risk compared to the online environment. Customers believed that by visiting a retail store, they could examine the product physically (Schmit 1999). This is supported by a report from TNS Interactive (July 2000) that indicated that in such a culture Asian people prefer to visit a retail store. It suggests that they strongly believed that culture plays an important role in persuading Malaysian people to purchase online (Haque and Khatibi 2006). Other researchers believe that online shopping is still at an early stage in Malaysia (Delafrooz et al. 2011; Haque and Khatibi 2006; Haque and Khatibi 2005; Schmit 1999).

The role of culture, especially the country's language, has played a vital role in Malaysia. According to Jeannet and Hennessey (1999), the impact of language on online shopping may affect the communication process among marketers and other languages may pose difference in thinking. In Malaysia, people mostly prefer to communicate in their national language (Bahasa Melayu) and also prefer to browse a website written in Bahasa Melayu rather than English (Haque and Khatibi 2006). It should also be added that visiting a shopping mall is a revered family activity and it is not easy to influence Malaysian people to purchase products online, as visiting shopping malls is part of their culture (Haque and Khatibi 2006).

Malaysia was ranked tenth in terms of the top ten Asian Internet countries in 2011 (Miniwatt Marketing Group, 2001-2010). According to the Malaysian Minister of Communication, Dato' Seri Utama Dr. Rais Yatim, Malaysia currently has 17.5 million Internet users as of April 2011 and this figure has increased from 16.9 million in 2010. Apart from that, there were 5 million recorded broadband users, 2.5 million wireless broadband users and 10 million 3G subscribers (Kugan 2011).

Aligned with the growth of Internet penetration in Malaysia, the number of people who like to shop online has also increased. Based on a report by IDC ASEAN (2008), a total of 7.4 million people were recorded as buying online in 2008, and they estimated that 10.5 million people would purchase online in 2012. Thus it can be seen that Malaysian people are pleased with the advantages brought by e-commerce. Yee and Seong (2009) stated that online Malaysian shoppers believe that shopping online offers convenient purchases, affordable alternatives and discounts compared to retail shops. Selling apparel online through Blogspots<sup>1</sup> and websites is one example of the embrace of e-commerce in Malaysia.

According to Shafie et al. (2011), Blogger was found to be the most popular blogging platform for small online businesses' Blogspots to market their product or service online. This is because blogs allow owners to quickly update their product, direct communication between seller and buyer, provide prompt feedback, allow sharing personal opinions and personalize touch (Shafie et al. 2011). Not just those, but having low cost maintenance and free setup are other advantages of using a Blogspot to sell products online.

### **1.3 SELLING APPAREL OVER THE INTERNET**

Electronic retailing continues to grow in size and importance as increasing numbers of consumers buy online, and apparel purchases represent a significance portion of online purchasing. According to Goldsmith and Goldsmith (2002) not only does buying apparel online represent a new form of consumer behaviour in the computer-mediated environment, but apparel e-retailers also face intense competition. Lee and Park (2009) note that apparel is now being sold through the Internet. They provide an example: in 2006 10% out of all apparel purchases in the US occurred online.

According to Auchard (2005) apparel has become the second most money-making activity in the e-commerce domain, surpassing jewellery and automobile sales. For

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<sup>1</sup>“A Blogspot is an online journal that acts as a shop or store that uses blogging facilities as their trading platform on free blogging platforms such as Blogger, Tumblr, WordPress and Posterous” - Shafie et al. (2011)

the first time, the revenue generated from online apparel sales surpassed the revenue from traditional buying as consumer spending at apparel websites exceeded \$US4.68 billion in 2005 and that retailers gain advantage from the emergence of e-commerce in their business.

Many major brands like Tommy Hilfiger, Reebok and Armani Exchange have now moved to this new way of selling their products online. According to DesMarteau (2004), their website developers saw an explosion in selling apparel online and added that apparel lifestyle brands not only use the Internet as a medium for selling their product but also tried to take the advantage of the Web's multimedia, interactive facilities.

Peters (2007) reported that Forrester Research and Shop.org on their annual survey report revealed that online purchases by U.S. consumers increased by a better-than-expected 25% last year, due to a 61% increase in apparel sales. The advanced technologies which let shoppers closely look at web site images and see clothing in various colours, combined with more liberal return policies by many e-retailers led to the big jump in the apparel sector. According to the Shop.org executive director, Scott Silverman (2007) cited in D'innocenzio (2008):

*“Retailers are systematically addressing the hurdles for customers to buy online and the risk and uncertainty, particularly for shopping for clothes, where you're buying without being able to touch and even feel them”*

#### **1.4 BLOGSPOTS: A NEW E-COMMERCE PLATFORM FOR SELLING APPAREL IN MALAYSIA**

In Malaysia, there is a trend for many small online businesses to market their products using Blogspots especially for selling apparel. Based on the Malaysian Directory Blogger (2008) there were a total of 5261 blogs which use the Blogger platform to sell their products and share knowledge and experience. This directory has been divided into 27 categories based on content. Among these, blogs for personal purposes rated the highest with 1845 blogs, followed by those for a shopping purpose

which had 911 blogs (Malaysia Blogger 2008). Apart from 911 blogs for shopping purposes, 808 blogs have been categorized as selling apparel. Malaysian Blogger (2008) added that more than 8 million users have visited the Blogspots in Malaysia and also around the world. Shafie et al. (2011) listed the attributes in Blogspots (e.g. owner's telephone number, owner's email address, privacy policy, company address, consumer feedback form).

## **1.5 CUSTOMER SATISFACTION WITH CLOTHING**

There are many studies on customer satisfaction of apparel purchases in the online environment context (Khakimdjanova and Park 2005; Chae et al. 2006; Kim et al. 2006; Kim and Damhorst 2010; Hong and Kim 2011). For example, many studies adapted the Oliver et al. (1997), quality-satisfaction-behavioural intention link model as their framework in investigating the potential drivers and outcomes of customer satisfaction in an apparel online context (Nysveen et al. 2005; Parasuraman et al. 2005; Rodgers et al. 2005).

Chae et al. (2006) conducted a research project on tennis sportswear looking at pre-purchase (customer satisfaction may occur at any point in the purchase process) and post-purchase satisfaction and fashion involvement of women who participated in tennis. They revealed that there was a positive relationship on satisfaction between pre-purchase and post-purchase. Also, there was a positive relationship between pre-purchase satisfactions and fashion involvement. This suggests that people who were strongly involved with tennis probably were more interested in pre-purchase satisfaction.

A study by Lee et al. (2011) was interested in examining the satisfaction among customers for mass customization. Their findings indicated that satisfaction was not influenced by expectations of innovative experiences but was primary driven by the performance of the site and disconfirmation of expectations. This finding supports previous studies in which disconfirmation had a strong direct effect on satisfaction (Oliver 1980; Oliver 1981) and indirect effect on satisfaction (Oliver and DeSarbo 1988).

## **1.6 PROBLEM STATEMENT**

Recently, some researchers have realized that customer satisfaction plays a crucial role in sustaining the marketplace (Garver and Gagnon 2002). According to them, there is a significant relationship between customer satisfaction and organizational performance. Thus, it is important to make sure that customers are satisfied with the services that have been delivered. If not, retailers will lose their market. Kim and Stoel (2004) stated that customers must be satisfied with their shopping experience, otherwise they will not return. Less studies have been done that focus on uncovering the underlying constructs of customer satisfaction with online shopping, from the perspective of total retail experience following the purchase process and surprisingly the impact of payment was seldom touched (Xia et al. 2008). Huang and Adam (2004) investigated the key factors of e-satisfaction from customers. Through content analysis, nine key determinants affecting e-satisfaction were identified in pre-order and post-order shopping phases. Their findings showed that the primary determinant in customers' positive reviews was on-time delivery and the primary determinant in the customers' negative reviews was poor customer support services. These two primary determinants in the post-order phase appear to be the most important factors that influence customers' purchase decisions and adoption of e-tailers on the Internet.

Another issue in measuring e-service quality is whether reflective or formative measurement is more appropriate, and this is becoming more and more hotly debated in marketing research (Barrutia and Gilsanz 2009). The misspecification of the measurement scales will lead to a bias in structural parameter estimation, cause measurement error and will prime an incorrect assessment of structural relationship, according to Jarvis et al. (2003) and MacKenzie et al. (2005).

The broad aim of this study was to develop a framework for investigating how effectively small online apparel businesses in Malaysia are using the Internet to influence customers' online shopping satisfaction with regard to consumer behaviour factors of the shopper's Internet profile. According to Kotler (1988), purchase decisions are influenced by the buyer's unique set of cultural, social, personal and psychological factors. As previously discussed in Section 1.1, the impact of language plays a vital role in Malaysia. Besides, visiting a shopping mall is a revered family

habit (Haque and Khatibi 2006). Commonly, people's purchase of products or services online is influenced by the external environment, demographics, personal characteristics, e-store features, belief about online shopping and behaviour intention (Li and Zhang 2006)

Although the rapid growth of e-retailing may reflect convincing advantages of shopping on the Internet versus at brick and mortar stores, consumers, however are sometimes frustrated with e-shopping. The same problem occurs when customers purchase apparel online. Customers take a risk when purchasing apparel online because they cannot try on the garment to check fit, texture or colour (Kim et al. 2006). Due to a need for an adequate amount of product information to make a purchasing decision, online shoppers largely depend on information available on the web. In addition, due to the absence of a salesperson to answer the shoppers' questions, it is especially important for online apparel retailers to have necessary information available on their web site (Kim and Stoel 2005).

Recently, the researcher has noted that many of the prior service quality measures take into account the entire purchase and even the after-purchase process (Suh and Han 2003; Muyllea et al. 2004; Parasuraman et al. 2005; Kim et al. 2006). Bauer et al. (2006) present a view of the four purchase phases and try to link with the satisfaction and value perceptions but do not indicate how each dimension fits into the phases. No study has been conducted at point-of-purchase and post-purchase. Thus, this study aimed to investigate customer's overall satisfaction with online apparel dealings in Malaysia at point-of-purchase and post-purchase. This study also identifies any differences in overall satisfaction items between point-of-purchase and post-purchase.

## **1.7 OBJECTIVES OF THE STUDY**

Hence, the objectives of this research were to identify factors that may influence Malaysian customer's online shopping satisfaction from the perspective of the total online shopping experience, and to apply this to the online environment in the Malaysian e-retailing industry. Specifically, this study attempted to achieve the following objectives:

1. To develop a framework to represent the factors that contribute to customer satisfaction with small online apparel businesses at point-of-purchase and post-purchase
2. To assess the degree of customer satisfaction and behavioural intentions in small online apparel businesses at point-of-purchase and post-purchase
3. To investigate whether consumer behaviour (overall satisfaction and behavioural intention) and the profile of Internet shoppers affect satisfaction in online apparel purchases
4. To provide recommendations towards improving customer satisfaction in small online apparel businesses in the future.

## **1.8 RESEARCH METHODOLOGY USED IN THIS THESIS**

Data collection in this study involved three stages which were:

1. Phase 1-exploratory study,
2. Phase 2-point-of-purchase and
3. Phase 3, post-purchase.

In Phase 1, an exploratory study was conducted by interviewing (face-to-face interview) ten owners of Blogspots and websites. The purpose of conducting these interviews was to draw as much information as possible in refining and restructuring the questionnaires for Phase 2. Meanwhile, 800 online apparel customers were involved in Phase 2 (at point-of-purchase). Their participation was gathered from the owners of the Blogspots and websites. Respondents for Phase 2 were surveyed at the point-of-purchase. At the end of the survey, they were asked whether they wished to participate in a follow-up survey three months later. In Phase 3, respondents were investigated on their post-purchase experiences. Their details were obtained from the survey email they provided in Phase 2. Once the data collection was finished, the process of pairing and matching from Phase 2 was conducted to identify the same respondents. All emails addresses then were deleted due to privacy considerations. Details are explained in Chapter Four.

SurveyMonkey was chosen as a platform in collecting the data for this study. The questionnaire was developed using a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). Due to the respondents being non-English speakers, translation was done by a language expert. The questionnaire design was straightforward and comprehensible, avoiding ambiguities, estimations and leadings and presumptive questions as suggested by Norizan (2001).

Descriptive statistics were performed using SPSS (Statistical Package for the Social Sciences) to screen the collected data prior to performing structural equation modelling (SEM). Twelve hypotheses in this study were tested using SEM and the model fit was determined through goodness-of-fit indices as suggested by Kline (2005) and the significance of paths through using coefficient parameter estimates. Meanwhile, five hypotheses were tested using Wilcoxon Ranked Sum Test and Mann-Whitney U Test from SPSS but another five hypotheses could not be tested due to the different items remaining. Details can be read in Chapter Five.

## **1.9 CONTRIBUTION TO KNOWLEDGE**

At a more theoretical level, the results of this study will increase our understanding of the satisfaction process in the e-commerce environment with consideration to consumer behaviour and cultural factors especially language that may affect the overall satisfaction of online purchasing. At a more practical level, it is intended that the website design for e-commerce environment guidelines produced should be in a form whereby they can readily be adopted for use by other small businesses. Many studies have examined either non-selling websites or sites selling products such as books, music, travel or computers, but dimensions of website quality for e-retailers selling soft goods such as apparel have not previously been investigated. Depending on the types of products, shoppers have different website attributes that they consider important (Elliot and Fowell 2000). Nowadays, many people are buying apparel offline in the traditional way, where this involves high touch where they could see the product, use traditional payment style and self-pickup and all this leads to satisfaction.

This is true in the Malaysian context where visiting shopping malls is a cultural activity and it is not easy to accept online shopping (Haque and Khatibi, 2006). In the future, there will be more online shopping in a high-technology and virtual environment where customers cannot feel the fabric or try the garment to check the fit as well as a change in the method of payment and product delivery. Considering these changing ways of doing business in online retailing, a crucial issue has been raised of how the online shopper can be satisfied in this online environment. Consumer behaviour is the study of the process involved when an individual selects, purchases, uses or disposes of products, services, ideas or experiences to satisfy needs and desires (Jongeun 2004). In order for the Internet to expand as a retail channel, it is important to understand the attitudes and overall satisfaction which can lead to buying intentions among online shoppers.

#### **1.10 STATEMENT OF SIGNIFICANCE**

Considering that Internet shopping is still at an early stage of development, little is known about customer satisfaction and behavioural intention at point-of-purchase and post-purchase especially in small online apparel businesses. This is especially true in the context of Malaysia where Internet shopping is still new and consumers are less familiar and often more sceptical towards online shopping. According to Haque and Khatibi (2006), online shopping in Malaysia is something new but promising. Thus this study can help marketers to realize that customer satisfaction is a key to sustaining the marketplace by creating a clear framework in the eyes of Malaysian people. According to Garver and Gagnon (2002), market orientation and customer satisfaction research show there is a direct connection between customer satisfaction and organizational performance. Besides this, retailers will need to recognize which dimensions they can focus on to increase their customer satisfaction. Malaysia's cultural mosaic is marked by many different races and cultures and language impacts on overall satisfaction and behavioural intention among Malaysian people. There is a huge research gap that exist especially between developed and developing countries that can limit the generalization of research results from the developed countries to the developing countries context (Dewan and Kraemer 2000). This research is needed as non-transferability of findings from research in developed countries is a problem,

and also for improvement of understanding the determinants of online shopping in developing countries (Dewan and Kraemer 2000). Also, there is a lack of research in specific industry areas such as the garment industry.

At a more detailed level, the study contributes to both information systems (IS) and marketing research in the areas of e-commerce technology, consumer behaviour, attitudes and customer satisfaction. The study also contributes to development of a model of customer satisfaction in a small online business context from a Malaysian perspective at point-of-purchase and post-purchase. In addition, it identifies which dimensions can affect customer satisfaction in the e-commerce environment. It will also contribute to the international literature on customer satisfaction of small online apparel businesses. More than that, this study also investigated the mediation effect from overall satisfaction and attitude, and these were investigated in their relationships involving behavioural intention.

In summary, this study develops and represents a framework of customer satisfaction in small online apparel businesses in Malaysia that will take into account point-of-purchase and post-purchase.

## **1.11 CHAPTER ORGANIZATION**

The study contains six chapters as follows.

The study begins with Chapter One which outlines an introduction to the research. It consists of research background, research problem, research questions and research objectives. Significance and organization of the study are also addressed.

Chapter Two and Chapter Three introduce the previous literature related to e-commerce, purchasing apparel over the Internet, the factors which influence shopping online, customer satisfaction and the proposed framework. The twenty-two hypotheses to be tested and analyzed are also introduced.

Chapter Four outlines the methodology of the research and the development of hypotheses is addressed as well. The research approach, questionnaire design and

construct measurement, sampling and data analysis procedure are also discussed in this section.

Chapter Five outlines the pre-analysis data screening results. The research outcomes derived from content analysis and Structural Equation Modeling (SEM) are also reported here. These constitute the findings on this study.

Chapter Six offers a summary and conclusion of the findings and implications of the study. Research limitations and recommendations are stated as well.

Bibliographies and appendices are included in the end of the dissertation.

# **CHAPTER TWO**

## **REVIEW OF THE LITERATURE**

### **2.0 INTRODUCTION**

This chapter reviews general literature related to the growth and penetration of e-commerce worldwide and as well as in Malaysia. Firstly, this chapter starts by introducing the definition of e-commerce and includes the type of e-commerce as well as a snapshot of e-commerce activity in Malaysia. Further, small online business Internet commerce (SBIC) is also briefly discussed (section 2.2). The next section provides an overview of current trends in Internet use in Malaysia and its impact on selling apparel online is also discussed. The following three sections are then devoted to discussing general customer satisfaction, overview of behavioural intention and service quality. A summary of this chapter is presented in the last section.

### **2.1 AN OVERVIEW OF EMERGANCE OF E-COMMERCE**

Ling et al. (2011) stated that due to the emergence and growth of the Internet in Malaysia, the development of electronic commerce (EC) has become an important trading element in changing the way of doing business from traditional markets to online markets. The worldwide Internet population exceeded 6 billion in 2008 and of that, 16.9 million were from Malaysia (2010). This shows that the Internet has experienced tremendous growth globally and is still increasing dramatically, especially in Malaysia, and this growth is expected to continue.

The growth of the Internet has created many opportunities for businesses and individuals to explore new ways of life where online business is a key aspect of these new forms of living (Har and Eze 2011). According to Jehangir et al. (2011), it could not be denied that e-commerce and Internet technologies have an impact on the firm's performance. The advantage of e-commerce is due to access to the global market and suitable for all types of businesses (Jehangir et al 2011). For instance, not only are

products now available in online businesses but customers are also showing an increasing interest in online service businesses. One of the impacts of Internet technology is that it has enabled businesses to easily reach consumers without geographical boundaries. Simply put, e-commerce comprises the online transactions of business, featuring the links between the computer systems of the vendor, host and buyer.

### **2.1.1 Definition of e-commerce (EC)**

There have been various definitions of what EC actually encompasses and some include electronic data interchange (EDI), electronic funds transfer (EFT) and all credit/debit activities (Collecchia n.d.). This is because the definition itself comes from a researcher perspective and does not rely on the element of e-commerce. Some authors defined e-commerce by limiting it to retail sales to consumers for which the transaction and payment take place on the Internet. For instance, Turban et al. (2002) defined e-commerce as a process of buying and selling products or services through the Internet. Further, Bauer and Glasson (1999) have extended the definition of e-commerce with added activity just not on buying and selling products but also buying and selling information.

However, Collecchia (n.d.) argued that the definition of e-commerce can be varied depend on three key elements: 1. Activities/transactions; 2. applications; 3. communication networks. Simply put, the definition of e-commerce should cover the issues of transforming the economic activities, focusing on certain technologies and not only justify the recent attention given by policy makers (Collechia n.d.). Hence, Collechia (n.d.) listed three questions before making any definition which are: (1) Why we want to measure; (2) What do we want to measure; (3) What can we measure.

Whiteley (2000) stated that EC uses Information Systems, Information Technology or Information and Communication Technologies to achieve the provision of information and buying and selling goods and services among business stakeholders. Internet based technology is one of EC's impacts that provides the widest network of information systems. Similarly, Doernberg et al. (2001) defined e-commerce as commercial activities that are carried out using a computer which include online

trading of goods and services, electronic funds transfers, online trading financial instruments, electronic data exchanges between companies and electronic data exchanges within a company.

Nowadays the scope of e-commerce ranges from simple Web presence to sharing business processes connecting different organizations. The World Wide Web ("www" or simply "the Web") has moved far beyond its original presence to become a new application environment. This has led to a dramatic and rapid growth of the Web, triggered by organizations offering Web-based products and services and therefore asking for e-commerce applications (Gaedke and Turowski 2000).

According to Businessstoun (2001-2003), e-commerce is the pre-eminent buzzword of the online business transformation. The idea of e-commerce actually is to use the Internet to enhance business operations. In other words, customers are given access to company computer systems and allowed to serve themselves. It is more about committing a company to serious online efforts and linking its website to the nature of its business.

### **2.1.2 Types of e-commerce**

E-commerce can be divided into seven categories: collaborative commerce (c-commerce), business-to-consumers (B2C), consumers to business (C2B), consumer – to-consumer (C2C), Intrabusiness (intraorganizational) commerce, government-to-citizens (G2C) and to others and mobile commerce (m-commerce). B2B commercial transactions are typically between a wholesaler and a retailer. According to these five categories, B2B, which covers all transaction between companies, has been well-established, while B2C describes the activities of businesses serving end-customers with products or services. In Malaysia, as forecasted by IDC, B2C which includes online purchasing of goods (products and services) and bill payment had reached an astonishing figure of RM15.3 billion in 2009 (Yee and Seong 2009). For c-commerce, business partners normally collaborate electronically and this collaboration occurs between and among business partners along the supply chain. Intrabusiness (intraorganizational) commerce refers to an organization using e-commerce internally

in order to improve its operations. Meanwhile, C2C involves the electronically-facilitated transactions between consumers through a third party. In this type of business, a customer posts an item for sale and other consumers bid to purchase it (e.g. eBay). Normally, the sites are only intermediaries which are only there to match consumers. Consumer-to-business (C2B) is where consumers (individuals) make known of particular need for a product or service, and organizations compete to provide the product or service to consumers. For instance, when consumers write reviews or give a brilliant idea for a new product development, then this individual is creating value to the organization if the organization adopts the input. Government provides services to its citizen through electronic commerce technologies and can also do business with other governments (G2G) as well as with businesses (G2B). This is known as G2C. M-commerce is done in a wireless setting such as using cell phones to access the Internet.

### **2.1.3 A snapshot of e-commerce activity in Malaysia**

Rapid developments in information technology and telecommunications have set the tempo of an electronic revolution leading to the emergence of e-commerce. The advent of the Internet offers many business firms new opportunities and challenges. Besides functioning as a communication medium, the Internet has been used as a market space where buyers and sellers exchange information, goods and services without the hindrances of time and geographical constraints. It allows interactivity to create a shared real-time common marketplace and this can lead to a shared global market-space.

As previously mentioned, in the Asian region, Malaysia ranks tenth in terms of the top ten Asia Internet countries with 17 million users in 2011 (Miniwatts Marketing Group 2001-2010). The number of Internet subscribers in Malaysia is expected to reach the 10 million mark in the next five years, based on the growing trend of Internet users in the last three years as Malaysia has moved towards advanced information, communications and multimedia services (Miniwatts Marketing Group 2010). Figure 2.1 shows the Internet users recorded in year 2011.

Figure 2.1: Asia's Top Internet Countries (March 31, 2011)

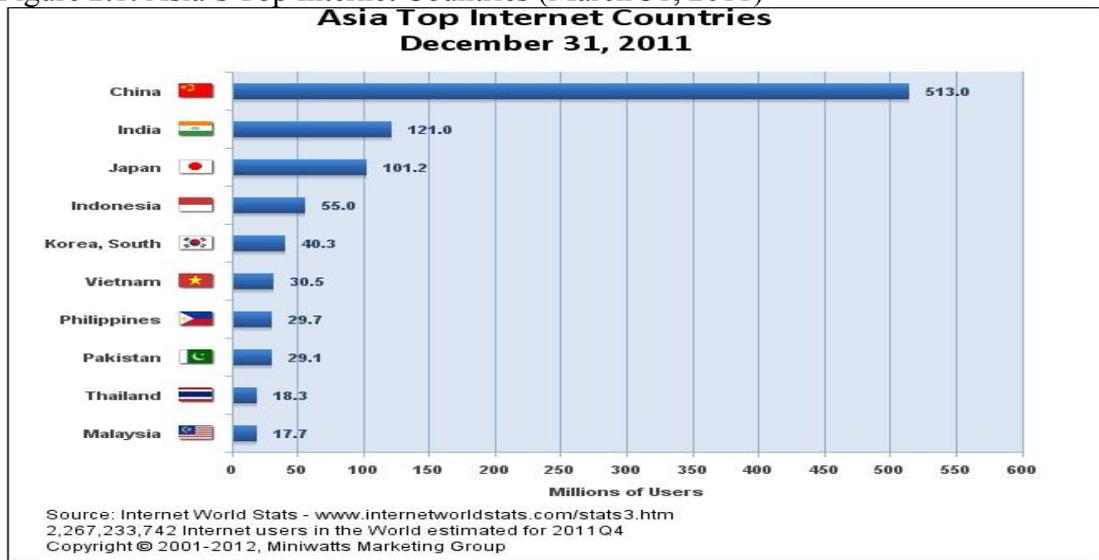
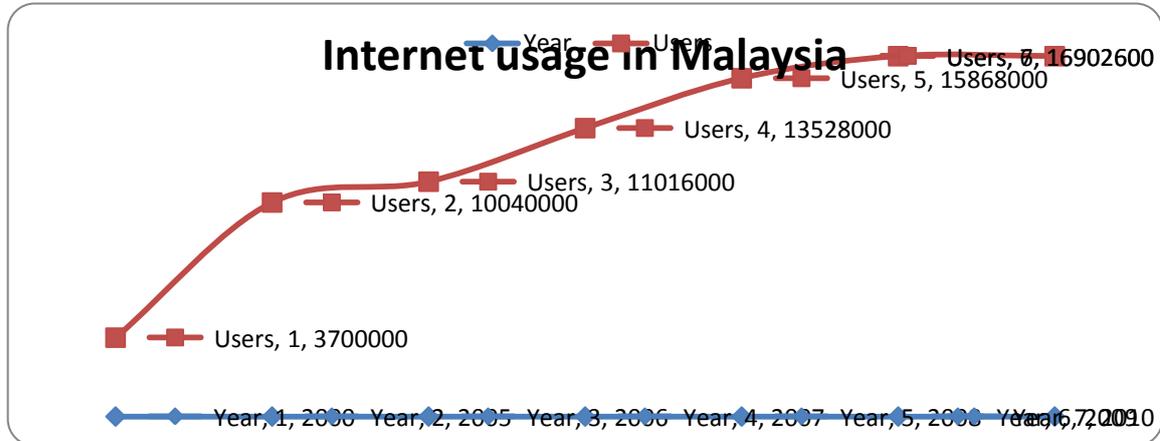


Figure 2.2 below illustrated the Internet usage in Malaysia and from this figure, it shows that Internet usage in Malaysia increased year by year.

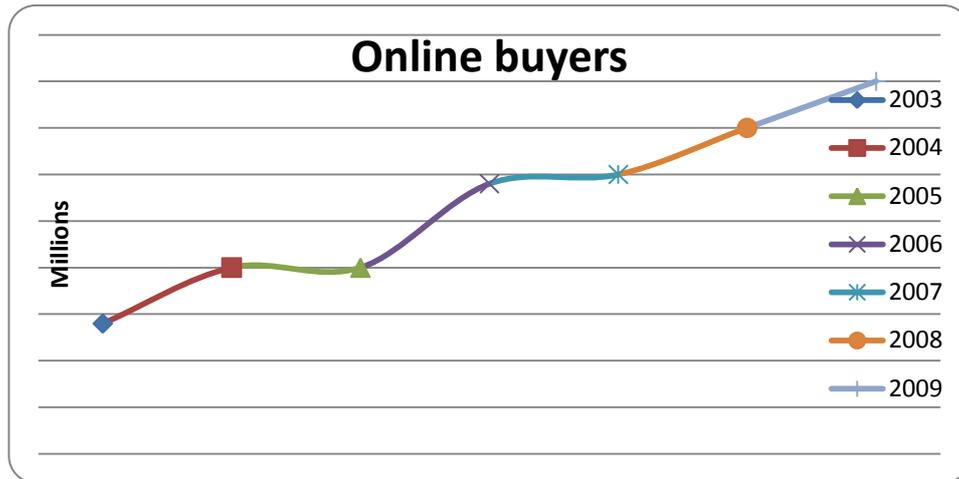
Figure 2.2: Statistics on Internet Usage



The e-commerce growth sector in Malaysia is stimulated by the National broadband initiative (Hassan and Ali 2012). A report survey conducted by International Data Corporation (IDC) in 2007 indicated that overall e-commerce spending in Malaysia had grown to RM15.3 billion in 2009 (Yee and Seong 2009). Online buyers in Malaysia also rise year by year (see Figure 2.4). As reported in a news article (The Star) in 2010, Malaysians spent RM1.8bil on online shopping (Ho 2011) and this figure is expected to triple in three years' time. Ho (2011) added that Malaysian

people were spending more on local websites with transactions recorded up to RM825 million compared to foreign websites which recorded only RM627 million in receipts last year. This can be a positive sign for the Malaysian economy especially in motivating new and existing local entrepreneurs to venture into online business models as supported by Hassan and Ali (2011).

Figure 2.3 Showing growths of online buyers in Malaysia

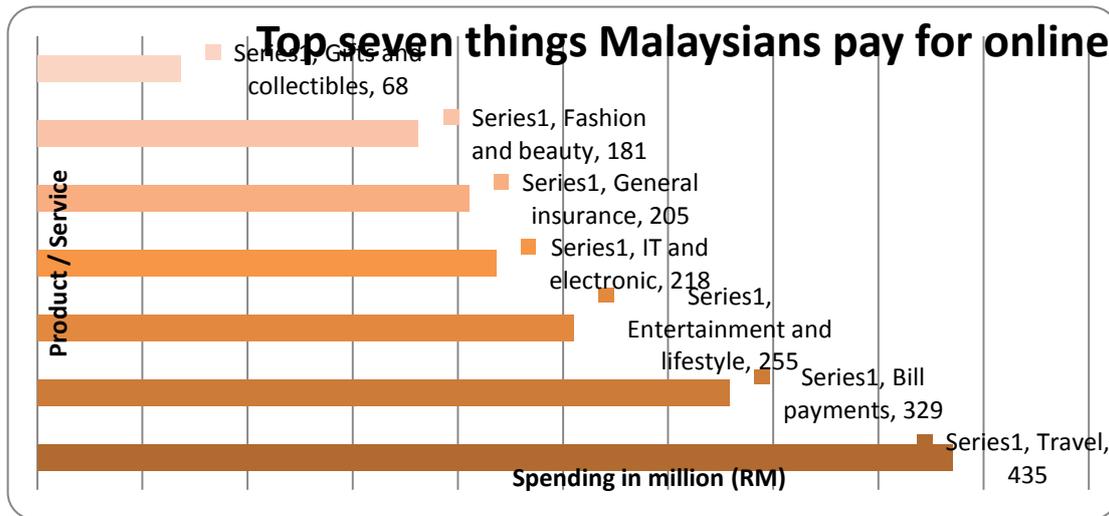


Source: Dept. of Statistics Government of Malaysia

However, according to Kamaruzaman et al. (2010), Malaysia started accepting e-commerce systems early, along with other developed nations when e-banking facilities were introduced in Malaysia in 1981 with ATMs and with tele-banking services being introduced in early 1990s. They added that MayBank was the first bank which offered Internet-supported banking services in June 2000.

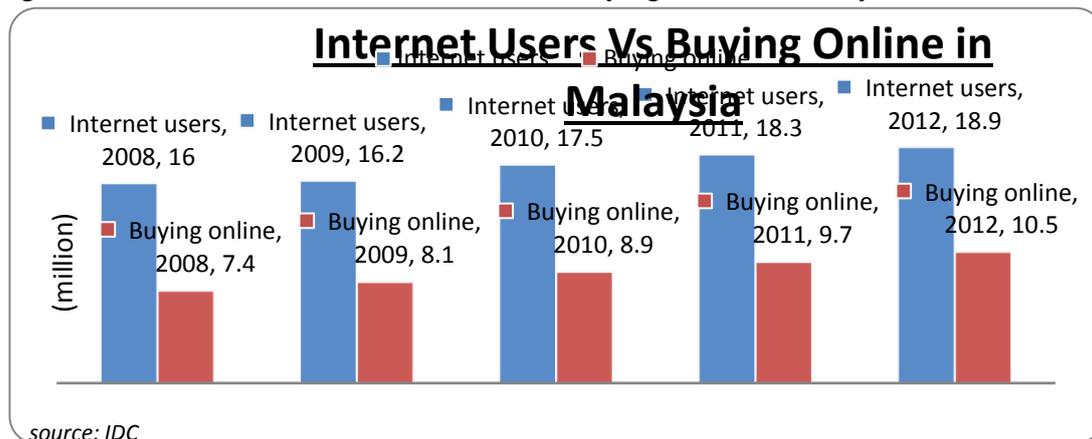
A survey by the Malaysian Communication and Multimedia Corporation (MCMC) in mid-2005, reported that 10 percent of Internet users had purchased products or services through the Internet during the preceding months. Airline tickets were the most popular items, followed by books and music. Most sums spent on these items were small, with 57.7% of transactions worth less than RM500. It was expected that Malaysian online sales would show high growth every year (Syed and Norjaya 2010).

**Figure 2.4 Top seven things Malaysian people pay for online**



Statistics reported by IDC Asean (2008) showed that Internet users in Malaysia increased from 16 million in 2008 to 18.9 million in 2012. Not just having an increase in Internet users: people who like buying online also increased, from 7.4 million in 2008 to 10.5 million in 2012. This is a strong indication that Malaysian people are delighted with the advantages brought by e-commerce. Online Malaysian shoppers believe that the online medium can offer convenient purchases, affordable alternatives and discounts rather than shopping at traditional stores (Yee and Seong 2009).

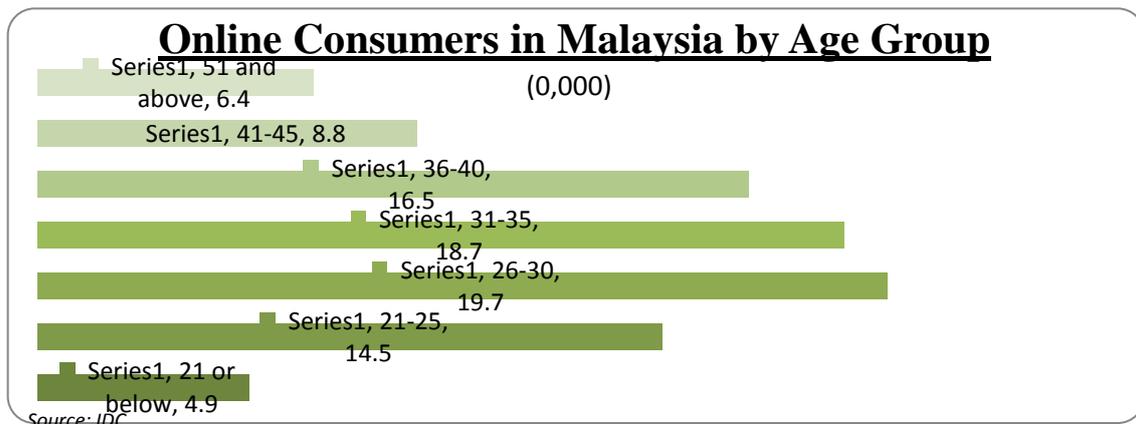
**Figure 2.5 Statistics of Internet users vs buying online in Malaysia**



In 2007, a survey conducted by The Nielsen Company showed that Malaysian people like to spend online for airline tickets, followed by hotel/ tour reservations (The Nielsen Company 2008). By comparison, surveys done by IDC Asean (2008), airline tickets (including travel) topped the list, followed by books. A recent survey

conducted by Nielsen (see Figure 2.4) in early 2010 polled 400 Malaysian online shoppers aged 18 and above in which they were asked about their online transaction in 2010. The results indicate that airline tickets were the most popular items, followed by bill payments. Online shoppers spent RM181 million on fashion and beauty and the lowest spending was recorded for gifts and collectibles which was RM68 million. According to Figure 2.7, working adults who contributed most to online shopping in Malaysia were aged 26-40 years.

Figure 2.7: Statistics of online consumers in Malaysia by age group



#### 2.1.4 Challenges and Opportunities for E-Commerce in Malaysia

The future of e-commerce seems to be bright for Malaysia. This is supported by Hassan and Ali (2011) who stated Malaysia is full of opportunities for e-commerce. One concrete step taken by the Malaysia government was by introducing the Multimedia Super Corridor and many technology parks (Jehangir et al. 2011). Not just that, the Malaysian government also created plans for local content development know as ICON where this programs provide funding and training for web development (Hassan and Ali 2011; Jehangir et al. 2011). Challenges are always there and Malaysia is no exception. Lack of policy implementation is one of the factors that mean that e-commerce is not flourishing as it should (Dominic et al. 2010) and legal issues such as copyright infringement, protection of patent right, domain name disputes and safeguarding of trade secrets still need consideration (Jehangir et al. 2011).

### **2.1.5 Benefits of E-Commerce**

It can't be denied that the growing impact of e-commerce has given many benefits to the country generally. According to Chowdhury (2007) the benefits of e-commerce to consumers are as listed below:

#### **2.1.5.1 Benefits to consumers**

- 24/7 access. Customers can perform transactions 24 hours a day, all year round from any location. For instance, customers can make payment online when they purchase apparel on a website.
- More choices. For them, e-commerce provides a platform to search for information through the global markets with a variety of choices which make comparison and evaluation simpler and more efficient. He added that with easier access to the Internet, consumers are able to search for outlets and perform other transactions any time in almost any location.
- Price comparison. Consumers love to take advantage of shopping online due to cheaper prices and services.
- Improved delivery processes. Moreover, delivery costs and time can be saved. For instance, consumers like to buy books, clothes, gadgets and even distance learning which can be obtained or performed online.

#### **2.1.5.2 Benefits to organizations**

E-commerce also provides benefits to organization as follow:

- International marketplace. Organizations take advantage of the global reach of the Internet by seeking and exploring new markets and opportunities. (This breaks down geographic limitations and reaches narrow markets that traditional businesses have difficulties accessing (Chowdhury 2007).)
- Mass customisation. Through the Internet, businesses now offer a variety of choices and quality of customer information and details for people to research and compare. Some companies, such as Dell Computer Corp. can even

provide a competitive advantage through build-to-order inexpensive products and services (Benjamin and Wigand 1995).

- No more 24-hour-time constraints .Another extended benefit for organizations is trading hours. The 24 hours a day, 365 days per year access allows businesses to remain open on the Internet without limited time or extra cost. A company can also be up-to-date with the material, current inventories, improved customer service, better customer communications, increased operating and trading flexibility (Chowdhury 2007).
- Enables reduced inventories. Meanwhile, in term of cost reduction, e-commerce helps organizations save more in creating, processing, distributing, storing and retrieving information (Chowdhury 2007).
- Lower telecommunication cost. For instance, using e-mails as an option to update any news can help in cutting business costs. Indeed, in terms of online ordering and online auction organizations, the costs could be lower than running an actual shop with the associated personnel (Chowdhury 2007).

#### 2.1.6.3 Benefits to society

- Enables more flexible working practices. Preston et al. (2010) and Chowdhury (2007) suggest that people can now do their purchasing at home rather than by travelling around. By doing this, it reduces air pollution and traffic congestion. In third world countries in particular, the growth of e-commerce seems to have a huge effect. This is because the services and goods which were previously unavailable in the past are now available. For instance, distance learning which is popular in developed countries now can be achieved in developing countries. Government also takes advantage of the booming e-commerce by providing an online payment system which supports the payment of tax refunds and pensions quickly and securely.
- Connect people and facilitates delivery of public services. Public services such as education, health care and social services also benefit from e-commerce. For example, in education, teachers and students can be in various parts of the world but with technology they can connect with each

other. Students from abroad can attend virtual lectures conducted by their lecturers and do tutorials online (Preston et al. 2010).

#### 2.1.6.4 Benefit to country

According to Zeinab (n.d.), the greatest impact of e-commerce to a country can be on its economy. For instance, the most popular ICT in developing countries and one that is progressing rapidly in Africa and Asia is the mobile phone. A report from the World Bank which was released in 2012 shows that, the benefit farmers get when using mobile phones includes access to agricultural information concerning stockpiles and prices, data visibility and being able to enter into new and existing markets. Not just impact on the agriculture sector, the fisheries sector also takes advantage of e-commerce where the fishermen and merchants conduct the process of buying and selling fish, communicating through voice calls, via SMS or by Wireless Application Protocol (WAP)<sup>2</sup> services (World Trade Organization n.d.)

Overall, e-commerce makes products and services more easily available without geographical boundaries.

## 2.2 SMALL BUSINESS INTERNET COMMERCE (SBIC)

Internet Commerce (IC) uses advanced technologies which have revolutionized doing business, especially small business, around the world. No doubt the topic of Small Business Internet Commerce (SBIC) has become an important topic in current electronic commerce research. Many researchers have attempted to define SBIC. For example, Poon and Swatman (1998 p.2) adapted the definition from Zwass (1994) to illustrate Internet Commerce as follows.

*“Internet commerce is the sharing of business information, maintaining business relationships and conducting business transactions by means of Internet-based technology”.*

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<sup>2</sup> WAP is a technical standard for accessing information over a mobile wireless network.

According to Rhiannon and Antje (2002) who conducted a study in Wales, SBIC falls into two categories: small companies employing 10-99 staff and micro companies which employ one to ten staff. Sieber (1996) and Walter and Leon (1996) also classified a small business employing fewer than 10 persons as a micro-sized business. However, Collin (1995) categorises business use of the Internet into three main areas: customer relations, dealing with suppliers and internal company operations.

Lymer et al. (1997) focused on small business and Internet commerce and concluded that a business that becomes successful in the European and the larger global markets will be likely to exhibit a number of key characteristics. These include the ability to support a large element of turnover growth via exports, being able to enter into niche markets, using advanced information technologies, using the full benefit of networking schemes sponsored by national agencies and building strong domestic and cross-border partnerships and strategic alliances.

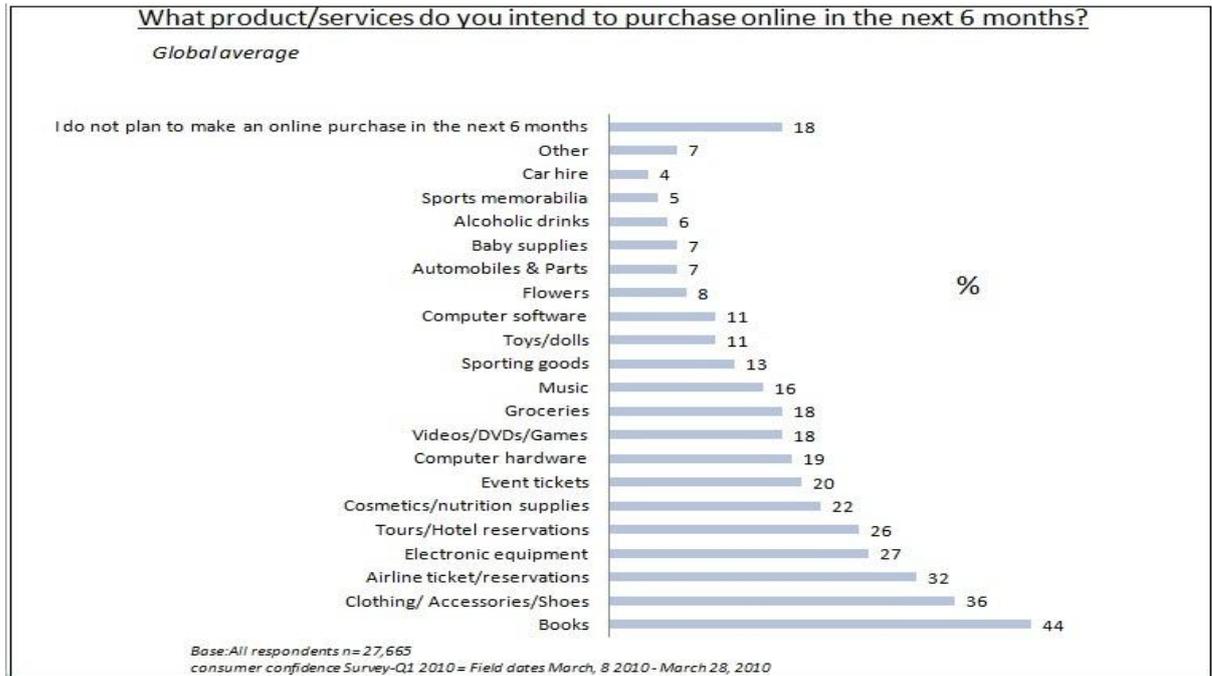
Much SBIC has used Internet commerce to achieve marketing benefits, better global exposure and better customer relationships (Walter and Leon 1996). This was supported by Stevens et al. (2002) who found the Internet was mostly being used for gathering general information, ordering products and supplies, obtaining supplier information, customer information and competitor information, and lastly for entertainment purposes.

### **2.3 CURRENT TRENDS IN INTERNET ACTIVITIES**

Internet penetration has not only transformed the way of doing business but has also changed many aspects in life and has become a more important tool in day-day activities of individuals. Although people have realised that shopping over the Internet has some disadvantages, such as that they cannot touch and see the products, the convenience of performing online shopping still can't be bettered. According to an online survey by Nielsen (June 2010), there was a global increase in purchasing airline tickets and hotel reservations made online in 2010 compared to 2009; from 24 percent to 31 percent for airline tickets and 17 percent to 26 percent for hotel

reservations. The same report also suggested that books and clothing will continue to be at the top of the list for global online consumers who planned to purchase in the next six months. Future prospects for online purchase of services and products are presented in the chart below.

Figure 2.8 Statistics on Type of Products/Services to be Purchased Online in the Next 6 Months



In Latin America, according to Nielsen’s report (June 2010), 84 percent of Brazilians shoppers planned to make an online purchase in the next six months for books, electronic equipment, computer hardware and DVDs/games. The same survey also found that in Mexico, books were in the top list of products /services for most online shoppers, which recorded 30 percent. They were followed by electronic equipment, tours/ hotel reservations, event tickets and music, computer hardware, clothing and video /DVDs /games. In contrast, 34 percent of Venezuelan online shoppers planned to shop for electronic equipment in the next six months followed by airlines tickets and computer hardware, but it is surprising that book purchases were favoured by only 18 percent for this country. 36 percent of online Colombians and online Chileans indicated they did not plan to make any online purchase in the next months.

As part of the same survey, European Internet respondents indicated that 79 percent plan to purchase online products or services in the next six months. Ninety percent of online shoppers in Norway and Great Britain reported they would purchase online in future but consumers in Estonia, Croatia and Latvia did not intend to make any purchases in the next six months. A pattern can be seen in Europe where online Germans and Czechs would prefer to buy clothing and shoes online in the future. Conversely, online shoppers in Austria planned to spend their money on books. Strong intent to purchase travel and event tickets for the future is recorded for Norwegians while intent to purchase DVDs and games online was recorded for more than one-third of online Brits. Meanwhile, Greek and Israeli online shoppers would prefer to buy electronic equipment and computer hardware.

In North America, half of online Americans preferred to shop for services or products via the Internet. Conversely in Canada, the sample split into two where 31 percent indicated they like to shop online and 19 percent preferred to spend their money at traditional shops. Not different from other regions, consumers in USA and Canada indicated a preference to buy books, clothing and airline tickets online in the future and only one-third of Canadian shoppers did not wish to purchase a product or service online: the same thing applied to American shoppers. Reviewing consumer electronics, cars and software and researching cars, electronics and travel are the most important things to consider before buying (Nielson 2010).

Internet penetration is still a new tool for the Middle East, Africa and Pakistan regions ("MEAP") because almost 47 percent of online respondents indicated that they had never made any online purchases (Nielson, 2010). Books top the list for planned online purchases for 29 percent of MEAP web shoppers followed by airline ticket/reservations (24 percent) and electronic equipment such as TVs and cameras (23 percent). In South Africa, plans to purchase event tickets were recorded as the highest consumer item compared to other products, followed by non-downloadable music. Conversely, Pakistanis would use online shopping to buy computer hardware (25 percent) and clothing (18 percent) but 38 percent indicated that they had no intention

to buy any product or services in the next six months. 27 percent intended to use the Internet in the United Arab Emirates to book travel and 25 percent to buy clothing.

Intention to shop online in the Asia Pacific region was high: 95 percent of online consumers in Korea and China planned to purchase products and services in the next six months (Nielsen 2010). Over one-fourth of online shoppers in Hong Kong and Thailand, and one-fifth of online shoppers in Japan, New Zealand, Indonesia and Australia indicated they would be making no online purchases in the near future. The most popular products and services for planned online purchase in Korea were books, cosmetics, clothing/accessories/shoes and groceries. Other popular planned online picks for Chinese were also books and clothes, and 40 percent indicated they would buy an electronic item via the Internet. Online residents in Malaysia intended to buy airline tickets and hotel/tour reservations. Web-literate Australians look online to purchase event tickets and non-downloadable video/DVDs/games and online Indian shoppers planned to use the Internet for buying non-downloadable music.

## **2.4 WHY DO PEOPLE PURCHASE ONLINE?**

Nielsen (1999) reported that people love to purchase online because of convenience and ease of use of the website. Respondents were asked to rank the purpose of choosing online to buy products and it was surprising that the attraction of low prices was ranked third. The findings revealed that ease in placing an order (83%) was recorded the highest followed by a large selection of products (63%), cheaper price (63%), faster service and delivery (52%), information provided is detailed (40%) and lastly, for convenience of payment (36%). According to Sung and Jeon (2009), five factors affecting Korean people purchasing fashion online were fashion consciousness, shopping enjoyment, brand consciousness, personality pursuit and economical orientation.

In addition, Edwards (2007) stated that most people buy everything online for four main reasons. The first reason is that of money: he believed that people become aware of how much they will spend or save as a result of purchasing. Indeed, the money

aspect can lead people to use the Internet purely for price information searching. The second reason why people tend to purchase products online is that it involves less effort and is less time-consuming. People nowadays are very busy and even don't even have time to shop at traditional shops. So, they will look for something which can save time and effort - which is doing shopping online. The third reason is to escape either physical or mental pain. This involves how the vendor company promises its customers that the product is as good as at traditional stores. For instance, people who suffer from physical pain and can't get the medicine at a traditional store will look for medicine to be delivered. Lastly, the biggest reason people buy online is because of popularity and social success. If we have ever wondered why people spent so much to buy stylish clothes, perfumes, books and treatment, especially acne treatment, the simple answer is that they want to feel better about themselves and be more confident in social situations. What organizations do to boost their sales is to explain to customers how smart they will look or save the money and how clever they will feel when they purchase product from them (Anamika 2012).

Malaysian people are still at the early stage when coming to the matter of buying products online. Most of this is due to security concerns (Wong 2010a). However, Wong (2010) listed seven reasons why Malaysian people should purchase products online:

1. Promotions or bargains - People who purchase online normally look for the best price: in other words, which website can offer the cheapest or best price. One of the advantages of performing shopping online is that people can bargain the price and well-known websites they can visit are eBay or Lelong. These two websites can be a starting point of bargain-hunting.
2. Time saving and convenience - Due to a hectic and busy lifestyle, most people don't have enough time to enjoy shopping at a congested shopping mall. In saving time, they can shop online more conveniently.
3. Gems or rare items - If people are looking for something like antiques, collectibles, memorabilia, art etc. the best tool is the Internet. In fact, not

many traditional shops sell rare items; the price may be expensive and the location is far from home. The easiest way they can purchase this item is online. For example, they also can visit eBay or Lelong.

4. Variety of merchandise - Online stores are not limited by shelf space constraints and the best consideration is they are able to display everything they have in one page. Conversely, in congested shopping malls, people have to move to other shops or sections to find the desired item. In an online store, there are many options and the store will even offer to match and pair for their customers.
5. Gift purchase - If we want to surprise someone we love, buying online is a great way to do so.
6. Help in the decision process of buying - Another advantage of buying online is helping in the decision-making process. People will not be solely buying a product. They will compare prices or products with other shops. They also consider reviewing and reading the feedback from existing customers.
7. Surprise and excitement - Some online retailers might attract customers or encourage further business by shipping a surprise gift together with the purchase. In addition, online retailers also offer free delivery and special prices to retain customers and this makes customers enjoy dealing with them (Wong 2010b).

A study conducted by Ling et al. (2011) indicated that five major predictors towards B2C have positively correlated to B2C electronic commerce usage. These are trust, payment, price, online payment security, website design and website quality with the website design and website quality found to be the highest predictors of B2C electronic commerce usage. This is argued by Vrechopoulos and Atherinos (2009) who stated that website quality serves as store atmosphere since customers' acquisition and retention are influenced by the effective store environment.

## **2.5 THE GROWTH OF SELLING APPAREL ONLINE**

The growth of Internet penetration has changed the ways of doing business. People can now get almost anything from the Internet, including purchasing apparel online. Research conducted in the United Kingdom (UK) found that there was an increase in apparel purchased online where it rose from 25% in 2004 to 34% in 2008 (Ergin and Akbay 2008). This did not just happen in UK but dramatically spread to Asian countries such as China and Japan (Hernandez et al. 2010). A survey conducted by Global Lifestyle Monitor Survey (2003) found that 38% of Japanese and Chinese consumers used the Internet as a medium for buying apparel in 2003. In contrast, the figure in US was that 25% of shoppers bought clothes online.

Shields (2010) reported that clothing and footwear were two examples of fashions that boomed online when other products reported slowed growth in January 2010. In UK, online shoppers spent 4.3 billion pounds on buying apparel in 2010 and that increased to 4.8 billion pounds by the end of 2011. This figure was forecast to increase to 6.9 billion pounds in 2015 (Ergin and Akbay 2008). Forrester (2001) forecast that in 2014, Britain and Germany will face increasing online apparel sales, growing by more than 50% (7.1 billion pounds) or 6 billion Euros, while sales in France will double (3.5 billion Euros) (e-volve 2001).

Having advantages like offering many types of delivery options, comparison between items and added information have led Australian shoppers to prefer to shop online, especially when purchasing apparel (Eurostat 2009). Many Australian shoppers tend to buy these items before trying them. Furthermore, having incentives like free shipping and a good return policy can encourage more customers to purchase online. Other factors such as good customer service, branding and favourable reviews from previous users can help online retailers boost their sales (Eurostat 2009).

A report by Mintel said that the existence of an online market had been helped by more attractive websites which offer more features such as zoom-in pictures of clothes and increased numbers of people using the Internet. Broadband connections also contribute to the climbing percentage of people who purchase apparel online (Wallop 2011). A new finding showed that many customers prefer to purchase

apparel online due to lack of confidence - purchasing online means that they do not have to go to a changing room to try the clothes (Bodymetrics 2012; Carroll 2011; Civic Consulting 2011; Deswardt 2011).

### **2.5.1 Purchasing apparel over the Internet**

The development of electronic retailing continues to grow in size and prominence as increasing numbers of consumers buy online, and apparel purchases represent a significant segment of online purchasing. According to Goldsmith & Goldsmith (2002), not only does buying apparel online represent a new form of consumer behaviour in the computer-mediated environment, apparel e-retailers face intense competition. Lee and Park (2009) stated that apparel is now being sold via the Internet: in 2006, 10% of all apparel purchased in the US occurred online. However according to Ha and Stoel (2012), apparel is often associated with the experience because customers can evaluate its quality after purchase and use.

Many researchers have attempted to develop a new framework which focuses on customer behaviours toward online apparel purchasing activities. For example, some have made use of The Theory of Reasoned Action (TRA) by Fishbein and Ajzen (1975) to explore the relationships between service personalization attitudes and the online apparel purchasing activities.

Several studies of consumer online behaviour have shown that attitudes toward the Internet as an online buying mechanism are systematically related to online buying behaviour (Goldsmith and Bridges 2000; Karson 2000; Goldsmith and Goldsmith 2002). Goldsmith & Bridges (2000) in their research presented Likert scales to measure five specified attitudes towards e-commerce, describing individual perceptions of its enjoyment, safety, speed, confidence and economic considerations: all these attitudes related to online buying.

Consumers who have bought apparel online are likely to buy online more frequently than other consumers. Broadly speaking, consumers who buy apparel frequently are likely to be involved with clothing as a product category; they not only shop frequently, they probably spend more time than those who are less involved, less

frequent purchasers (Goldsmith and Goldsmith 2002). A recent study conducted by Ha and Stoel (2012) which focuses on the apparel context found that privacy/security, website content, customer service and experiential have significant impact on e-shopping satisfaction as supported by Ling et al. (2011) and Vrechopoulos and Atherinos (2009).

Since online buying is a new consumer activity, consumers who have previous experience with online buying are more likely to buy apparel online than those who lack such experience. Starting with small purchases online, a consumer will be likely to broaden confidence and skills that facilitate more motivated buying. This is appropriate with the experiences they have gained during online purchasing.

### **2.5.2 Risks in purchasing apparel over the Internet**

Although the rapid growth of e-retailing may reflect convincing advantages of Internet shopping over shopping at brick and mortar stores, consumers are sometimes frustrated with e-shopping. The same problem occurs when customers purchase apparel online.

Customers risk purchasing apparel online because they cannot try on the garment to check fit, texture or colour (Kim et al. 2011). Online shoppers largely depend on information available on the web, which requires an adequate amount of product information to make a purchase decision. In addition, due to the absence of a salesperson to answer shoppers' questions, it is especially critical for online apparel retailers to have the necessary information available on their web sites (Kim and Stoel 2005).

Online shoppers are known to have a low tolerance (Flavian and Guinaliu 2006). It was estimated that, on average, online shoppers only waited for eight seconds for system feedback before bailing out (Flavian and Guinaliu 2006). A crucial matter to consider when shopping online is security (Suh and Han 2003). Because of the perceptions of risk related to misuse of personal information, many people are still unwilling to purchase apparel online. According to Park and Kim (2003) many customers are concerned about personal data abuse and vulnerability of transaction data.

## **2.6 FACTORS AFFECTING PURCHASING ONLINE**

The question of what drives a consumer to shop online for certain products and not for others is still not particularly well understood, even though the use and popularity of the Internet continues to increase. According to Monsuwe' et al. (2004), 59 million Europeans use the Internet frequently for shopping purposes. However, they added that it is not understood what drives customers to shop online and whether these numbers could even increase if more eye-catching online stores were developed.

Generally, whether shoppers buy a product or service online is influenced by the external environment such as demographics, beliefs, attitudes and shopping behaviour, and these are recognized as factors that contribute to customer satisfaction (Li and Zhang 2006). Beliefs about the Internet as a shopping channel in terms of security, trust, risk, convenience, website features and customer support service can lead to satisfaction. Attitudes might also refer to services at a specified e-store or at the online general store (Li and Zhang 2006). People who have a wired lifestyle and are experienced in online shopping are more open to purchase on the net.

Consumer attitudes and behaviour have a tremendous influence on making the decision to adopt a virtual store or buy or sell over the Internet. In Malaysia, most buyers like to do brick-and mortar shopping. One shopping mall in Kuala Lumpur, Suria Mall, has 450,000 visitors per week. To visit a shopping mall has become a kind of Malaysian “weekend activity”; it is a method for some Malaysian people to relieve pressure or to spend time with family and friends. Similarly, Haque and Khatibi (2006) note that culture plays a vital role in Malaysian society where visiting shopping mall is a revered family outing.

### **2.6.1 Characteristics of an e-store.**

Web page design characteristics were also found to affect consumers' decisions to buy online. According to Cheung and Lee (2005), homepage presentation is a key to customer satisfaction. Four other antecedents are logistics support, technological aspects including hardware and software, information characteristics and product characteristics. Shergill and Chen (2005) found a high daily-visit rate is strongly

shaped by the number of updates made to the web site in the preceding three months and the number of links to other web sites was also found to attract visitor traffic. Lohse and Spiller (1998) conducted research on prediction of store traffic and sales revenues as a function of interface design features and store navigation features. Their findings indicated that in addition to having a variety of products in the store, adding a FAQ (frequent answer question) section can lead to reduced traffic but higher sales. Lastly, improving product lists can significantly affect sales.

A survey about predictors of online buying by Lohse et al. (2000) showed that a typical online consumer leads a wired lifestyle and lack of time. For this reason, they suggested a web site should be more directed towards purchasing standard or repeat purchase items by providing customized information to enable quick purchase decisions. They also pointed out the need for an easy checkout process.

### **2.6.2 Consumer traits**

Consumer traits are another factor in understanding why consumers shop on the Internet. These include demographic factors and personality characteristics. According to Burke (2002), four relevant demographic factors - age, gender, education and income - have a significant moderating effect on the relationships among the three determinants (ease of use, usefulness and enjoyment and consumers' attitudes to online shopping).

Furthermore research conducted by Wood (2002) found that younger adults and especially those under age 25, are more interested in using new technologies to search for new product offerings and information and also like to compare and evaluate alternatives. Younger customers are found to have higher interest in using new technologies because they are having fun while shopping. This is because they react more favourably than older shoppers to features that make online shopping entertaining.

When it comes to gender, a number of studies have reported differences between men and women in orientation to communications, computers and the Internet (Cho and Koh Jialin 2008). It is well documented that men and women have different

communication patterns. Women are typically more interpersonally oriented than men and men are typically more information- or task-oriented than women. In communication patterns, for example, once online, men tend to seek information to perform tasks such as personal business like banking whereas women try to communicate with others (Jackson et al. 2001).

In the context of e-commerce, many studies have already found strong associations of online shopping with the male domain (Kim and Stoel, 2004). For example, men express a greater interest in using various type of technology in the shopping process. This is because they believe that the Internet is a shopping medium, but women consumers prefer to use catalogues to shop at home. Conversely however, according to Burke (2002) female consumers do prefer to shop on the Internet more frequently than their male counterparts.

Male Internet users are more focused on transactional uses of the web (Dietz 1998) and are 2.4 times more likely than women to shop online (Kwak et al. 2002). Women were found to be less emotionally satisfied, demonstrated greater scepticism and perceived lower convenience levels with an online shopping outlet compared to men (Rodgers and Harris 2003). Research was done by Dholakia (2006) on whether consumers associate e-shopping with any specified stereotypes. He found that, while respondents connect a hypothetical shopper with a female, such stereotypical views reverse when the product purchased is technical and expensive. Females are unlikely to break out of their stereotypical purchaser role while males are more likely to buy expensive technical products online.

Another factor that drives the customer to shop online is income. Consumers with higher household incomes tend to shop online more often than lower income consumers. Lohse et al. (2000) found that there is a positive relationship between higher household incomes with possession of computers, Internet access and higher education levels of consumers.

When it comes to education, higher-educated consumers are more comfortable using non-store channels like the Internet to shop (Burke 2002). Broadly speaking, education is often positively correlated with an individual's level of Internet literacy (Li et al. 1999). Indeed, Case et al. (2001) suggested that Internet knowledge, income

and education level are especially powerful predictors of Internet purchases among university students, based on an online survey of 425 US undergraduate and MBA students.

In order to purchase on the Internet, a considerable amount of knowledge or skill is required. From the basic knowledge of computer use, consumers also have to learn skills needed to obtain the desired information on the Internet. Learning to shop on the Internet is costly and time-consuming for those who are computer-illiterate to start with. Consumers need to learn to weigh costs and benefits before deciding whether to invest in learning the required skills (Monsuwe' et al. 2004). Indeed, Ratchford et al. (2001) found that customers who have the most knowledge and skills to shop on the Internet are likely to be the most skilled.

### **2.6.3 Situational factors**

The Internet has become a normal retailing distribution channel. Three main reasons have been recognised as factors why people purchase online: price, convenience and information (Chen and Chang 2003). Wolfinbarger and Gilly (2001) have expanded their view on why people purchase online by adding a further attribute: time-savings.

According to Wolfinbarger and Gilly (2003), the most-favoured consumer attributes of online shopping are convenience and accessibility. The ability to purchase online without leaving the house or office and to have the ordered products delivered to the door is of immense interest to many consumers. They are able to shop at any time, day or night. For customers who have a small amount of free time, online shopping is an excellent opportunity: those who have no free time to shop most prefer to shop online.

The Internet can be used to provide consistent and comprehensive product and customer service information (Park and Stoel 2002). This benefits the consumer by providing more information than is possible in brick-and-mortar retail stores (Chen and Chang 2003; Park and Stoel 2002). Compared to brick-and-mortar retailers, online marketers often offer extensive product information on demand.

Another recognised factor is the lack of mobility (Avery 1996). Consumers who have a problem with illness and mobility prefer to shop on the Internet to meet their shopping requirements. Moreover, for customers who have to travel large distances to shop, shopping on the Internet is an excellent alternative (Monsuwe' et al. 2004). The need for specific items has also been recognised as one of the drivers for people to shop online (Wolfenbarger and Gilly 2003). Sometimes, a customer needs to acquire a tailored product, for instance special sized clothing or shoes which are not available in most stores, shopping on the Internet is then an option.

## **2.7 CUSTOMER SATISFACTION**

The importance of customers has been highlighted by many researchers and academicians. According to Zairi (2000 p. 333):

*Customers are the purpose of what we do and rather than them depending on us, we very much depend on them. The customer is not the source of a problem; we shouldn't perhaps make a wish that customers should go away because our future and our security will be put in jeopardy.*

This is because many organizations are now focusing on customer satisfaction, loyalty and retention to sustain their place in the market. To be successful in the marketplace, organizations must look into what their customers need and want. Many studies have continuously stressed the importance of customer satisfaction, loyalty and retention (Burke 2002; Carlson and O'Cass 2010). Customer satisfaction is crucial because customer satisfaction has a positive effect on an organization's profitability. Thus, the causes of satisfaction and dissatisfaction of customers must be fully considered: there is a positive connection between customer satisfaction, loyalty and retention.

### **2.7.1 Definition of customer satisfaction**

Customer satisfaction is not a new concept and a great amount of research has been done to clarify a better understanding of its ascendants and consequences. According to Oliver (1980), customer satisfaction can be defined as an evaluation of the customer with consideration of their needs and expectations. Customer satisfaction in

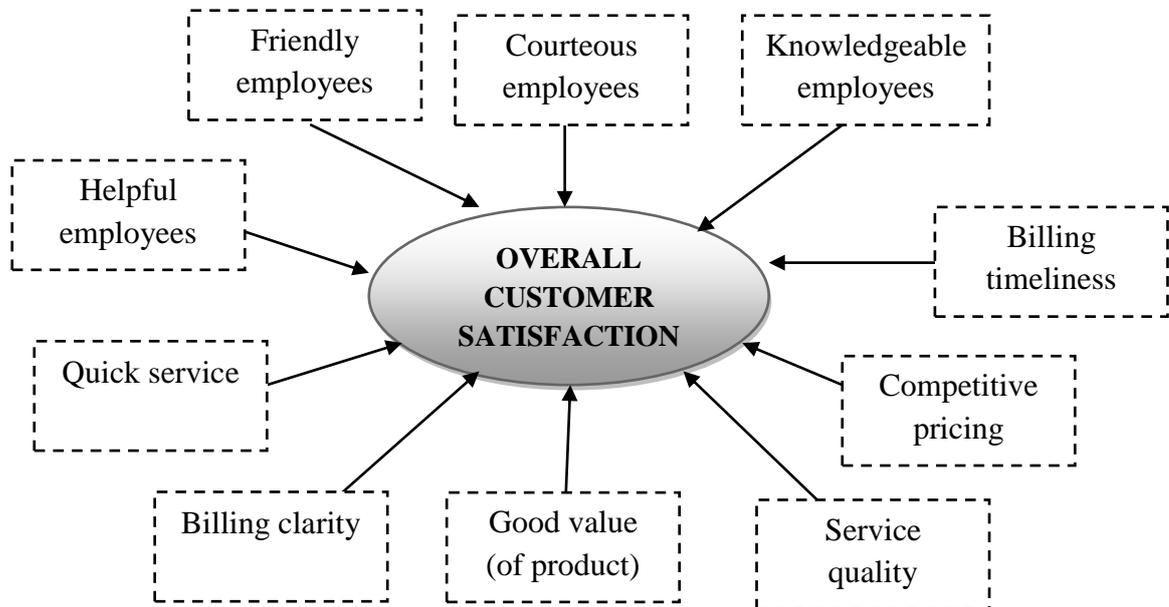
business terms measures how products and services supplied by a company meet customer expectations. It is seen not just as a key performance indicator within businesses, but customer satisfaction is also being seen as a key differentiator in the marketplace in the competition for customers.

Customer satisfaction can help businesses achieve a sustainable competitive advantage (Carlson and O’Cass 2008). In other words, the way a customer feels after purchasing a product or service and whether or not that product or service met the customer’s expectations will determine their satisfaction. Normally, customers develop their expectations through past purchasing experiences, word-of-mouth (WOM) from other relatives and friends and information delivered through marketing activities. If the customer’s expectations are not met, they will be dissatisfied and it is very likely they will tell others about their bad experience (Lang 2011).

Marketing scholars have been particularly interested in the conceptualization and measurement of service quality that may lead to customer satisfaction. According to Parasuraman (1988), in general, service quality is defined as the outcome measure of how effective is the service delivery and it occurs when customers receive the service that met their expectations. Parasuraman et al. (1994) developed five dimensions of service quality which they called SERVQUAL: it consists of tangibles, reliability, responsiveness, assurance and empathy to measure service quality. In combination, these may lead to customer satisfaction.

Kotler (2000 p.36) defined satisfaction as “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”. Hoyer and MacInnis (2001) stated that satisfaction can be associated with feelings of acceptance, happiness, relief, excitement and delight. Many factors have been identified as contributing to customer satisfaction. For instance, a study conducted by Singh (2006) found that friendly employees, courteous employees, knowledgeable employees, helpful employees, accuracy of billing, billing timeliness, competitive pricing, service quality, good product quality, billing clarity and quick service are factors that affect satisfaction

Figure 2.9: Factors That Affect Customer Satisfaction from a study conducted by Singh (2006)



According to Kotler (2000), customers need to state if they felt deprived. Indeed, what customers want is according to human needs as they are shaped by culture and individual personality.

According to Oliver et al. (1997) satisfaction is a judgement that a product or service itself has provided (or is providing) a pleasurable level of consumption-related fulfilment. However, in 1980 they validated this definition and found that satisfaction does not mean the same thing to everyone. According to Li and Zhang (2006) most studies treated satisfaction as a dependant variable and tried to identify its antecedents. It has been verified that customer satisfaction with user information is one of the drives of why they shop online. In addition, if users were not satisfied with the e-information given, they will click away to look somewhere else for their information needs (Xia et al. 2008).

Szymanski and Hise (2000) investigated the driver of satisfaction in the e-commerce environment and, based on focus group interviews with online shoppers, they concluded that satisfaction was the outcome of online shopping convenience, site design, financial security and merchandising, all of which include product information and product offerings. They tested this key construct and found that all four drivers had a significant effect on e-satisfaction except product offerings. Burke (2002) listed convenience, product quality, value provided and product selection offered by the supplier as recognised drivers of customer satisfaction in the online shopping environment.

Fewer studies have investigated the underlying constructs of customer satisfaction with online shopping, from the perspective of total retail experience and following the purchase process. Surprisingly, the impact of payment was seldom touched on (Xia et al. 2008). The buying process can be viewed as series of several stages (Oliver 1981; Kotler 1991; Ranganathan and Ganapathy 2002). Kotler (1991) further suggested that customer satisfaction also resulted from the various purchasing stages. These purchasing stages are: information search, purchase and post-purchase.

### **2.7.2 Why measure customer satisfaction?**

“Customer is king” is a reaction that is always stressed in corporate vision statements in order to serve and provide products to customers (Debano n.d; Kags n.d and Zairi 2000). Questions have been raised about how much the organisations know about what their customers want and need, how satisfied the customers are with their services and products and how to ensure the customers stay connected and do business with them in future. To reflect these issues, a measurement for customer satisfaction is crucial.

What is customer satisfaction measurement? According to Pedic (2004), customer satisfaction measurement is used to assess the performance from the customer’s viewpoint and also to provide a platform for strategic alignment for the organization to provide better services according to those which are most important to customers. This measurement affects two parties - the customers and the company. For customers, this can be their platform where they can voice their needs and wants and

even rate the services they've been receiving. For the company, this is the best way to know how customers rate their products and services, thus helping it to improve and get focus on the issues that most affect their customers' satisfaction.

However, Hayes (1997) in his book (Measuring Customer Satisfaction) distinguished between two types of quality: quality of design and quality of conformance. In fact, quality of design reflects the extent to which a product or services possess extra value-added features. For instance, Apple Corp. launched a new gadget, iPad2 in 2011 that was built with a slimmer profile and more functions compared to the iPad1 and these luxury options were considered to have better quality of design of the telecommunication tool. Meanwhile, the quality of conformance reflects the extent to which products or service adapt to the intent of the design. These two types of quality can be measured. Such measures help businesses to assess their performance and determine the quality of products and services resulting from these processes. In the new global economy, many businesses believe they need 'something' new to improve the measurement of quality which they believe is more subjective to indicate the quality for their services and products (Samson 2010). This is where soft measures begin and become popular. A soft measure is mainly focused on perceptions and attitudes rather than more objective criteria and because of these, many organizations either provide services or products attractive to this kind of measurement. These measures not only use customer satisfaction questionnaires to assess the customer's perceptions and attitudes on services and products received but also employee attitudes questionnaires to determine employees' perceptions about the quality of their work life (Cacioppo n.d.).

In an earlier context, the importance of customers' attitude can be seen in the Malcolm Baldrige National Award (1990) which demonstrates a high standard of business practice. It includes consideration of seven criteria or categories on which companies are judged. Among these seven categories, 'customer satisfaction' is the most highly weighted. Knowing customers' perceptions and attitudes about the performance of the business will help to improve it. A business can know its customers' requirements or expectations and will be able to fulfil its customers' needs.

Hill et al. (2003) found that dissatisfaction is obviously the main reason for customer decay. However, what causes customer dissatisfaction? To reflect on this, they produced the theory of 'satisfaction gap' where it can be concluded dissatisfied happens when there is a gap between expectations and experiences. The root causes can be detected by using one of the five earlier gaps which are promotional, understanding, procedural, behavioural and perception.

### **2.7.3 Customer satisfaction in the context of online environment**

It is well known that the benchmark for online business to sustain in the marketplace is dependent on how well customers are satisfied with their business (Chen et al. 2008). Customer satisfaction in the online setting should not be treated as the same as the customer satisfaction in the traditional setting because it is two different things (Wolfenbarger and Gilly 2003). To overcome this issue, numerous studies have started to conceptualize, investigate and propose a model for customer satisfaction in the online context.

In MIS studies, some researchers focused on technology issues which consider the factors related to customers' experiences in online shopping that may also influence customer satisfaction. Namely, Devaraj et al. (2002) and Wixdom and Todd (2005) tried to predict e-shopping satisfaction on the basis of the Technology Acceptance Model (TAM). Further, Lee and Joshi (2007) believed that customer satisfaction with an online store involves both experiences involving technology usage as well as service encounters. They added that these experiences should help in shaping a customer's overall satisfaction.

#### **2.7.4 The importance of customer satisfaction**

As discussed earlier, customer satisfaction plays a crucial role in ensuring an organization can sustain its place in the market, especially organizations which compete for customers. Organizations should not underestimate the value of customer satisfaction because it is becoming an important area in competition. Nowadays, customers are more demanding, less tolerant and very critical when the service or products they used has not met their expectations. Also, customers have a lot of choice on where and who to deal with. As a consequence of this, the power has now shifted to the customer. They can switch to another similar business if they are not satisfied with the service provided for them. Besides, when organizations have been asked about their most valuable asset and key ingredient to ensuring business success, “Our Customer” is the most common answer. Here we can see how important it is to have a satisfied customer to the organization.

Customer satisfaction has a positive effect on an organization’s profitability. According to Hoyer and MacInnis (2001), satisfied customers form the foundation of any successful business as customer satisfaction leads to repeat purchases, brand loyalty and positive words (mouth to mouth or otherwise). Coldwell (2001) conducted research on CRM (Customer relationship management) and performed a statistical analysis on Customer Satisfaction over 20,000 customers in 40 countries and summarised this as follows.

- A totally satisfied customer contributes 2.6 times more revenue to a company than a somewhat satisfied customer.
- A totally satisfied customer contributes 14 times more revenue than a somewhat dissatisfied customer.
- A totally dissatisfied customer decreases revenue at a rate equal to 1.8 times what a totally satisfied customer contributes to a business.

Organizations have to keep their eyes on the effect of bringing satisfied customers. This is because customers nowadays are becoming more demanding, less tolerant and very critical if the service or products they use do not meet their expectations (Recklies 2006). Having a lot of choices on where and who to deal with, customers

have the power to choose what they like. That is why it is important to have satisfied customers today because if they are not happy with the service or product provided by the company, they will move to other competitors. Besides, when organizations have been asked about their key ingredient to ensure their business success, the answer will be the customer. From here, we can conclude that it is importance to have customer satisfaction today and to make sure that they can sustain this in the marketplace. Organization should bear in mind that the power of word-of-mouth is the most powerful form of ‘advertisement’. Hence it is very important to have satisfied customers so that they can spread positive words among others.

## **2.8 OVERVIEW OF BEHAVIOURAL INTENTION**

Customers’ behaviour can typically be predicted by their intentions, so it is crucial to understand this. The most famous definition about behavioural intention is from Fishbein and Ajzen (1975). They believed that a person’s behaviour towards an object is determined by his/her attitude toward that object. In other words, a person’s behaviour is determined by his intention to perform that behaviour but is not necessarily related to any given behaviour. Zeithaml et al. (1996) reported that a purchase intention is one dimension of behavioural intention. This is supported by Ajzen and Fishbein (1980) who found that behavioural intention is correlated to actual behaviour.

In reality, the value of service quality is measured by its decision-making implications (Gounaris et al. 2010). Thus, it is expedient to have a sound knowledge about the differences between offensive and defensive marketing policies and tactics. Offensive marketing actions are the business’ needs to invest in service quality to attract new customers. Gounaris et al. (2010) added that it is extremely costly for a company to capture new customers and list two reasons. Firstly, it is promotional, where a lot of money needs to be spent to attract new customers, especially in the e-commerce context. It will also take a longer time for new customers to provide profit to the company. Fornell and Wernerfelt (1987) reported that it was better for organizations to allocate their resources to keep existing customers rather than to attract new ones.

Commonly, people who purchase products or service through online services are influenced by the external environment, demographics, personal characteristics, e-store features, beliefs about online shopping and behaviour intention (Li and Zhang 2006). People who lead a wired lifestyle and have experience with the Internet tend to shop more on the Internet (Steven et al. 1999; Bhattacharjee 2001). Steven et al. (1999) added that people who like using the Internet and who agree that the Internet improves productivity are more likely to shop online because they use the Internet to search the product or service information before engaging to buy the product or service.

Beliefs about the Internet as a shopping channel in terms of security, risk, trust, convenience, control, web site features and customer service have been confirmed to be strong predictors of shopping behaviour (Li and Zhang 2006). Khalifa and Limayem (2003) also found that people would shop on the Internet more frequently if they had no concerns regarding the risks of security break and privacy violation. Besides that, they found that intention to shop is another predictor of shopping behaviour.

On the social side, the influences of the family, the media, and friends were perceived to be important. The participants identified five conditions for facilitating Internet shopping: transaction efficiency, navigation efficiency, product description, site accessibility and web page loading (Khalifa and Liu 2003). Similarly, Liang and Lai (2002) found that personal factors such as needs and external/interpersonal influence of mass media, advertising, friends and colleagues would motivate one to buy at a specific e-store. Li and Zhang (2008) added that competitor's performance, known as an external environment factor, plays a crucial role in predicting a consumer's online shopping behaviour. This was also determined by Ramaswami et al. (2000) who found that customers would be encouraged to buy financial products online if they were less satisfied with the performance of an offline service agent.

Efthymios et al. (2008) conducted research into the effects of cultural background on Internet buying behaviour in two countries. They wanted to identify the combined

influence of web experience components of consumers' behaviour from three angles: the relative importance of the online experience factors in choosing an online vendor, the actual effect of these factors on the vendor choice and the influence of personal and behavioural characteristics on the virtual shopping behaviour. Their findings show an indicator of emerging behavioural convergence among Internet users of different cultures and nationalities, concluding that cultural and behavioural differences in the physical world could limit control on people's behaviour in the virtual marketplace.

Koufaris (2002) considered the online consumer as both a shopper and the computer user and examined how emotional and cognitive responses to visiting a web-based store for the first time can influence an online consumer's intention to return and the likelihood of making unplanned purchases. Results confirmed that shopping enjoyment and perceived usefulness of the site strongly predict intention to return, whereas unplanned purchases are inconclusive. This research also revealed that product involvement, web skills, challenges and use of value-added search mechanisms all have a significant impact on the web consumer.

Christy et al. (2005) separated online consumer behaviour into five domain key areas including individual/consumer characteristics of the intention and adoption of IS/IT. In this context, Goldsmith and Bridges (2000) and Khalifa and Limayem (2000) found that personal innovativeness is a personality trait that explains consumer online buying. Conversely, Gefen (2002) identified consumer trust and consumer satisfaction as the key antecedents of re-purchases behaviour.

According to Li and Zhang (2006) customers still have to decide whether to buy a product or service online, where (specifically) to shop and how much to spend. As expected, behavioural intention is a potent predictor of shopping behaviour at a specified e-store (Pavlou 2003; Suh and Han 2003). Nevertheless, Liang and Lai (2002) and Li and Zhang (2006) confirmed that better e-store features such as lower product price, best web site design and better store reputation motivate customer shopping behaviour at a specific store. Furthermore, some empirical studies have

found that customer beliefs about the web site and product attributes have significantly impacted on shopping behaviour (Bhattacharjee 2001).

The relationship of purchase intention with actual behaviour is also common and has been empirically tested in the hospitality and tourism businesses (Bigne' et al. 2001; Wong and Law 2005; Zabkar et al. 2010; Rong et al. 2011). Using 1056 visitors from four tourist destinations, Zabkar et al. (2010) found that destination attributes affect the perceived quality of tourist offerings which then significantly related to satisfaction as well as visitors' behavioural intentions. Similarly, Law and Hsu (2005) found that customers viewed information for reservation as the most important dimension and room rates as the most important attribute. Besides, this study benefits hotel practitioners in gaining a better understanding on what should be included in their websites.

## **2.9 SERVICE QUALITY**

The most popular definition of service quality was from Zeithaml and Bitner (1996 p .117) who defined service quality as “the delivery of excellent or superior service relative to customer expectations”. Recently, Zeithaml (2000) added that service quality has become one of the most important and interesting topic among researchers. Many marketing scholars agreed to conclude that service quality results from customer comparisons of their expectations about a service encounter with their perceptions of the service encounter (e.g, Parasuraman et al. 1985). Similarly, Munusamy et al. (2010) defined service quality as the difference between customer's expectations about the service and the perceptions of the service received. Meanwhile, Pollack (2011) stated that service quality is multi-dimensional construct. The same view was shared by Brady and Cronin (2001).

The most popular assessment of service quality is SERVQUAL from Parasuraman et al. (1988). SERVQUAL is widely applied in various industries including the banking industry (e.g. Caruana 2002; Herington and Weaven 2009), education (e.g. Clewes 2003; Pareda et al. 2007) and tourism (e.g. Puller et al. 2006; Liu and Yen 2010). This basically consists of a 22-item scale which measures five dimensions of service quality:

- a. Reliability;
- b. Tangibles;
- c. Empathy;
- d. Responsiveness; and
- e. Assurance

However, in some studies, the application of SERVQUAL was not successful in retaining all of the 22 items of the five dimensions (Finn and Lamb, 1991; Smith, 1999). Consequently, the factors were categorized into three factors which were reliability, tangibles and responsiveness, assurance and empathy.

Carman (1990) and Brady and Rovertson (2001) suggest that the construct of service quality should be treat as a higher order construct which has precise dimensions with relation to sub-dimensions. This means that sub-dimensions are treated as first-order constructs and the dimensions as second-order constructs of service quality. For instance, Dabholkar et al. (1996) conceptualized retail service quality into five dimensions:

- a. Physical aspects
- b. Reliability;
- c. Personal interaction;
- d. Problem solving; and
- e. Policy

and six sub-dimensions:

- a. appearance;
- b. convenience;
- c. promises;
- d. doing it right;
- e. inspiring confidence; and
- f. courteous

## **2.10 SUMMARY**

In this chapter, an overview of growth of the Internet usage worldwide as well as in Malaysia has been discussed briefly. The impact of Internet growth has changed the way of doing traditional business from retail to business online especially in selling apparel. This chapter also discussed the factors that cause customers to move from traditional retail shopping to online retail especially on apparel. It also discussed the risk they are facing when performing online shopping. Customer satisfaction, attitude and behavioural intention and general service quality are the other main topics that were discussed in this chapter. The following chapter (Chapter Three) presents the links between these variables, the theoretical underpinnings, the conceptual framework, research questions and the hypothesis being investigated.

## **CHAPTER THREE**

### **CONSTRUCTIONS OF THE RESEARCH MODEL**

#### **3.0 INTRODUCTION**

Chapter Two discussed the general literature for the thesis. Chapter three discusses the development of the proposed model to be analysed and the propositions to be tested. The hypotheses for testing these propositions are presented in section 5.4 of Chapter 5. This chapter will establish how online shoppers in Malaysia who purchased apparel online perceive their satisfaction with the websites and Blogspots. This chapter is organized into twelve sections. The following section provides an overview of the previous research models in section 3.2 then the development of the research framework for this thesis (section 3.3). The next section reviews the customer satisfaction (section 3.4). Service quality in section 3.5 specifically discusses in the context of the online setting together with the proposed propositions to be tested is next. Explanation on mediating variables together with the proposed proposition can be found in Section 3.9. In Section 3.10, post-purchase with the proposed proposition is briefly discussed and comparison between point-of-purchase and post-purchase is discussed in section 3.11. The final section presents a chapter summary (section 3.12).

#### **3.1 THEORETICAL FRAMEWORK**

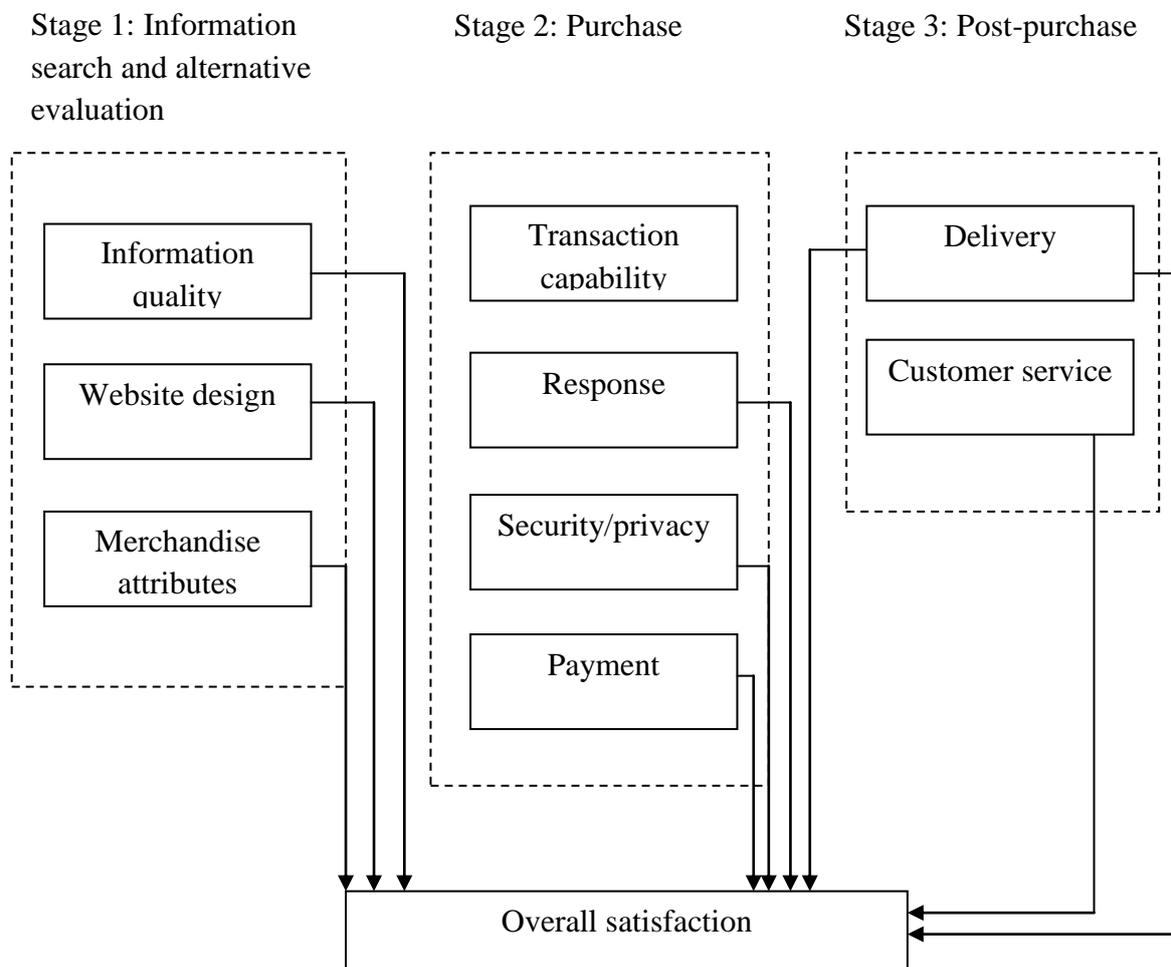
A theoretical framework provides the foundation on which an entire research project is based (Sekaran 2000; Xia et al. 2008). It explains the relationships among the variables that contribute to the research problem. The development of the theoretical framework provides the researcher with a clear understanding of the dynamics of the problem being investigated and thus leads to the generation of the testable hypotheses. Based on exploratory research, this study identified five variables that are considered relevant to the research problem. The dependent variables (DV) are overall

satisfaction, attitudes and behavioural intention while the independent variables in this study are e-service quality and post purchase (delivery service and customer service). These variables build a theoretical framework that is in line with the objectives of this research.

### 3.2 SUMMARIES OF PREVIOUS MODELS

#### 3.2.1 Research Model by Xia et al. (2008)

Figure 3.1 Model A (Xia et al. 2008)



Xia et al. (2008) divided the purchasing process into three stages: information search and alternative evaluation stage, purchase stage and post purchase stage. This was based on the Kotler (1991) study and proposed a model of the satisfaction process in the e-commerce environment outlined in Figure 3.1. According to Kotler (1991)

satisfaction is the consequence of the customers' experiences during various purchasing processes. Thus, it is advantageous to assume that satisfaction of the customer who purchases the product or service online can be affected at every stage (Xia et al. 2008).

#### 3.2.1.1 Information search and alternative evaluation stage

This stage refers to the quality of the information provided by the website, how the website functions, the variety of merchandise offered together with the price which (it is believed) has an impact on satisfaction during the online shopping experiences. Since customers who purchase online rely on information to reduce their searching costs (Bakos 1997), it is crucial for online stores to provide a high quality of information. According to Peterson et al. (1997) the higher the quality of the information available online is, the higher is the level of customer satisfaction. The usability and website design play another crucial role in determining customer satisfaction when making online purchases. According to Karat and Karat (2003), "usability" refers to ease of use, user-friendliness and ease of learning. This impliedly encourages users with systems requiring minimum cognitive and physical effort to accomplish their tasks. Besides that, wider merchandise offered by an online store also can be an attraction to customers and can lead to increased satisfaction among customers (Szymanski and Hise 2000).

#### 3.2.1.2 Purchase stage

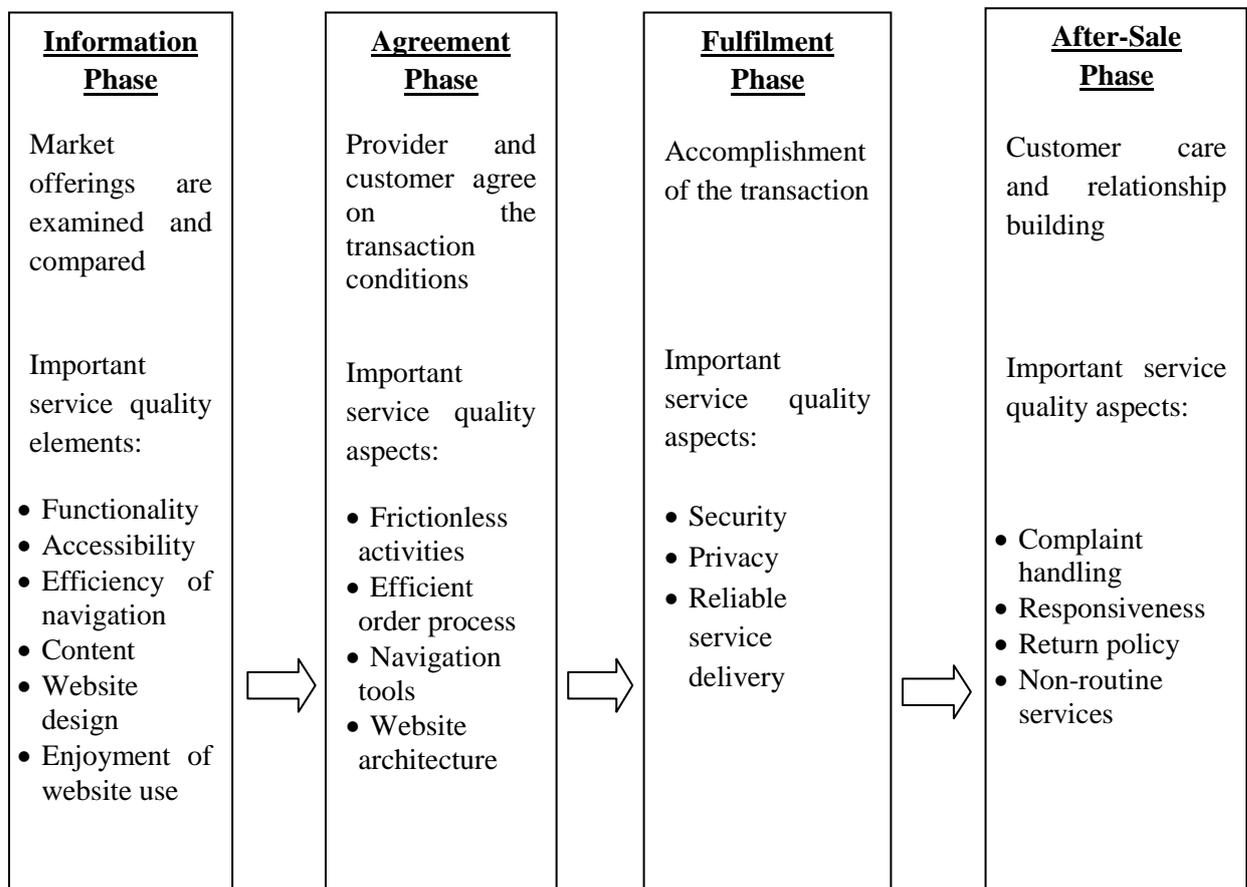
This stage describes the privacy/security, payment mechanisms, transaction capabilities and the response of the operation which may affect satisfaction. The greatest concern for online consumers is security/privacy. Thus, online stores become more aware of the importance of providing consumer privacy policies. Studies show that privacy or security have a strong impact on the overall quality of the site (Wolfenbarger and Gilly 2003), along with purchase (Loiacono et al. 2007) and satisfaction (Szymanski and Hise 2000). Satisfaction will increase if the website offers a convenient payment mechanism. Internet shoppers are also known to have low tolerance (Chen and Chang 2003) and delays in response may affect satisfaction among customers. Online stores should provide convenient payment mechanisms for customers (Chen and Chang 2003) because this also may affect customer satisfaction.

### 3.2.1.3 Post-purchase stage

This stage refers to the efficiency of logistics and customer service which may affect satisfaction. Chen and Chang (2003) revealed that most complaints about Internet transactions concerned return and exchange policies, defective products and poor customer service. Similar findings from Wang and Huarng (2002) recognized nine factors in the customer text comments regarding what customers were satisfied and dissatisfied about during the post-purchase stage. Unsatisfied customers commented on customer service via phone or email, availability of merchandise in stock and delivery of merchandise as ordered on time.

### 3.2.2 A transaction process –based framework for electronic commerce by Bauer et al. (2006)

Figure 3.2 Model B: A transaction process –based framework for electronic



commerce (Bauer et al. 2006)

Bauer et al. (2006) proposed a transaction process-based framework to capture all relevant quality aspects of virtual service transaction. Based on this framework, four stages may be involved in traditional offline transactions. It starts with examining and comparing what the market offers. Customers will then engage in the contract which means that customer's agree on transaction conditions. Basically, these two stages are dominated by collecting and processing the information. The third stage deals with exchanging goods and services and the last stage builds the customer relationship. Ideally, this framework is not only applicable for capturing offline transactions but is also applicable for the online environment. In fact, expectations of the online customers are the same as with the offline environment except that most of the stages (1, 2 and 4) are now fulfilled electronically.

#### 3.2.2.1 Information phase

Customers normally look at information such as price, reputation of the provider, product and other information which can lead to their purchase decision. At this stage, a good website design, efficiency of navigation, ease of access and good functioning can help to reduce search time by customers. The enjoyment of website use is also part of the key quality criteria (Zeithaml et al. 2002).

#### 3.2.2.2 Agreement phase

This phase is more concerned with interaction between customers and supplier. In other words, it refers to the customer's agreement based on conditions of the transaction provided by the supplier. The effectiveness at this stage is measured by the communication tools available on this website such as chats, discussion forums, e-mails, feedback forms, and fax.

#### 3.2.2.3 Fulfilment phase

In the third phase, an exchange of supplier's product occurs after it receives payment from the customer. The quality of this stage is measured by the efficiency of the placement and ordering system: whether it is quick and easy (Parasuraman et al.

2005). All errors should be particularly avoided in this phase. Other available features are prompt order confirmation and tracking services. Lastly, the product or service should be delivered as promised.

#### 3.2.2.4 After-sales phase

The last phase concerns building customer relationships where all complaints and inquiries should be answered by the supplier. The Returns policy also should be clearly understood. Moreover, in this phase also the customer should be advised of all special offers and complementary services/products (Library n.d).

### 3.2.3 Research model by Holloway and Beatty (2008)

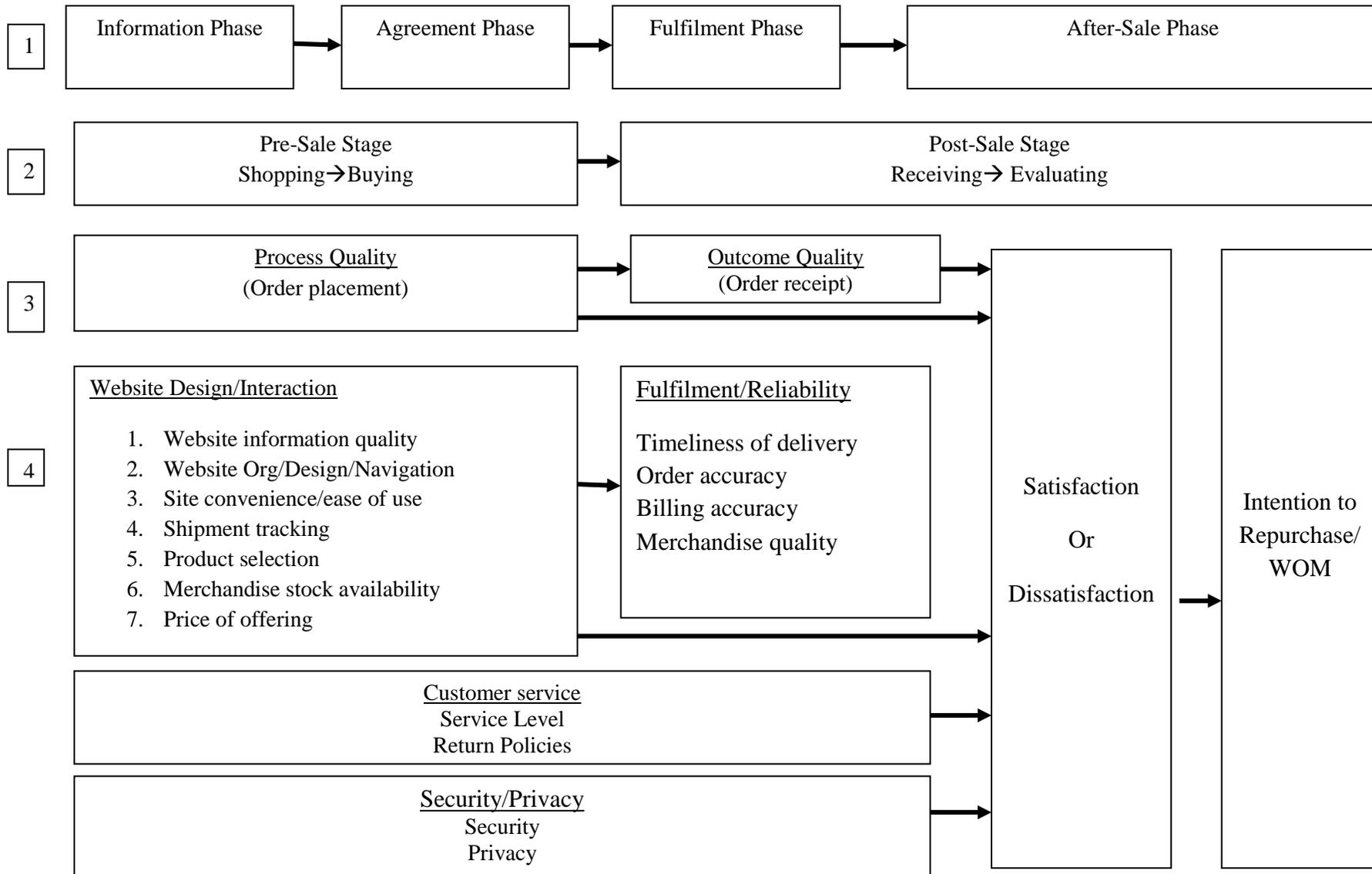


Figure 3.3 Model C ( Holloway and Beatty 2008)

Many researchers have just begun to address the factors that cause satisfaction or dissatisfaction among customers in the online environment but the issues limit our understanding. This is because some studies were only conducted to examine the cause of satisfaction but not examine the root of dissatisfaction among customers in an online environment. In addition, few studies have been conducted to examine both satisfaction and dissatisfaction in an online context. In contrast, a study conducted by (Holloway and Beatty 2008) examined the factors driving consumer satisfaction and dissatisfaction in the online service context.

The research model by Holloway and Beatty (2008) was developed from overview of the current literature that related to e-service quality and the factors influencing satisfaction and dissatisfaction. At Row 1, service quality is divided into four stages which are information phase, agreement phase, fulfilment phase and after-sale phase. This is taken from research done by Bauer et al. (2006) where they related final dimensions of service quality such as responsiveness, reliability, process, functionality/design and enjoyment with satisfaction and value perceptions.

Posselt and Gerstner (2005) divided e-retailer service into two phases; before and after the sale takes place (see Row-2). In their study, they emphasized the time sequence of service delivery which may impact on customer evaluation of a service and then lead to e-satisfaction. The findings showed that post-sale factors have a stronger impact on e-satisfaction than do pre-sale factors. The factors are on-time delivery, product meeting expectations, customer support and availability of the product.

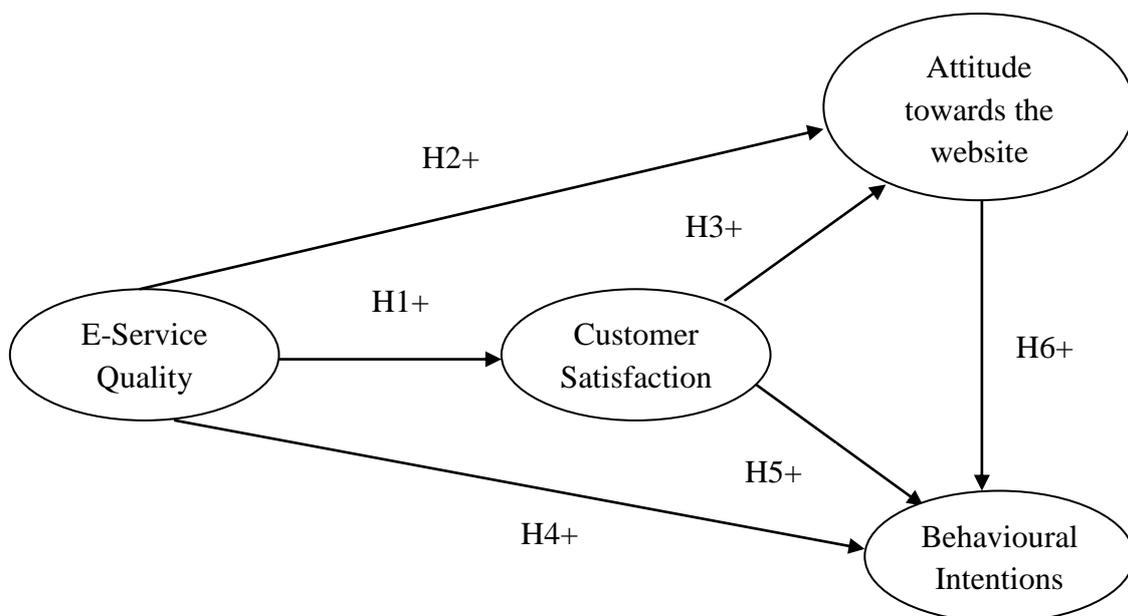
Based on a study conducted by Mentzer et al. (2001), Collier and Bienstock (2006) believe that the e-service quality scale is based on a sequential view involving process quality, outcome quality and recovery. They worked in logistic service quality (LSQ) which emphasised order placement (process) and order receipt (outcome). In order placement, they proposed four items: personnel contact quality, order release quantities, information quality and ordering procedures. Order issues concern the following items: order accuracy, order condition, order quality, timeliness and order discrepancy handling. Their study revealed that process quality influenced outcome quality, satisfaction and intentions, while outcome quality

and recovery were the two items mostly influenced by satisfaction. Holloway and Beatty (2008) showed all the linkages in the Row 3 except for recovery because it was beyond the scope of their study.

Wolfenbarger and Gilly (2003) developed a study based on four dimensions and a scale (eTailQ). The first dimensions are website design/ interaction and fulfilment reliability. Holloway and Beatty (2008) believed that website designs and fulfilment contribute to customer satisfaction while the other two dimensions - customer service and security and privacy - may or may not be related to the outcome variables. As identified by Posselt and Gerstner (2005) at the pre-sale stage and by Bauer et al. (2006) and Collier and Bienstock (2006), the first two stages (website design/interaction) happen early in the process. The fulfilment reliability occurs in the post-sale issues and relates to the outcome quality. Holloway and Beatty (2008) added that customer service and security/privacy may be relevant through all stages since they occur before and after the actual sales process.

### 3.2.4 Research model by Carlson and O’Cass (2010)

Figure 3.4 Model D: Carlson and O’Cass (2010)



Carlson and O'Cass (2010) proposed a conceptual model to investigate the relationships among e-service quality, customer satisfaction, attitudes towards the website and behavioural intention in the context of content-driven websites. They postulated the relationship between e-service quality and satisfaction because consumer perceptions (positive or negative) towards the various e-service attributes lead either to the satisfaction or dissatisfaction in the context of the content-driven website. It has been shown that e-service quality factors have an impact on consumer attitudes towards the website. In addition, they extended the relationship between customer satisfaction and attitude towards the website. Many previous studies have shown that if customers are satisfied with the attributes provide by the website, it will lead to a better attitude towards the website (e.g. Suh and Pederson 2010; Natalia and Kuster 2011; Hasley and Gregg 2010). Taking into account the previous findings (e.g. Collier and Bienstock 2006; Wolfinbarger and Gilly 2003) researchers also postulate a relationship between customer satisfaction and behavioural intention. In this, customers who are satisfied with the website are likely to revisit the site, and repurchase, will make positive comments to others and will recommend it to friends and relatives. Other studies have also found a positive relationship between attitudes towards the website and behavioural intentions. For instance, a positive attitude towards the content-driven website will lead to encouraging behavioural intentions such as repurchases, revisits and recommendations to others by customers. Lastly, they tested the relationship between e-service quality and behavioural intentions. They found that when a customer's assessment towards e-service quality is negative, they will automatically avoid using the website and will make negative comments about the website to others.

### **3.3 THE DEVELOPMENT OF THE RESEARCH FRAMEWORK**

Further investigation is needed regarding the impact of e-services on customer responses, such as perceived service quality, customer satisfaction and purchase intentions (Parasuraman et al. 2005).

Yang (2001) and Grewal (2000) found that service quality in an online environment is a precondition for e-commerce business. Research on the interactions among different dimensions of e-service quality in predicting overall service quality, customer satisfaction and purchase intentions in an online context remains in its infancy.

Empirical research is needed to shed light on the detailed determinants of e-service quality and its impact on perception by customers of the online environment setting. This is to reflect the limitations of the existing literature to provide a conceptual model of e-service quality. This study proposes that e-service quality general belief, information quality, merchandise attributes, transaction capability and payment, security and privacy, expected delivery and expected customer service and also develops a research model for understanding the perceptions of rational customers at the time they purchase products through online services. The model also proposes that e-service quality dimensions are causally linked to customer satisfaction and in turn affect the behavioural intention of customers. The dimensions of post purchase, i.e. service delivery and customer service, are added as links to customer satisfaction and in turn influence customer purchase intentions.

The conceptualization and measurement of e-service quality is still its infancy. The first gap identified by the researcher is that most scales do not consider the entire purchase process, including post purchase. This view is shared by Barrutia and Gilsanz (2009) who stated that some scales and dimensions do not investigate the complete purchase experience and few studies have examined and investigated the complete purchase experience among customers. For example, Xia et al. (2008) postulated a framework to measure customer satisfaction in the online environment in China's context which includes the entire process of purchase experience, and the eTailQ scale was developed by Wolfinbarger and Gilly (2003) to also consider the complete purchase experience of customers.

According to Kotler (1991) stated that satisfaction is the consequence of the customer's experiences during various purchasing processes. Thus, satisfaction in the online environment should be measured before purchase, during purchase and after purchase. This view is shared by Bauer et al. (2006) who affirmed that a complete definition of e-service quality should cover all cues and encounters that occur before, during and after the electronic service delivery.

In this study, the development of the research framework was adapted from the three studies conducted by Xia et al. (2008), Holloway and Beatty (2008) and Carlson and O'Cass (2010), together with this researcher's common sense. However, there are some weaknesses

identified in the framework developed by Xia et al. (2008). They combined the post-purchase with the two other stages (information search and evaluation and transaction) to measure overall satisfaction. As known, post purchase includes service delivery and customer service and should be measured separately from those other stages. This is because these two dimensions occur after the customer has received the product they bought through a website. In other words, customers can evaluate their satisfaction about these two dimensions after they have experienced them. In addition, this researcher believes that the two other stages are best measured for satisfaction when customers make their purchases. The consequences of e-service quality were in attitudes and behavioural intentions. They are included in this study to capture customers' perceptions when they make their purchases.

Many of the previous studies concentrated on the development of e-service quality scales rather than on consequences of the e-service. Indeed, concentration on intentions (to revisit or repurchase), attitude (such as saying positive things about the site) and customer satisfaction are studied less by the researchers. They are more likely to focus on other constructs such as loyalty, perceived value and trust (Swaid and Wigand 2009). To fulfil the gap, therefore, this study investigated the consequences of e-service quality including overall satisfaction, behavioural intention and attitude. Carlson and O'Cass (2010) also identified this gap, and this supports the researcher's argument that there is a need for investigation into e-service quality, satisfaction and behavioural intention in conjunction with consumer attitudes. This researcher also believes that these outcome measures are an area of research that needs attention because many studies have previously focused on rating the features of web sites rather than investigating outcome measures.

The arrangements of all the items in information search and alternatives and evaluation stage (Stage 1) and purchase stage (Stage 2) are adapted from the study by Carlson and O'Cass (2011). Three items in Stage 1 (information quality, website design, merchandise attributes) and three items in Stage 2 (transaction capability and payment, response and security/privacy) are combined into one dimension - e-service quality. Three new items - general belief, expected customer service and expected delivery service - are also include in this dimension.

### 3.3.1 General beliefs about online shopping

As discussed in Section 2.6, belief about online shopping has been recognised as one factor that affects people's online purchase. Further, details about general belief toward online shopping were discussed here. According to Fishbein and Ajzen (1975) belief is an attitude which refers to a person's favourable or unfavourable evaluation of an object. In other word, it corresponds to the information he/she has about the object. The object of belief can be a person, a group of people, an institution, behaviour, a policy or an event, and the connected attribute may be any object, trait, property, quality, characteristic, outcome or event.

Beliefs about Internet shopping also referred to the customers' evaluation (Li and Zhang, 2006). They added that in terms of B2C it is defined as a (potential) consumer's subjective evaluation of a relevant object, such as the Internet is used as a shopping channel, a specific e-store or online shopping experience. Beliefs are expected to affect (potential) customers' shopping intentions, behaviour and satisfaction (Han and Noh 2000; Devaraj et al. 2002).

However, Lee et al. (2011) defines that beliefs are the feeling towards some aspect of the world which correspond to a person's self-understanding and environment and lead to the person's attitude, intention and behaviour. They added that perceived usefulness and perceived ease of use are two beliefs that determine the likelihood of online shopping as argued by Vijayasathy (2004) and Yoon (2009).

Several studies observed beliefs about the Internet as a shopping channel or online shopping. In this context, it refers to an individual's subjective evaluation of objects in the context of B2C commerce. The evaluations of the Internet as a shopping channel are expressed in terms of its usefulness, ease of use, convenience, security, risk, trust, uncertainty, transaction cost, time saving and technical features. However, Verhagena and Dolen (2011) proposed that online store belief are constitute from merchandise attractiveness, site ease of use, enjoyment and website communication and all these three beliefs lead to consumer impulse buying<sup>3</sup>, mediated by emotions of customers'.

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<sup>3</sup> *"Impulse buying occurs when people experience an urge to buy a product, without a thoughtful consideration why and for what reason one needs the product"* (Verhagen and Dolen 2011 p.320).

Beliefs about an e-store or online shopping experience are best defined as an individual's subjective evaluation of a specific e-store or an online shopping experience. Gefen (2002) defined belief as an individual's subjective evaluation of an electronic vendor which evaluation includes trust toward the vendor, perceived risk with the vendor, empathy, reliability, responsiveness and assurance with the vendor.

Much research has been conducted about beliefs as to what is being offered - products and services on sale. A belief in this category is an individual's subjective evaluation of the products or service for sale in an e-store; for instance, the perceived usefulness of products and perceived performance of the service.

According to Jarvenpaa and Toad (1996), many studies have been done in online shopping that point to price and service as the two most vital factors for online shoppers. Consumers always believe in an e-link as being relatively low cost in searching for information on products and price which can boost price sensitivity. In the Internet market context, it is called the "fraction-less market" (Bakos 1997). Online shoppers continue to be sensitive to Web elements that provide pricing information although the extent of sensitivity depends on price and product categories (Ba and Pavlou 2002). This is in line with studies which confirm that communicating value online is not easy and price-related basics are the key for e-commerce sites.

In addition, the price as an attraction to win consumers is evident in the success of eBay.com and Amazon.com which heavily advertise lower prices for the same products from the traditional local stores. Also, customers love to seek the lowest price (Anderson and Srinivasan 2003). Using the Internet, allows for efficient price searching and comparison by employing Internet tools such as recommendation agents that allow consumers to screen alternatives online, and a comparison matrix with depth comparisons among selected alternatives (Haubl and Ttifts 2000). According to Chen and Chang (2003) a simple request can provide a quick price comparison among several online vendors and makes sense for consumers who know what they are looking for and find an Internet marketer who is able to offer competitive prices.

One study conducted by Verhagen and Dolen (2011) developed a model and showed how beliefs about functional convenience (e.g. online store merchandise attractiveness and ease of use) and about representational delight (e.g. enjoyment and website communication style) related to online impulse buying. These findings are supported by the previous study conducted by Madhvaram and Laverie (2004) who suggested that website elements (e.g. merchandise attractiveness) are likely to lead to impulse buying.

In addition, the lack of physical access and the time lag between purchase and delivery of the product make web customers sensitive to online vendors' services. Hence, one can argue for the saliency of two behavioural beliefs impacting web customers' attitude: perceived price and perceived service. According to Lichtenstein, Burton and Karson (1991), perceived risk refers to the consumers' perception of low price while perceived service refers to many dimensions such as responsiveness, tangibility, assurance and empathy.

Drawing on the literature presented above, I propose that:

*"Belief" refers to general belief about online shopping. It refers to an individual's overall subjective evaluation of an e-store as a whole and included as one of the e-service quality attributes.*

### **3.3.2 Information quality, website design and merchandise attributes**

Before consumers engage with the decision making process, they will begin by searching for information and this is recognised as a purchaser problem (Mishra 2009). Consumers have to choose searching for information from two or more channels. According to Peterson et al. (1997), consumers can search for the information online, offline or in combination. Consumers who are at this stage require a search and evaluation process to gather information (Burke 2002; Chen and Chang, 2003; Kim and Stoel, 2004) and this is retailer-related. All the collected information will be evaluated according to their purchasing criteria. At this stage, it is essential to place adequate product (Burke 2002) and pricing information and make it easy to locate.

In this stage, there are considerable differences between traditional shopping and Internet shopping. Commonly, there is limited physical interaction possible with products which are

visual and textual information. Additional information on products is limited to other channels such as online chat sessions, telephone conversations and email. Secondly, it is difficult to find common comparative criteria from different retailers for similar products. The advantages of the convenient 24/7 trading hours and the multitude of websites may reduce the time and effort involved in searching for products (Seiders et al. 2000). This source is particularly advantageous when searching for unique or unusual products and when seeking to compare a range of products or prices (Wolfenbarger and Gilly 2001; Zeithaml et al. 2002).

Wells et al. (2011) divide information into two types which are pre-purchase information scarcity and post-purchase information clarity. Pre-purchase information scarcity occurs when a customer cannot access the quality of the product's attributes before making a purchase while post-purchase clarity is when customer can readily assess the quality of a product after they purchase or use it (Wells et al. 2011). Purchasing apparel through online is one of the examples of pre-purchase information scarcity due to the customer not being able to touch, inspect and try it on. The evaluation of the apparel can be made after customers have received the product and tried it and this is known as post-purchase information clarity. Therefore, marketers should provide clear information because information scarcity and clarity depending upon on the nature of the product and experience of the customer.

Providing the information quality associated with the site itself, how it functions and the variety of apparels play a significant role in determining if customers are satisfied or not. According to Kim et al. (2006) this information plays pivotal dimensions of service quality. This is because online shoppers cannot try on a garment to check the fit, texture or colour. Online shoppers largely depend on information available on the web site, due to a need for adequate product information to make a purchase decision. If the shoppers are not satisfied with the information the web provided, they will exit and visit a competitor's website. This is supported by that if the website could provide sufficient information to their customers it should be encourage people to shop online (Kuo and Chen 2011).

Another advantage of shopping online is that comparison of products can be much easier as physical movements between shops or between shelves in a shop are not necessary (Gruner

and Ramus 2005). According to Mishra (2009) in a traditional store, much energy is expended to find information because there are a lot of potential environmental influences (e.g., atmosphere, sales personnel, POS information, etc.) and immediate feedback on the appropriateness of the product (e.g. tactile qualities, fit, colour, drop, quality). Another important point is that quick and effortless searches and comparisons on the Internet are possible.

In order to understand the online information search behaviour, one needs to recognize that the Internet is not an isolated channel. According to Peterson et al. (1997), consumers use coexisting, complementary and competing channels to search for information and make decisions. Internet shopping is a new tool for shopping involving various types of perceived risks where a consumer is likely to place added importance on searching through online behaviour.

Another attribute for apparel retail web sites is usability of website design. According to Karat and Karat (2003), usability refers to ease of use, user-friendliness and ease of learning. That implies that users have systems requiring minimum cognitive and physical effort to accomplish their tasks. Similarly, Sindhuja and Dastidar (2009) defined web usability as making the design simple so that customers who naturally tend to be goal-driven can accomplish their task as quickly and painlessly as possible. Shneiderman (2005) added usability can be a balancing act where inadequate functionality will make the application useless while complexity and non-user-friendly make an interface hard to use.

McKinney et al. (2002) in their research on web customer satisfaction, stated that a website will be abandoned if the customer has difficulty in searching or retrieving the needed information even if the website provides the information necessary to complete the intended task. Nielson (2003) states that it is more practical to design a website that meets customers' needs rather than one that is attractive and fun. This is because if the customers find the site too difficult to use, they will not be a purchaser or make a return visit. Similarly, Kuo and Chen (2009) stated that website service play a crucial role in affecting desire of the customer to consume and be loyal. They define quality of website service by the customers' feeling towards the level of service while browsing the website and interacting with the online store.

Zeithaml et al. (2002) identified five criteria that users look for while evaluating websites in general: information content, ease of use, privacy/security, graphic styles and fulfilment. They defined usability on five dimensions of website design: download delay, navigability, content, interactivity and responsiveness. Eroglu and Davis (2001) found that aspects of graphic style affected satisfaction with the web. Besides that, customers will be attracted to visit a site with good graphics and hence become satisfied if the site they are visiting offers a variety of merchandise and prices. Meanwhile, Cry (2008) stated that the effectiveness of the website includes navigation capability or visual appeal of the website because these two attributes are antecedents to website trust, website satisfaction and e-loyalty in a three countries which are Canada, Germany and China.

D'Angelo and Little (1998) argue that factors such as navigational and visual characteristics, and practical considerations, such as images, background, colour, sound, video, media and content are key considerations in designing a Web site. Lohse and Spiller (1998) also note that online business Web site characteristics, such as having a feedback section and product lists, are crucial in generating sales.

In the online retailing environment, Rice (1997) investigated what factors made the users revisit certain Web sites and found that the most significant variables were design features (e.g. content, layout, ease of finding information, and ease of navigation) and emotional experience (e.g. enjoyable and exciting visits). Hoffman and Novak (1997) pointed out that personalization was of the essence for online firms to make the Internet a unique consumer market. Griffith and Krampf (1998) found two factors commonly occurred in the virtual setting: lack of prompt responsiveness, especially in handling e-mail inquiries. They further pointed out that US retailers needed enough staff support in order to improve their customer service access through the Web sites and to satisfy their customers. This is most likely true also in other countries.

Many online businesses employ features such as banner ads and pop-up windows to generate additional revenues and promote sales. These features also increase interruption of the search process, distracting and disorienting consumers in this highly and perceptual environment. By having a clear understanding of this interruption, online businesses could prevent consumers

from getting lost if the information space guides them to the information destinations of interest (Chiang et al. 2005).

Not just having sufficient information and good website design, Guo et al. (2012) believes that merchandise attributes plays a significant role in whether customers are satisfied or dissatisfied with their online shopping experiences. They added that offering a broad range of products is often a key for marketers to keep customers coming back. This supports from Christian and France (2005) who stated that web merchants who have offered a wide range of assorted products seem to be more successful. A wider range of products may be attractive to customers and e-satisfaction would lead to e-satisfaction among online shoppers (Szymanski and Hise 2000). In addition, Xia et al. (2008) indicated that wider range of merchandise together with low price could affect customer satisfaction in the context of online setting.

### **3.3.3 Transaction capabilities and payment, response and security/privacy**

Transaction capabilities and payment, response and security/privacy are also known as part of the purchase stage. Here, shoppers are ready to buy and expect to be able to complete their transactions with a limited amount of effort. This differs from traditional retailing both in the physical activity involved and in terms of payment. The key concern given is consumers' involvement with payment security via the Internet (Flavian and Guinaliu 2006; Ganguly et al. 2009; Gritzalis and Gritzalis 2002). Along with this, there are only limited payment methods in online businesses.

Purchase is recognized as one of the factors that contribute towards customer satisfaction. At this stage, transaction capability, payment, security or privacy and responses may affect satisfaction. When doing online business, problems with privacy and personal information and mistrust regarding the payment system cannot be avoided. Many online shoppers face greater risks when they shop on the Internet compared to traditional shopping. Privacy is defined as the degree to which the site is safe and protects customer information (Parasuraman et al. 2005). This issue was a serious issue for online retailing. Most online shoppers are concerned about the security/ privacy because their personal information may be misused by another party. Thus, online apparel retailers are becoming more aware of the

importance of providing consumer privacy policies (Ranganathan and Ganapathy, 2002). Studies show that privacy or security has a strong impact on response to the overall quality of the site (Wolfenbarger and Gilly 2003) purchase (Loiacono et al. 2007) and satisfaction (Szymanski and Hise 2000). Satisfaction will increase if the web site offers a convenient payment mechanism.

Guo et al. (2012) stated that online retailers normally offer many type of online payment ( e.g. credit card, payment with cash and telegraphic remittance) and customers normally choose their type of payment not only base on convenience but also considering the matter of security. For instance, for cash payment, online retailers offer COD (cash on delivery) when they deliver the product to customers. In other words, customers pay for the product upon their meeting with the owner of businesses. This is argued by Grace and Chia-Chi (2009) who found that customers used certain criteria to evaluate the usefulness and ease of use for a particular website, including information search, Internet search, Internet subscription and payment methods. Hence, online retailers should make the payment procedure easy to increase the level of customer satisfaction (Grace and Chia-Chi 2009).

Security issues are not only of utmost concern among Malaysian people but among users worldwide (Shergill and Chen 2005; Gefen and Straub 2003; Milne et al. 2005). Both online consumers and non-online-consumers claimed that they would adopt online if they could be assured that a company in the Web was reputable and the transaction system was secure. From the study by Seal and McCartney (1997) and Pincince (1998) security was proven to have an effect on the adoption of shopping from a virtual store. Most of the virtual shops have not acquired the trust of customers (including Malaysian people). With this kind of uncertainty, businesses are naturally reluctant to join the e-commerce.

According to Paynter and Lim (2001), the first case involving credit card fraud in Malaysia was reported in 1998. It happened in a shopping mall and further credit card fraud cases were reported. As a result, confidence in online retailing dropped. To avoid such incidents recurring, retailers were advised to take the initiative to call online shoppers when dealing with large sums of money. If the online store fails to get the confirmation, the transaction will be cancelled immediately (Cnet.com 1998).

The Malaysian government has put much effort into creating a policy to overcome the purchasing fraud cases. For instance, the Computer Crimes Bill 1997; Digital Signature Bill 1997; Copyright Bill 1997 and Communication and Multimedia Bill 1998 (Ramayah et al. 2003). MIMOS Bhd introduced iVEST in November 1999 which provides a secure virtual environment for e-business. This security system could tackle 40 security risks and privacy issues by integrating encryption, digital signature and smart card technology into one single product.

Dellaert and Kahn (1999) stated that online shoppers are well-known as having low tolerance and (as previously mentioned) it is estimated that they only wait for eight seconds for a system to respond before bailing out. Therefore, a web page designer has to consider not only appearance and functionality but also loading time (Weinberg 2000). As a result, it will raise the customer's degree of satisfaction and improve the website's transaction capability, design a secure and convenient payment mechanism, ensure completion of all online shopping operations and save the customer's operation time (Xia et al. 2008).

### **3.3.4 Expected service delivery and expected customer service**

In this study, expected service delivery and expected customer service are different to service delivery and customer service at the post-purchase stage. This suggests that these elements play a different role at every stage, and the research was planned on this basis. Expected service delivery and expected customer service are measured when customers place their orders. In contrast with service delivery and customer service at the post-purchase stage, which happens after customers have received their products.

At the expected service delivery stage, this researcher believes that satisfaction can occur if customers are offered a variety of service delivery methods and set out to test this. Not just having a standard delivery, an e-retailer can offer express delivery and cash on delivery (COD) based on customers' preferences on how the product is to be delivered. In addition, the price stated for delivery charges has to be reasonable and without any hidden costs. Wang and Huarng (2002) found that what satisfied customers were on-time delivery with a competitive price and without any hidden charges. An extra incentive to delight customers is by providing free delivery if customers purchase more than one item from the website.

Meanwhile, expected customer service is more than policies, procedures and responsiveness in handling complaints. It also refers to the return policy, customer's right to change and that problems can be solved. At this stage too, customers are offered many interactive communications with the company. For instance, customers can use the chat room, email, telephone, bulletin board and feedback forms to communicate with the company (Massey and Levy 1999). According to Teo et al. (2003), interactivity features have a significant relationship with the consumers' perceived value. Indeed, Zeithaml (1988) added that customer value has been recognised as the key for businesses to succeed. Ray (2010) summarised that the availability of the online chat room on the website presence can boost customer satisfaction.

### **3.4 CUSTOMER SATISFACTION IN THE CONTEXT OF AN ONLINE SETTING**

The issue of customer satisfaction has been discussed widely in section 2.7 in Chapter Two (Literature Review) and this included its definition and the importance of having and measuring customer satisfaction. Figure 7 in section 2.7.1 presented the factors that affect customer satisfaction; however, this was not practically applied for this study. The factors presented in Figure 7 such as knowledgeable employees, helpful employees are focused on satisfaction towards the organization were not in the online setting.

Subsequently, section 3.4 is designed to focus more on specific customer satisfaction which is in the context of an online setting. In many prior studies, customer satisfaction in an online environment was always referred to as e-satisfaction (Szymanski and Hise 2000; Cho and Park 2001; Kim and Lim 2001).

According to Ofir and Simonson (2007) and Johan (2006), exploration of satisfaction in the e-commerce environment is still in the emergent stage. Winter (2001) added that, in the context of online retailing, one of the centres of a firm's relationship programmes is customer satisfaction. Kim et al. (2009) defined satisfaction as the perception of pleasurable fulfilment in the customers' experiences. Broadly speaking, customer satisfaction is described as how products or services supplied by a company meet customer expectations.

Some recent researchers have realised that customer satisfaction plays a crucial role in sustaining a business in the marketplace (Garver and Gagnon 2002). According to them, there

was a significant relationship between customer satisfaction and organizational performance. Thus, it is crucial to make sure that customers are satisfied with the services delivered. If not, the organisation will lose its market. Kim and Stoel (2004) stated that customers must be satisfied with the shopping experience, otherwise they will not return.

Customer satisfaction is always connected with trust and loyalty. In explaining the establishment of e-loyalty, both e-satisfaction and e-trust play a pivotal role (Jin et al. 2008). For instance, studies discovered that e-satisfaction and e-trust influence e-loyalty. Kim et al. (2009) proposed a study on the e-loyalty process by conceptualizing that e-loyalty is influenced by e-satisfaction, e-trust and multidimensional aspects of retail quality. They found that the e-loyalty development process is influenced by both e-satisfaction and e-trust.

Szymanski and Hise (2000) investigated consumer's satisfaction with Internet shopping. Their respondents were online shoppers who purchased items online and used online surveys. They found that greater satisfaction with online shopping has significant impacts with consumer perceptions of the convenience, product offerings, product information, site design and financial security relative to traditional stores.

According to Holloway and Beatty (2008), there has been less focus on the drivers of satisfaction and even less attention has been directed at the drivers of dissatisfaction on service online encounters. Their research aimed to identify and categorize the specific drivers that lead to dissatisfactory and satisfactory online service encounters. The findings can be classified into two types: dissatisfied and satisfied outcomes. The dissatisfiers are as follows: fulfilment/reliability, website design/interaction, customer service and security privacy. Meanwhile, the satisfiers in order are: website design/interaction, fulfilment/reliability, customer service and security/privacy. As we can see, the most significant finding is the reverse order of fulfilment/reliability (the leading dissatisfier) and website design/interaction (leading satisfier).

Yang et al. (2003) researched general consumer review of websites of online firms and health product company websites. They found that even some dissatisfiers and satisfiers were the same (prompt delivery and confidence), accurate order and timely response arose more significantly as dissatisfiers and convenient shopping and effective navigation arose more heavily as a satisfier.

Posselt and Gerstner (2005) highlighted the importance of the time sequence in online purchasing settings. They distinguished between pre-sale variables and post-sale service elements even though they emerge to associate service quality with satisfaction drivers. Their findings showed that post-sale factors are considerably more influential than pre-sale factors. Consumers noted on-time delivery as the most influential factor and the last was the availability of the product.

Many previous studies have highlighted the positive relationship between perceived value and satisfaction in the service context (Lin et al.2012; Hur et al. 2012; Joon and Kwun 2011) Auh and Johnson (2005) believed that a satisfaction result is formed by the different levels of customer value. Customers who perceive that they receive value for money are more satisfied than those who do not. McDougall and Levesque (2000) showed that the driver of the most customer satisfaction is the perceived value. Yoo et al. (2010) also found that both utilitarian and hedonic values are significantly related to customer satisfaction in the e-commerce context. A high level of consumer satisfaction leads to customer retention which in turn leads to improved profits, positive WOM and lower marketing expenditure.

Wolfenbarger and Gilly (2003) proposed four dimensions and a scale (eTailQ). Website design and fulfilment/reliability were recognized as the first two dimensions which contribute overwhelmingly to satisfaction and quality, while customer service and security/privacy either were not related or were not significantly related to important outcome variables. Similarly Muylle et al. (2004) constructed the web site user satisfaction (WUS) model and explored its dimensionality. They proposed four dimensions of WUS: layout, information, connection and language customization. They found that the information comprehensibility, ease of use, structure, hyperlink connotation and layout contributed to unsatisfactory outcome.

In some studies, researchers treat service quality as synonymous with the drivers of satisfaction (Posselt et al. 2005; Wolfenbarger and Gilly 2003). Conversely, other research tends to support the contention that service quality is a driver of transaction satisfaction and this last outcome will produce global impressions of the firm (Dabholkar 1994; Parasuraman et al.1994). Lastly, many studies confirm that service quality dimensions are good predictors of satisfaction (Dabholkar 1994; Sureshchandar et al.2002).

Table 3.1: List of prior studies and drivers of e-satisfaction

Authors	Drivers of e-satisfaction
<b>Zeithmal et al. (2000)</b>	Perceived convenience: <ul style="list-style-type: none"> <li>• Access</li> <li>• Ease of navigation</li> <li>• Efficiency, flexibility</li> </ul> Perceived control: <ul style="list-style-type: none"> <li>• Reliability</li> <li>• Personalization</li> <li>• Security</li> <li>• Privacy</li> </ul>
<b>Szymanski and Hise (2000)</b>	<ul style="list-style-type: none"> <li>• Convenience</li> <li>• Site design</li> <li>• Financial security</li> <li>• Product information</li> </ul>
<b>Yoo and Donthu (2001)</b>	Site-related factors: <ul style="list-style-type: none"> <li>• Ease of use</li> <li>• Aesthetic design</li> <li>• Processing speed</li> <li>• Security</li> </ul> Vendor related factors: <ul style="list-style-type: none"> <li>• Competitive value</li> <li>• Clarity of ordering</li> <li>• Corporate and brand equity</li> <li>• Product uniqueness</li> </ul>
<b>Cho and Park (2001)</b>	<ul style="list-style-type: none"> <li>• Product information</li> <li>• Site design</li> <li>• Consumer service</li> <li>• Purchase result and delivery</li> <li>• Purchasing process</li> <li>• Payment methods</li> <li>• Additional information services</li> <li>• Delivery time and charge</li> </ul>
<b>Kim and Lim (2001)</b>	<ul style="list-style-type: none"> <li>• Width of information</li> <li>• Update of information</li> <li>• Depth of information</li> <li>• Promptness of retrieval</li> <li>• Speed of transmission</li> </ul>

	<ul style="list-style-type: none"> <li>• Web design</li> <li>• Customer service</li> <li>• Ease of access</li> <li>• Convenience of use</li> <li>• Security of users' information</li> <li>• Reliability of the site</li> <li>• Advertising</li> <li>• Entertainment</li> </ul>
<b>Francis and White (2002)</b>	<ul style="list-style-type: none"> <li>• E-store functionality</li> <li>• Product attribute description</li> <li>• Ownership conditions</li> <li>• Delivered products</li> <li>• Customer service</li> <li>• Security</li> </ul>
<b>Devaraj (2002)</b>	<ul style="list-style-type: none"> <li>• Perceived ease of use</li> <li>• Perceived usefulness</li> </ul>
<b>Loiancona et al. (2002)</b>	<ul style="list-style-type: none"> <li>• Ease of use (ease of understanding, intuitive operations)</li> <li>• Usefulness (informational fit-to-task)</li> <li>• Interactivity (trust, response time)</li> <li>• Entertainment (visual appeal, innovativeness, flow emotional appeal)</li> <li>• Complementary relationship (consistent image, online completeness, better than other channels)</li> </ul>
<b>Muyllle et al. (2002)</b>	<p>Layout</p> <ul style="list-style-type: none"> <li>• Information</li> <li>• Relevancy</li> <li>• Accuracy</li> <li>• Comprehensibility</li> </ul> <p>Comprehensiveness</p> <p>Connection</p> <ul style="list-style-type: none"> <li>• Ease of use</li> <li>• Entry guidance</li> <li>• Structure</li> <li>• Hyperlink connotation</li> <li>• Speed</li> </ul> <p>Language customization</p>
<b>Madu and Madu (2002)</b>	<ul style="list-style-type: none"> <li>• Updated information</li> <li>• Site design</li> </ul>
<b>McKinney et al. (2002)</b>	<ul style="list-style-type: none"> <li>• Information quality disconfirmation</li> </ul>

	<ul style="list-style-type: none"> <li>• System quality disconfirmation</li> </ul>
<b>Reibstein (2002)</b>	<ul style="list-style-type: none"> <li>• Ease of ordering</li> <li>• Product selection</li> <li>• Product information</li> <li>• Product prices</li> <li>• Navigation</li> <li>• On-time delivery</li> <li>• Product presentation</li> <li>• Customer service</li> <li>• Privacy policies</li> <li>• Shipping and handling</li> </ul>
<b>Trocchia and Janda (2003)</b>	<ul style="list-style-type: none"> <li>• Information quality</li> </ul>
<b>Wolfenbarger and Gilly (2003)</b>	<ul style="list-style-type: none"> <li>• Website design</li> <li>• Fulfilment/ reliability</li> <li>• Privacy/security</li> <li>• E-customer service</li> </ul>
<b>Evanschitzky et al. (2004)</b>	<ul style="list-style-type: none"> <li>• Shopping convenience</li> <li>• Product offerings</li> <li>• Product information</li> <li>• Site design</li> <li>• Financial security</li> </ul>
<b>Heiner et al.(2004)</b>	<ul style="list-style-type: none"> <li>• Financial security</li> <li>• Merchandise variety</li> <li>• Reliability information</li> <li>• Convenience</li> <li>• Website design</li> </ul>
<b>Udo et al. (2010)</b>	<ul style="list-style-type: none"> <li>• Website quality</li> <li>• Behavioural intention</li> </ul>
<b>Kim and Stoel (2004)</b>	<ul style="list-style-type: none"> <li>• Perceived</li> <li>• Reliability information</li> <li>• Transaction capability</li> <li>• Response time</li> <li>• Entertainment</li> <li>• Trust</li> <li>• Website design</li> <li>• Financial security</li> </ul>
<b>Barutcu (2006)</b>	<ul style="list-style-type: none"> <li>• E-customer service quality</li> <li>• E-store design quality</li> <li>• E-shopping cost</li> </ul>

<b>Hsuehen (2006)</b>	<ul style="list-style-type: none"> <li>• Reliability information</li> <li>• Website design</li> </ul>
<b>Dolen et al. (2007)</b>	<ul style="list-style-type: none"> <li>• Perceived technology attributes(control, enjoyment, reliability, speed, ease of use)</li> <li>• Chat group characteristics (group involvement, similarity, receptivity)</li> </ul>
<b>Lui et al. (2008)</b>	<ul style="list-style-type: none"> <li>• Information quality</li> <li>• Website design</li> <li>• Merchandise attributes</li> <li>• Transaction capability</li> <li>• Security. Privacy</li> <li>• Payment</li> <li>• Delivery</li> <li>• Customer service</li> </ul>
<b>Santouridis et al. (2009)</b>	<ul style="list-style-type: none"> <li>• Assurance</li> <li>• Quality of information</li> <li>• Responsiveness</li> <li>• Web assistance</li> <li>• Empathy</li> <li>• Reliability</li> </ul>
<b>Barutçu (2010)</b>	<ul style="list-style-type: none"> <li>• E-shopping cost</li> <li>• E-store design quality</li> <li>• E-store service quality</li> <li>• E-store information quality</li> <li>• Cargo carriers</li> <li>• Service quality</li> </ul>
<b>Gaonaris et al. (2010)</b>	<ul style="list-style-type: none"> <li>• User friendliness</li> <li>• Information</li> <li>• Adaptation</li> <li>• Aesthetics</li> </ul>

### 3.5 MEASURING E-SERVICE QUALITY (e-SQ)

Based on the preceding literature review (see Chapter Two), the traditional view of service quality has been discussed in detail. As described in Chapter Two, over the past two decades, service quality has become a popular topic in academic investigation as a guideline to differentiate between service products and building competitive advantage (Zeithaml et al. 1996). Hence, Section 3.5 focuses on service quality in the context of an online setting. With the rapid growth of e-commerce and business to consumer (B2C), e-commerce, many studies are now focusing on conceptualizing, measuring and managing service quality and its impact in the virtual environment (Carlson and O'Cass 2011). Parasuraman et al. (2005) added that e-service quality is a key to determining competitive advantage and factor in the long-term retention of firms in the marketplace. Yang (2001) stated that one key factor in determining the success or failure of electronic commerce is service quality.

Basically, e-service quality can be defined as the customers' overall evaluation and judgement of the excellence and quality of e-service offerings in the online environment. This definition is based on the Internet marketing and traditional service quality literature (Santos, 2003). In other words, it is the experiences of the customers when dealing with the product and service online. According to Parasuraman et al. (2005 p.135), e-service quality is

*"... the extent to which a web site facilitates efficient and effective shopping, purchasing and delivery".*

That definition shows that e-service quality does not solely rely on the pre-purchase phase (product information, ease of use, ordering information and personal information protection) but now extends to the post-purchase phase (delivery, customer support, fulfilment and return policy). The nature of the online environment is different to the traditional retail context. Hence, Ladhari (2010) has classified it into four factors: convenience and efficiency, safety and confidentiality, absence of face-to face contact and production of service quality.

From an analysis of different points of view on e-service quality discussed above, a common theme derived is:

*"E-service quality can be defined in the context of content-driven website. This includes the general belief about online shopping, information quality, website*

*design, merchandise attributes, transaction capabilities and payment, response, security/privacy, expected delivery and expected customer service. All these elements then group into one dimension, which is e-service quality."*

### **3.5.1 Formative construct of e-Service Quality versus Reflective of construct e-Service Quality**

While research into service quality, especially service quality in online setting continues to develop, attention has remained on how to conceptualize the construct. According to Carlson and O’Cass (2010), the conceptualization of e-service quality is important because it may shift the measurement and operationalization issues in e-service quality. Some studies for instance Kassim and Abdullah (2008), Kim et al. (2009), Francis (2009) have presented e-service quality as a construct rather than as antecedents to evaluation of service quality.

The measurement models that validate indicators and their latent variables are known as reflective models. The changes in underlying construct are reflected by changes in the indicators (Freeze and Raschke 2007). Meanwhile, a formative model is where the indicators influence the construct. Based on Jarvis et al. (2003), due to the high correlations between indicators, the dropping of the indicators will affect the meaning of the construct.

In more recent times, debate among researchers occurred whether service quality should be viewed as a formative construct rather than a reflective construct (Parasuraman et al. 2005; Rossiter 2007; Dabholkar et al. 2005). Jarvis et al. (2003) and MacKenzie et al. (2005) highlighted the important of having the right construct as it may affect the measurement scales which can lead to bias in structural parameter estimation and create measurement error.

Basically, Bollen and Lennox (1991), Coltman et al. (2008), Jarvis et al. (2003) and Edward and Bagozzi (2000) have listed four considerations of whether structural equation modelling (see next chapter) should be assumed as a reflective or formative measurement; the nature of the construct, the relationships among the observed indicators, the direction of causality between the construct and indicators and a theoretical judgment. Likewise, Coltman et al. (2008) also proposed a two-step justification to determine the construct (reflective or

formative), namely theoretical and empirical justification. The table below summarizes the nature of reflective and formative constructs.

Table 3.2 Nature of reflective and formative constructs (Adopted from Baumann et al. 2011)

<b>Reflective</b>	<b>Formative</b>
Effect indicator (Effect indicators are the more typical type of indicators that depend on the latent variable)	Causal indicator (these are ones in which the indicators affects the latent variable)
Indicators are manifestations of the construct	Indicators are defining characteristics of the construct
Instructions forward oriented (judgment based on hypothetical actions)	Instructions backward oriented (judgement based on actual actions)
Latent constructs exists independent of the measures used	Latent construct is a combination of its indicators
A process of deductive reasoning	A process of inductive reasoning

Contrary to past conceptualization of service quality (Collier and Bienstock 2006; Carlson and O’Cass 2011) and following recommendations for future research by Barrutia and Gilsanz (2009), this suggests that e-service quality is made up of reflective rather than formative indicators. All indicators such as gb, info, wd, sp, tc, eds and ecs (see details in chapter five) caused by the same latent construct which is e-Service quality (e-SQ) and set out to check this . To date, the majority of published SEM studies are based on reflective models and only a few studies using formative models (e.g Jarvis et al.2003; Carlson and O’Cass 2011; Ulaga and Eggert 2006).

### **3.5.2 e-SERVICE QUALITY (E-SQ) and Customer Satisfaction**

In the traditional setting, service quality and customer satisfaction are not new agenda items because many researchers have put much effort in investigating the relationship between them (Ismail et al. 2009). In today’s world of intense competition, the key to retention in the marketplace lies in delivering high quality service that will in turn result in satisfied

customers (Shemwell et al. 1998). Indeed, Sureshchandar et al. (2002) believe that many service providers around the world have realised the importance of providing an excellent service quality to customers. That is now happening where many organizations have shifted the paradigm of service quality to a customer's perspective (Parasuraman et al. 1985). Based on this paradigm, a customer will judge if the service meets his/her expectations (Parasuraman et al. 1985; Parasuraman et al. 1988).

In the context of the Internet, Santos (2003) defined e-service quality as a consumer's overall evaluation and judgement. Not different to the traditional setting, the evaluation of e-service quality is based on the customer's experiences of the website. Montoya et al. (2003) added that the success of electronic marketing is measured by understanding the ways of customer interaction with the website that will then lead their evaluations and behaviours. Due to limited human interactions in delivering e-service quality, consumers make their evaluation and assessment based on the specific attributes of the website (Long and McMellon 2004). This suggests that the focus on the interaction between the consumer and the website interface should be explored. Although there is a lack of agreement on the dimensionality of e-service quality, extant research supports the contention that website characteristics have a significant effect on customer satisfaction with that website (Kim and Stoel 2004; Szymanski and Hise 2000).

Numerous researchers have sought to uncover whether customer satisfaction is likely to be driven by the website characteristics (e.g. ease of use, responsiveness, fulfilment). For example, Lee and Lin (2005) found that dimensions of website design, reliability, responsiveness and trust affect overall service quality and customer satisfaction. Szymanski and Hise (2000) believed that e-satisfaction happened after a customer had experiences with the service provider over time. As such, one measures the degree to which overall a customer is both pleased/displeased and satisfied/dissatisfied with the online shopping they used.

Wu (2011) found that electronic service quality had no direct effect on customer satisfaction but had indirect effects on customer satisfaction for consumer electronic e-tailers. However, Kassim and Nor (2011) conducted a study on the effects of service quality dimension on satisfaction, trust and loyalty in two countries (Malaysia and Qatar) and the result showed

that e-service quality dimensions had significant effects on customer satisfaction. Their finding matched with past studies conducted by Bai et al. (2008) which showed website quality directly affects customer satisfaction.

Conversely, several researchers tend to differentiate satisfaction into two types which are satisfaction with service encounters (Bitner 1990; Shankar et al. 2003) and satisfaction with service processes (Tse et al. 1990). Satisfaction with service encounters describes the interaction between customer and the merchant while satisfaction with the service processes refers to the experience of the customer during all phases of a buying process. In the context of online shopping, service encounter is considered as the customer interaction experience towards the online store itself: for instance, the availability and quality of the information, website design and convenience of transaction and payment. Meanwhile, the service process is the experience of the customer post-purchase (e.g. customer service and delivery service).

In their study examining the satisfaction among Chinese customers, Xia et al. (2008) included factors that related to both service encounters (information quality, website design, merchandise attributes, transaction capability, security/privacy and payment) and service processes (customer service and delivery) as both were strongly predictive of online shopping satisfaction. Additionally, findings from a study by Liang and Lai (2002) revealed that online store must provide adequate post-sales services to support the customers' needs in the entire buying process.

Similar, then, to the classical literature cited above, I view e-service quality as an antecedent to e-satisfaction and therefore, in this study submit the following proposition.

*PI: E-service quality has a positive effect on customer satisfaction.*

### **3.5.3 e-Service Quality (e-SQ) and Behavioural Intention**

In a brick-and-mortar setting, the relationship between perceived value service and quality has a significant positive effect on behavioural intention. This is supported from previous research like (Cronin et al. (1997), Dodds et al. (1991), Grewal et al.(1998), Parasuraman et al.(1988) and Zeithaml et al. (1996). In addition, Baker et al. (2002) found that perceived

merchandise value and perceived value of shopping have positively affected intention to use the store patronage.

Meanwhile, in the context of online settings, Chen and Dubinsky (2003) and Yang and Peters (2004) found that customer perceived value of shopping either for general shopping or shopping for a specific product has a positive relationship with behavioural intentions. Furthermore, customers who perceived e-service quality have potentially increased their intentions towards the service, for instance spread positive things about the service, revisited it in the future and also recommend it to others (Santos, 2003). Parasuraman et.al. (2005) added that customers' perceived value of shopping for tangible products at an online retailer has a positive impact on customers' loyalty intention toward the Internet retailer. A similar study conducted by Carlson and O'Cass (2010) found that sport consumers have a positive influence on behavioural intention.

Regarding the specific types of behavioural intention affected by e-service quality, Wolfinbarger and Gilly (2003) and Collier and Bienstock (2006) indicated that if customers perceived e-service quality they are likely to recommend the website to others, create loyal customers (Srinivasan et al. 2002) and spreading positive things through word-of-mouth (Sasser, 1990). However, if customer experience is bad toward the service, they are likely to complain to third parties (e.g. with negative stories) and not recommend others to use it in the future. As a consequence, this can affect the reputation and image of the service.

The issue was raised by Udo et al. (2010) of whether service quality can directly or indirectly influence behavioural intention in all service contexts. Some studies indicate that both service quality together with customer satisfaction have direct links to behavioural intentions (Cronin and Taylor 1992; Cronin et al. 2000; Carlos and O'Cass 2010). A study by Cronin et al. (2000) found that service quality directly influences behavioural intention. Similarly, a recent study by Teimouri et al. (2012) discovered that electronic service quality has a positive impact on behavioural intention as matched with prior study conducted by Adin and Azar (2005). In other words, providing high quality electronic service may boost satisfaction among customers. In the present study, the researcher intended to test for the direct effect of e-service quality (e-SQ) on behavioural intentions based on the following proposition:

*P2: Perceived e-service quality has a significant positive effect on consumer behavioural intentions*

#### **3.5.4 e-Service Quality (e-SQ) and Attitude towards the website**

Attitude has been defined and measured very differently in various studies. According to Ajzen (2001) many studies about attitude have been conducted in the context of human behaviour over many years. The term "attitude" is used to represent the general degree of favourability. In other words, attitude refers to people's evaluation of characteristic of an object (e.g. bad-good, likeable-dislikeable) (Ajzen and Fishbein 1980). Meanwhile, in the context of online shopping, "attitudes" refer to customer's positive and negative feelings when completing purchasing (Chiu et al. 2005; Schlosser 2003). Zanna and Rampel (1998) expanded their definition of attitude by adding the process of decision-making. They believe this not only helps people in reaching decisions but also can enhance the quality of decision-making.

Several researchers investigated attitudes in the context of online user behaviour (Castaneda et al. 2008; Delafrooz et al. 2009). Indeed, new constructs have been developed specifically for the electronic market such as attitude towards the Internet and attitude towards the web site (Bruner and Kumar 2002). For example, Jarvenpaa et al. (2000) highlighted the importance of both attitudes' concepts in explaining online consumer behaviour.

A person's shopping choices are influenced by five key psychological factors - motivation, perception, learning, beliefs and attitude. Broadly speaking, through motivation and perception, attitudes are shaped and consumers make decisions. Saadé and Kira (2007) listed three dimensions of usefulness: performance-related outcome expectations, personal-related outcome expectations and intrinsic motivation. According to Wu (2003), attitude can be demonstrated as a mediator or linkage between consumers' background characteristics and the consumption that satisfies their needs.

Various studies have concentrated on the relation between attitude to the advertisement and attitude to the sponsor's brand (Lutz 1985). Research by Balabanis and Reynolds (2001) demonstrated the existence of this relationship for Internet users also, and suggested that

attitude to the sponsoring brand transfers to attitude for the use of a web site. MacKenzie et al. (1986) proposed four alternative models and the model posits a relationship between attitude to the brand and attitude to the advertisement.

Lee and Johnson (2002) investigated differences in attitude among three groups of Internet apparel shoppers (purchasers, browsers and non-purchasers). They reported that purchasers held more favourable attitudes to online shopping and Internet retailers compared to other groups. Indeed, this group believed that shopping over the Internet has advantages such as being safe and easy, providing better customer service and after-sales support compared to physical retail outlets. Likewise, Soopramanien and Robertson (2007) determined three behaviour groups of customers (purchase online, browse online but purchase in-store, never browse or purchase online) and revealed the factor of convenience as a main reason why purchasers prefer to shop online. Surprisingly, the factor of product branding did not influence any of the three customer groups in either case.

Attitude to online shopping has been proven to have a significant impact on online shopping intentions and behaviour (Lee and Johnson 2002; Wu 2003) while perceived website quality is significantly related to online shopping intention (Bruner and Kumar 2002; Loiacono et al. 2007). Bosnjak et al. (2007) tested a hierarchical model of personality for predicting consumer intentions to purchase products and services online. They concluded that a decision to shop online is made with emotion rather than reasoning. Jarvenpaa et al. (2000) found that the level of trust positively related to the attitude to the store and was not related to the perception of the risks involved in buying from the store. They concluded that increased customer trust can reduce perceived risks and establish a more favourable attitude towards shopping at a particular store. Lohse et al. (2000) revealed that people who have a wired lifestyle and time consuming interests tend to have positive attitudes toward e-shopping. Hence, this study defines attitudes as follows.

*“Attitudes are more to using a specific e-store and refer to an individual’s positive or negative feelings towards a specific apparel website”*

This leads to the third proposition:

*P3: Perceived e-Service Quality (e-SQ) has a significant positive influence on attitude among customers towards the website*

### **3.6 Customer satisfaction and attitudes towards the website**

A review of the existing literature shows that in some cases a large number of antecedents of customer satisfaction are the facets underlying satisfaction judgements and are general compared to specific (Rust and Oliver 1994). However, some researchers believe that customers tend to develop norms for product performance based on product experience rather than from a brand's performance (Mishra 2009).

Many studies have put much effort into investigating the relationship between customer satisfaction and attitudes towards a web site (Chen et al. 2002; Cho and Agrusa 2006; Li and Zhang 2002; Roy 2010). Roy (2010) found that there is a positive and significant e-satisfaction related to the customer's affective attitude. The results of this study indicate that a crucial mediating role is played by the constructs of e-satisfaction and affective attitudes in influencing the CSM (E-customer relative state of mind).

According to Lee and colleagues (2004), one's attitude to a website is influenced by the perceived risk. This is associated with the online transaction together with product and service risk and performance. They added that if the website fulfils a customer's expectations, it will lead the customer to build a positive or affective feeling towards the website. Likewise, Roy (2010) believed that customers will develop a sense of belonging to a certain website if the website has satisfied their needs. The higher the level of satisfaction, the more positive feeling customers will develop to the website.

In the context of e-retailing, literature suggests there is a positive linkage between customer satisfaction and attitude especially in the content-driven website (Chen et al. 2002; Wolfinbarger and Gilly 2003). It can be concluded that customers will develop satisfied feelings across many attributes of the website (e.g. customer service, service delivery, transaction). Their experiences of these attributes will determine the next action (attitude) (Carlson and O'Cass 2011). Shergill and Chen (2005) suggested that various attributes such

as navigation, content etc. will influence the attitude of the customer in deciding to purchase. Some of the studies using TAM indicated that a positive relationship occurs between the effectiveness of the website and consumer attitudes (Vijayasathya 2004; Delafrooz et al. 2009; Ngai et al.2007). Similarly one recent study conducted by Hur et al. (2012) discovered that e-satisfaction and e-loyalty were consistent with the findings of previous studies conducted by Bansal et al. (2004) and Anderson and Srinivasan (2004). In fact, a higher level of customer satisfaction with a website will increase the likelihood of forming positive attitudes towards the website. Based on this evidence and reasoning, the following proposition is made.

*P4: Consumers' evaluations of satisfaction with a website have a significant positive influence on attitudes towards the website.*

### **3.7 Customer satisfaction and behavioural intention**

Several researchers who have conducted studies in the context of traditional services found a strong relationship between customer satisfaction and behavioural intentions (Woodside et al. 1989; Bolton and Lemon 1999b). In the new era of information technology, it is good to focus on and investigate satisfaction with e-service quality and behavioural intentions. This reflects the findings of some studies which suggest that satisfaction has a strong relationship with the e-service quality in the online environment context (Carlson and O' Cass 2010). Singh and Shih (2012) added that providing service with high quality tangible outcomes to intangible service is crucial because this leads to future favourable behaviours.

Specifically Zeithaml et al. (1996) list four behavioural intentions which are integrated with the ability of a service provider to generate profit. These are: making positive comments, recommending the provider to other customers, loyalty (or repurchase), spending more with the same company and being willing to pay price premiums. Word-of-mouth (WOM) is one type of behavioural intention which resulted from e-quality and satisfaction. When customers are satisfied with the service provided, they are more likely to recommend the company to others (Parasuraman et al. 1988; Ng et al. 2011). Similarly, Hennig et al.(2002) indicated that WOM is very important for a firm's long- term economic success by attracting

new customers. Furthermore, existing and continuing customers may validate the reputation of the firm to new customers (Zeithaml 2000).

In the context of e-commerce, WOM plays an important role because customers rely heavily on the advice and suggestions from others who have experienced the service (Kinard and Capella 2006). In traditional commerce, unhappy customers communicate their negative experience to five friends, whereas on the Internet 5000 people can learn of it (Poleretzky 1999). Indeed, customers often trust others more than they trust communication from merchants (Kim et al. 2008). Thus, we can conclude that WOM offers a good correlation between satisfaction and likelihood of recommending a site to others.

Another key issue in behavioural intention is the willingness of customers to repurchase or revisit the same site. Generally, customers tend to perform their purchasing at the same site based on past evaluation (Gounaris et al. 2010). Several studies found that satisfied customers with the web site experience are more likely to revisit the site and perform future transactions on it (Wolfenbarger and Gilly 2003; Collier and Bienstock 2006; Loiacono et al. 2007). Bansal et al. (2004) referred to customers' likelihood to return as "stickiness". They found that managers should pay more attention to web site satisfaction to encourage their customers to revisit their web site. Indeed, the ability to have customers return to the site is an indicator of success of the online business (Daverport 2000).

Lastly, purchase intention can be illustrated as the willingness of the customers to spend more through the Internet. Customers who experience convenience, good value for money and availability of the product will enhance their satisfaction and this can reduce the chances of switching to another website (Cronin and Taylor 1992). A surprising finding from Srinivasan et al. (2002) revealed that e-loyalty is not associated with convenience (e.g. ease-of-use) so much as WOM and willingness to pay more. However, Bitner (1990) found that lack of time, access to information, money constraints and lack of credible alternatives may affect service loyalty. Past studies also confirm the significance of the relationship between satisfaction and behavioural intentions in the e-commerce setting in various service industries (Ram and Jung 1991; Bolton and Lemon 1999a; Lee and Lin 2005; Balabanis et al. 2006). In addition, Rust and Zahorik (1993) found that overall service quality and customer satisfaction are positively

related with customer retention, market share and profitability. One recent study conducted by Teimouri et al. (2012) found that there is a strong positive relationship between customer satisfaction and behavioural intention. Their finding is shared with prior study conducted by Lee and Lon (2005). In addition, customer satisfaction has also been recognised as a mediator in the relationship between a firm's perceived quality and customer purchase intentions (Llusar et al. 2001).

This researcher thus suggests:

*P5: Consumer evaluations of satisfaction have a significant positive influence on behavioural intention.*

### **3.8 Attitudes towards the website and behavioural intentions**

Past research has provided more insight into user acceptance of Internet services. For example, a study conducted by Koyuncu and Bhattacharya (2004) applied the technology acceptance model (TAM), the theory of planned behavioural (TPB) and a deconstructed TPB model to better understand the determinants of consumer intentions to use Internet services. TAM is adapted from the theory of reasoned action (TRA) which designates that social behaviour is motivated by individual attitude and is specifically used to predict information system use (Davis 1989; Davis et al. 1989). TPB is extended from TRA and is used to explain uncontrolled behaviour (Ajzen 2004). The deconstructed TPB is a combination of attitudinal, normative and control beliefs (Taylor and Todd 1995). According to Gentry and Calantone (2002), TAM can be considered as respectable as TPB and deconstructed TPB to predict buyer behavioural intentions. These three models can be seen as having a similar function in predicting user acceptance of new technology (Hung and Chang 2005; Shih and Fang 2004).

Several researchers, e.g. Fishbein and Azjen (1975) and MacKenzie et al. (1986) believed that attitudes affect consumers' behavioural intentions. Attitude based on the TRA proposed by Fishbein and Azjen (1975) is a key determinant of behavioural intention. Behavioural intention can be grouped into three classifications: behavioural action, involving a target of an object, in a certain context and time frame. In addition, some studies (e.g. Ha and Stoel

2009; Kim and Lee 2006) have shown that customers who have a more favourable attitude towards a website are more likely to shop at the site.

Wolfenbarger and Gilly (2002) reflected on the question of why online shoppers considered the 'image' of an online shop before making any purchase decision. In the context of traditional shopping, people can evaluate or rate something based on 'image' and lead themselves to follow-up action. Namely, we prefer to shop at a store that can give advantages to us, such as price and excellent reputation. People who perform online shopping also consider this matter. This is supported by several researchers who conducted research on e-image (Babakus and Boller 1992; Dennis et al. 2002; Kooli et al. 2007, Liu and Aaker 2007; O' Cass and Carlson 2011). In the online environment, e-image is illustrated as customer service, variety of merchandise, delivery and fulfilment.

Further, recent study by O'Cass and Carlson (2011) on the effect of the perceived website-service innovativeness found that perceived website-service innovativeness has a positive impact on revisiting the website and makes a significant contribution on word of mouth (WOM). This means that customers will spread positive thing to others (e.g. recommendation to others) if they perceive the website is innovative. Chevalier and Mayzlin (2006) and Davis and Khazanchi (2008) pointed out that the impact of WOM might increase the product sales.

In researching consumer behaviour, the relationship between attitude to a given system and behavioural intention can be found in TAM (Davis et al. 1989). Studies conducted by Castañeda et al. (2007) and Sánchez-Franco and Roldán (2005) applied TAM to explain the revisiting behaviour towards a website. The result revealed a significant relationship between attitudes towards behavioural intention (revisit). Bruner and Kumar (2002) took advantage of a new area of consumer behaviour by investigating the relationship between attitude towards the Internet and attitude towards the website. Jarvenpaa et al. (2000) had also stressed the importance of the concepts of attitude in explaining consumer behaviour in the context of an online setting. Thus, the fifth proposition is:

*P6: Consumer attitudes towards a web site will have a significant influence on behavioural intentions related to the web site.*

### **3.9 MEDIATING VARIABLES**

Research studies suggest the presence of the mediating variable in the relationship of overall satisfaction (OS), attitude (ATT) and behavioural intention (BI). For instance, Wu (2003) highlighted that attitude can be a potential mediating variable. Similarly, the model in Carlson and O’Cass’s (2010) study also identifies attitude as a mediating variable. Meanwhile Llusar et al. (2001) stated that customer satisfaction can be a potential mediating variable. As per indirect effect, even though some studies (e.g. Parasuraman et al. 1996 and Boulding et al. 1993), argues that a direct effect exists between service quality and behavioural intentions, most researches indicate that service quality affects behavioural intention through customer satisfaction (Hu et al. 2009; Yu et al. 2006). A study by Lien et al. (2011) discovered that work is a mediator between e-service quality and behavioural intention. Therefore, the researcher put forward the following propositions to investigate the mediating potential variable of attitude and overall satisfaction:

*P7: Overall satisfaction (OS) mediates e-Service Quality (e-SQ) and attitude (ATT).*

*P8: Overall satisfaction (OS) mediates e-Service Quality (e-SQ) and behavioural intention.*

*P9: Attitude (ATT) mediates overall satisfaction (OS) and behavioural intention (BI).*

### **3.10 POST-PURCHASE**

The post-purchase stage can be divided into two types of services: the efficiencies of service delivery and customer service. Many previous studies refer to service delivery as fulfilment or reliability and customer service has been recognised as responsiveness (Bauer et al. 2006; Parasuraman et al. 2005; Wolfinbarger and Gilly 2003; Yang and Fang 2004). The post-purchase stage differs from traditional retailing where customers take their products home but Internet shopping requires having to wait for delivery. In this study, post-purchase is evaluated after customers have received their product.

Service delivery in this stage is defined as the extent to which the site's promises about order delivery and item availability are fulfilled (Parasuraman et al. 2005). According to Smith (2000), customer concern in online shopping is fulfilling the transaction and delivering the

product. This is due to the spatial and temporal separation between buyers and sellers where sometimes the exchange of money and goods is not simultaneous, so the delivery risk is an issue of concern for customers (Smith et al. 2000). Based on Zeithaml et al. (2002), having products in stock, delivering the products within the time frame promised and accuracy of service promises are attributes of this fulfilment's factor. They added that delayed delivery may have a negative effect on satisfaction. According to Yang and Fang (2004), two keys of service quality connected to customer satisfaction are the accuracy of the order fulfilment and keeping service promises. Not simply keeping promises about order delivery, the efficiency of service delivery has also been evaluated by the proper condition of the product (Meuter et al. 2000) and item presentation evaluation. The product should be delivered well-packaged and customers will receive the product seen on the website (Parasuraman et al. 2005).

For that reason, issues of product returns and retailers' return policies are important. At this stage, consumers compare their actual experiences with expectations and promises provided by the online retailer including the timeliness and reliability of product delivery (Burke 2002).

Since being restricted in communications with customers due to the absence of a salesperson (unlike conventional shopping) it is tremendously important for e-retailers to respond to each inquiry and problem presented by customers. Supporting customer service is thus needed. Supporting customer service is recognized in this phase as one of the factors that contribute to satisfaction in e-retailing. It is measured by the ability to provide appropriate problem-solving information to customers, providing online guarantees and compensation. Customers expect that online stores will respond promptly to their inquiries (Liao and Cheung 2002).

Not just having a good response to all inquiries, satisfaction can also occur when the online tracking works well. Much of the previous research has not considered this attribute. By putting in a working link for customers to track their parcel, this can automatically contribute to the satisfaction by customers. They can trace their parcels accordingly and if anything happens during the process of delivery, he or she can contact the customer service (Fjermested and Roman 2006).

Wang and colleagues (2002) examined the satisfaction and dissatisfaction among customers during the post-purchase stage. They found what satisfied customers was on-time delivery with a competitive price without any hidden charges, followed by customer service. Customer dissatisfaction concerned lack of customer service via phone or email, availability of merchandise in stock and delivery of merchandise as ordered on time.

Thus, the propositions:

*P10: Post-purchase has a significant positive effect on overall satisfaction.*

*P11: Consumer evaluations of satisfaction have a significant positive influence on behavioural intention.*

### **3.11 POINT-OF-PURCHASE VERSUS POST-PURCHASE**

Many studies have differentiated the stages of the electronic purchase, for example Cao and Gruca (2004) have divided online purchase into two stages which are pre-purchase stage and post-purchase. According to them, the activities involved in pre-purchase are to: navigate the website, make a choice, take a decision, make a payment and provide the information on status of delivery. Meanwhile, activities that occur in post-purchase are delivery and customer support.

A similar study conducted by Alzola and Robaina (2010) also distinguishes two phases in electronic commerce which are pre-sale and post-sale. In pre-sale, three dimensions involve (design, information and costs) and two dimensions at post-sale (delivery and guarantee). This study seeks to identify the impact of pre-sale and post-sale factors on online purchasing satisfaction and the results show that the dimensions involved in pre-sale have a significant impact on dimensions in post-sale. In other words, dissatisfied customers at the pre-sale phase will have an effect on the post-sale phase (e.g. spread the negative things to others, do not intend to revisit). Conversely, Posselt and Gerstner (2005) found that post-purchase has a much stronger effect on customer satisfaction and repurchase intention and overall rating compared to service delivered in pre-sale phase.

Chae et al. (2006) in their study revealed that there was a significant relationship in clothing especially on pre-purchase satisfaction with post-purchase satisfaction among women who participated in tennis. As a result, comfort was identified as the clothing attribute that had the most affect before and after purchasing tennis apparel.

In this study, the researcher divided electronic commerce into two phases which are point-of-purchase and post-purchase which are important stages in understanding online purchases. Point-of-purchase is measured as the time customers purchased the product while post-purchase is measured after they received the product. The researcher is interested in consumer attitudes at point-of-purchase, instead of the pre-sale stage, for capturing respondents' true evaluation of factors influencing the close of an online apparel transaction. Responses obtained at the pre-sale stage tend to reflect attitudes of respondents prior to their purchase actions and the value judgements provided by these respondents at this stage may be provisional and differed from their evaluation at point-of-purchase. Therefore, to minimise potential deviation and ensure an appropriate representation of actual experience, this study focuses on the point-of-purchase stage. This study also looks at consumer attitudes at the post-purchase stage to capture respondents' true subjective evaluation of their experience in regard to delivery service and customer service on overall satisfaction after the respondents have received the products they purchased and been exposed to the level of post-purchase service.

In this study, the researcher is interested in investigating whether there is a significant difference between point-of-purchase and post-purchase on satisfaction and behavioural intention. Hence the proposed propositions are as follows:

*P12: There is a significant difference between point-of-purchase and post- purchase on satisfaction.*

*P13: There is a significant difference between point-of-purchase and post- purchase on behavioural intention*

There are studies which found that the demographic has an impact on satisfaction (Richa 2012; Lightner 2002, Kwak 2002; Dholakia 2006). For example, Haque and Khatibi (2006)

stated that language has an impact on online shopping especially in Malaysia where Malaysian people mostly prefer to surf the website written in Bahasa Melayu. Similarly, Chai et al. (2001) stated that people who are less experienced with e-commerce preferred to browse the e-commerce website which used their natural language dialog. Therefore, the researcher proposes the following propositions to investigate the impact of demographic on satisfaction and behavioural intention in the context of online setting.

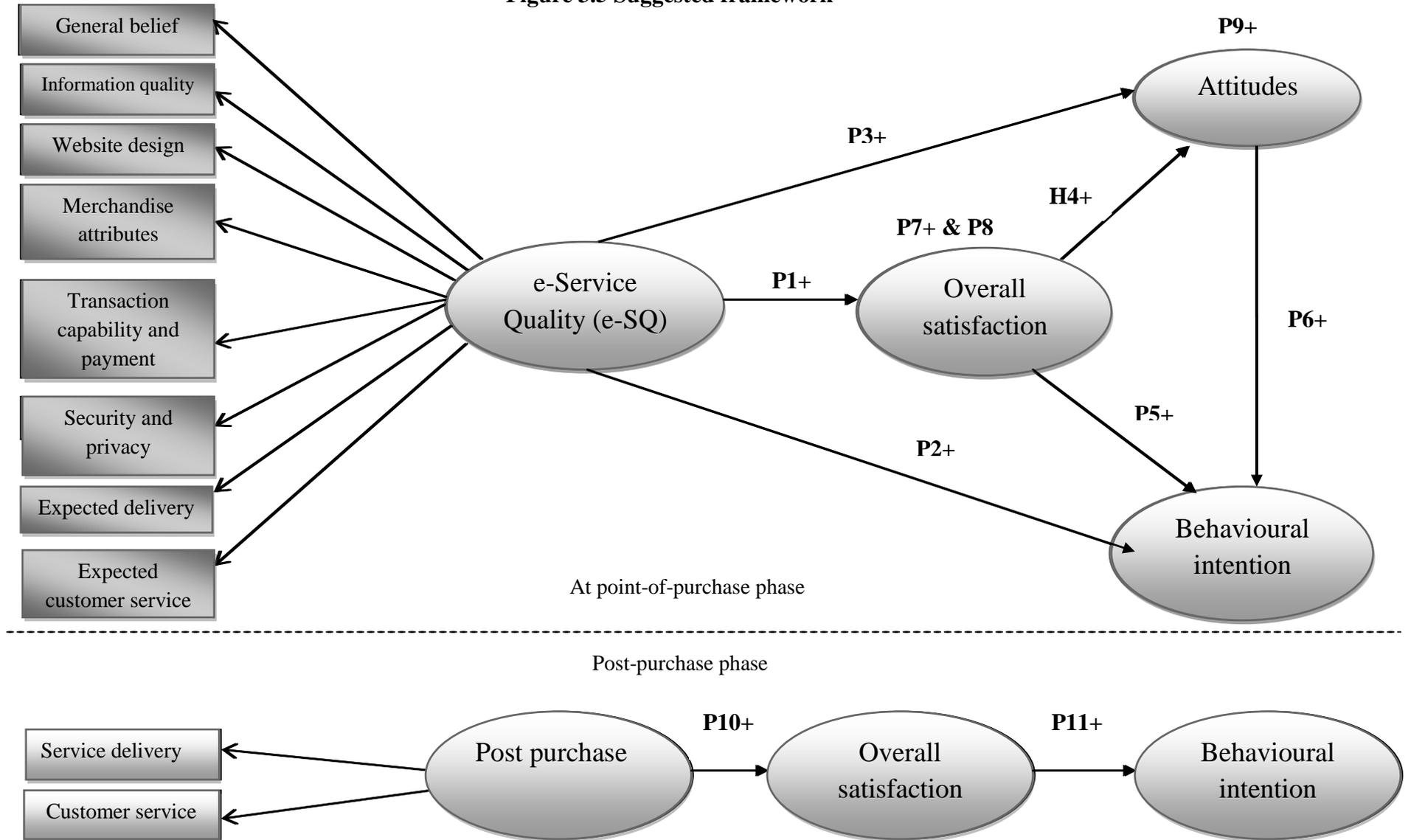
*P14: Demographic influences satisfaction*

*P15: Demographic influences behavioural intention*

### **3.12 SUGGESTED FRAMEWORK**

Based on the preceding literature review, the conceptual framework of the present research is shown in Figure 3.5. Based on Figure 3.5, the model was divided into two phases which were at point-of-purchase and post-purchase.

Figure 3.5 Suggested framework



### 3.13 SUMMARY

The intent of this chapter was to discuss the objective of the proposed conceptual e-Service Quality model from a Malaysian customers' perspective and provide a deeper understanding of the development of the relationship in the context of online business especially online apparel business. To achieve this goal, the proposed model examines the association between the constructs of e-Service Quality, post-purchase construct with overall satisfaction, attitude and behavioural intentions.

This research was based on the following propositions as follow below:

- P1: e-Service Quality (e-SQ) has a positive effect on overall satisfaction
- P2: Perceived e-Service Quality (e-SQ) has a significant positive effect on consumer behaviour
- P3: Perceived e-Service Quality (e-SQ) has a significant positive influence on attitude among customers towards the website
- P4: Consumers' evaluations of satisfaction with a website have a significant positive influence on attitudes towards the website.
- P5: Consumer evaluations of satisfaction have a significant positive influence on behavioural intention.
- P6: Consume attitudes towards the website will have a significant influence on behavioural intention related to the website.
- P7: Overall satisfaction (OS) mediates e-Service Quality (e-SQ) and attitude (ATT).
- P8: Overall satisfaction (OS) mediates e-Service Quality (e-SQ) and behavioural intention.
- P9: Attitude (ATT) mediates overall satisfaction (OS) and behavioural intention (BI).

- P10: Post-purchase has a significant positive effect on overall satisfaction.
- P11: Consumer evaluations of satisfaction have a significant positive influence on behavioural intention.
- P12: There is a significant difference between point-of-purchase and post- purchase on satisfaction.
- P13: There is a significant difference between point-of-purchase and post- purchase on behavioural intention.
- P14: Demographics influences overall satisfaction.
- P15: Demographics influences behavioural intention.

The methodology adopted in order to test to the underlying hypotheses is discussed in the following chapter. This includes an overview of the methodology used, measurement development, data collection tool, sampling design, data collection procedures and finally issues related to reliability and validity.

# **CHAPTER 4**

## **RESEARCH METHODOLOGY**

### **4.1 INTRODUCTION**

The underlying theoretical framework of this study was presented in the previous chapter (Chapter 3 ‘Construction of Research Model’). In Chapter 4, details about methodology undertaken in relation to justification of the research paradigm, questionnaire design, sampling procedure and data collection and administration are discussed. This chapter also provides a briefing of the planned analysis strategy used in testing the propositions of this study. Finally, the ethical issue regarding data collection is discussed before this chapter is summarised in a conclusion.

### **4.2 RESEARCH PARADIGM AND METHODOLOGY**

#### **4.2.1 Justification of paradigm**

The concept of a paradigm in social science was adopted by this study to find real answers to the research questions. According to Hart (2003), paradigms can report how scientists work towards their research in defining, assigning categories, theorizing and presenting procedures in various disciplines. In other words, the paradigm used in a study may be different from other sciences. For example, it may differ in methodologies and methods of data collection and in finding a solution to problems. The different methodologies are sometimes also referred to as “knowledge claims” (Cresswell 2003 p.6). According to Creswell (2003), the five main methodologies can be

distinguished as follows: positivism, post-positivism, constructivism, advocacy/ participatory approach and pragmatism.

The Positivist approach is used when researchers believe they can fully extend understanding regarding experiment and observation. In other words, positivists believe that science is the way to get the truth, to understand the world well enough so that they might anticipate and control it. Research questions for this approach are precisely based on the 'positive' data of experience (Crotty 1998).

Post-positivism is a methodological approach after positivism (Trochim 2006). According to Ryan (2006), this approach is the creation of new knowledge, which aligns with the social movement where it can motivate the researcher to change the world and contribute towards social justice. A post-positivist affirms that reality can never be easily understood but only approximated. This is in contrast with positivism where scientists believe that reality can be studied, captured and understood. As a consequence, researchers who use the post-positivist approach will rely on a variety of methods to gain as much information as possible for their studies (Denzin and Lincoln 2000). For example, they will begin with a theory, collect the data, postulate hypotheses and perform analyses. Normally, the work of post-positivists deals with cause-and-effect relationships.

A constructivist paradigm, which is often combined with interpretativism, emphasises that the analysis should be put in the right context, presenting the interpretations of many who are interested in the outcomes of instruction. According to Crotty (1998) and Denzin and Lincoln (2000), constructivists believe the reality is the consequences of a subjective interpretation of the world where it is socially constructed. When people see certain things or objects, they will build subjective meanings towards it. Sometimes, these meanings are influenced socially and historically through interaction with others. Researchers who use this approach rely as much as possible on information they can gain from the participants in the research project. Indeed, they also recognize their own backgrounds can influence their interpretations. Creswell (2003), who supports this, stated that the interpretation will be influenced by the researcher's own personal, cultural and historical experiences.

Unlike the three paradigms above, pragmatists connect directly to the nature of the developed research questions (Creswell 2003). Darlington and Scott (2002) noted that the decision whether to take a qualitative or a quantitative research approach is not based on philosophical commitment only but also on a belief of a design and methodology which are best suited to the purpose. This approach arises due to the paradigm debate and the emergence of the mixed method and mixed models approaches and is the only paradigm not committed to any philosophy or perceived reality (Creswell 2003).

Lastly, the advocacy or participatory approach is a new approach and it rejects the notion of the post (positivism) approach, on the basis that the latter does not fit marginalized individuals. Basically, the participatory approach allows researchers to conduct research with individual constraint - for instance lack of time in conducting questionnaires or analysing the resultant data (Nind 2008). Researchers who follow this approach attempt to change practices through political debates and discussions.

In light of the five paradigms outlined above, the paradigm that is fundamental to this study was post-positivist. This was based on the researcher's rational deliberation: I believe this approach offers a suitable foundation for conducting empirical research. Further, the post-positivist approach suggests causal relationships between selected independent and dependant variables. The post-positivist allows broad ideas to be postulated with testable hypotheses. Finally, this approach also relies on multiple methods of data collection (such as literature review, survey and interview) to gain as much information as possible to address the objectives of the study. The post-positivist paradigm embraces a quantitative approach in research in contrast to the constructivist paradigm which embraces a qualitative approach.

## **4.2.2 Quantitative versus qualitative research**

### **4.2.2.1 Distinction between qualitative research and quantitative research**

Ulin et al. (2004) defined qualitative research as scientific research that involves an investigation to find a solution, has a proper way to answer the question, gathers evidence and lastly provides

an outcome applicable to the study. Furthermore, the finding can be generalized to the population where it is involved. They also added that a qualitative study is one of the methods that can be used to obtain information about culture.

Golafshani (2003) stated that qualitative research allows the researcher to bring to light the problem to be studied by developing hypotheses to be tested. This was supported by Patton (2002) who stated that a qualitative attempt to understand certain phenomena is based on context-specific settings without ignoring the natural surroundings.

Denzin and Lincoln (2000) broadly defined qualitative research as a multi-method focus which involves an interpretive naturalistic approach to its subject matter. This means that such research attempts to investigate things based on a natural setting which brings meaning to them. Qualitative research also involves the studied use and collection of a variety of methods to capture the story, such as interview, observational, historical, interactional and visual texts. All these methods can describe people's routines and problematic moments which can bring full meaning to them.

Strauss and Corbin (1990) stated that qualitative research is different from quantitative research: the finding of the former method naturally explains without using statistical procedures or other means of quantification. Indeed, the qualitative researcher describes explanation, understanding and prediction to similar situations. In contrast, quantitative researchers seek causal determination, prediction, and generalization of findings (Hoepfl 1997).

In simplified terms, qualitative research does not involve any statistical analysis to interpret the data to make the findings. For instance, if we were asked to explain in qualitative terms a thermal image displayed in multiple colours, we would explain the colour differences rather than the heat's numerical value.

In quantitative inquiry, the collection of data is normally measured and expressed numerically and used for statistical data analysis. Quantitative methods allow researchers to test theories and hypothesized relationships. This study adopts a quantitative inquiry.

Table 4.1 below provided a clear understanding about the different between qualitative research and quantitative research

Table 4.1: Qualitative versus quantitative research

<b>Criteria</b>	<b>Qualitative Research</b>	<b>Quantitative Research</b>
<b>Purpose</b>	To understand and interpret social interaction	To test hypotheses, look at cause and effect and make predictions
<b>Group studied</b>	Smaller and not randomly selected	Larger and randomly selected
<b>Variables</b>	Study of the whole not variables	Specific variables studied
<b>Type of Data Collected</b>	Words, images or objects	Numbers and statistics
<b>Form of Data Collected</b>	Qualitative data such as open-ended responses, interviews, participant observations, field notes and reflections	Quantitative data based on precise measurements using structured and validated data-collection instruments
<b>Type of Data Analysis</b>	Identify patterns, features, themes	Identify statistical relationships
<b>Objectivity and Subjectivity</b>	Subjectivity is expected	Objectivity us critical
<b>Role of Researcher</b>	Researcher and their biases may be known to participants in the study and participant characteristics may be known to the researcher	Researcher and their biases are not known to participants in the study Participant characteristics are deliberately hidden from the researcher (double blind studies)
<b>Results</b>	Particular or specialized	Generalizable findings

	findings that is less generalizable	that can be applied to other populations
<b>Scientific Method</b>	Exploratory or bottom-up; the researcher generates a new hypothesis and theory from the data collected	Confirmatory or top-down: the researcher tests the hypothesis and theory with the data
<b>View of Human Behaviour</b>	Dynamic, situational, social and personal	Regular and predictable
<b>Most Common Research Objectives</b>	Explore, discover and construct	Describe, explain and predict
<b>Focus</b>	Wide-angle lens: examines the breadth and depth of phenomena	Narrow-angle lens: tests a specific hypotheses
<b>Nature of Observation</b>	Study behaviour in a natural environment	Study behaviour under controlled condition; isolate causal effects
<b>Nature of Reality</b>	Multiple realities; subjective	Single reality; objective
<b>Final report</b>	Narrative report with contextual description and direct quotations from research participants	Statistical report with correlations, comparisons of means and statistical significance of findings

Adopted from Xavier University Library and the content was taken from Johnson and Christenen (2008) and Lichtman (2006)

#### 4.2.2.2 Advantages and disadvantages of qualitative and quantitative research

This section will briefly explain the advantages and disadvantages performing qualitative and quantitative research method. For qualitative research, the advantage of this method lies in its strength in uncovering multiple realities based on varying experiences of people. In other words, a researcher who conducts qualitative research can produce more in-depth and comprehensive information about their subjects. In addition, qualitative research could be conducted on a small group to understand multiple realities. However, the disadvantage of this method is its focus on a selected group only, where participants feel or think or how they behave. The researcher cannot make any assumption beyond this specific group of participants.

Quantitative research is a systematic approach to investigation. It involves measuring or counting attributes and answers to the ‘what’ and ‘how many’ questions. According to Demand Media Inc (1999-2012), the research data is based on numbers which allow statistical tool to analyze it. This research method investigates the relationship between an independent variable and dependant variables to be studied. Researchers derive the hypotheses and test them with statistical tools like SPSS and SEM. However, advantages always come with disadvantages. Two disadvantages of doing quantitative research are: it ignores the natural setting like the qualitative research method. Besides that, it requires a large sample size so that it can be run through analysis statistical tool.

#### 4.2.2.3 Justification of the quantitative approach

This section firstly justifies the adoption of a quantitative approach in this study. Then and subsequently, it provides the rationale behind using an online survey methodology for collecting data from online shoppers in Malaysia.

From the existing literature on online marketing, this thesis developed a theoretical model to examine the research questions stated in Chapter 1 and the hypotheses testing in Chapter 5. Researchers should bear in mind that methods used to conduct the research need to align with the research questions (Punch 1998). In other words, data which need to be collected should be enough in answering the research question. Amaratunga et al.(2002) maintained that quantitative research can help a researcher to gather strong evidence through statistical analysis on the relationship between dependent and independent variables. Undoubtedly, results obtained from statistical analysis can provide directions of relationships when mixed with theory and literature. Neuman (1997 p.63) defined the quantitative approach as “an organized method for combining deductive logic with precise empirical observations of individual behavior in order to discover and confirm a set of probabilistic causal laws that can be used to predict general patterns of human activity.”

Thus, this study aimed to measure underlying variables based on Cavana et al. (2001 p.106) who stated, “measurement of the variables in the theoretical framework is an integral part of research and an important aspect of quantitative research design”. Furthermore, the advantages of using a quantitative approach can provide a researcher with in-depth explanations of quantitative enquiry. Cavana et al. (2001) and Amaratunga et al. (2002) emphasized this method can provide strength in reliability and validity for the constructs. Many studies on customer satisfaction, e-service quality and behavioral intentions use this approach as their way of conducting the data analysis (Yang and Fang 2004; Xia et al. 2008; Carlson and O' Cass 2010; Carlson and O' Cass 2011). Because the objective of this study was to empirically investigate a causal relationship between the underlying constructs, this methodology was deemed to be appropriate (Churchill and Suprenant 1992; Punch 1998)

#### **4.2.3 Research design**

Research design is the plan of research that essentially guides the conduct of the whole research (Burns and Bush 2002). The researcher needs to develop a proper research design before conducting data collection and analysis, because research design will guide the logical flow of the research project. It is important to have a clear and systematic research design at the outset of the project for being rigorous throughout the investigation process and for being confident in the outcome of the study. This process may involve a number of stages and each stage has its own outcomes. Hair et al. (2003) concluded that a vigorous and systematic research design will lead to the type of data, technique of data collection, sampling methodology to be used, that the schedule and compliance with budget. Indeed, it will help to align the planned methodology to the research problems.

Research design essentially addresses two fundamental research inquiries – “what” and “why”. "What" normally refers to the descriptive research and a clear description will lead to the "why" questions or exploratory research. Answering the "why" questions (exploratory research) will involve developing a causal explanation. These research processes were identified by Burns and Bush (2002) and Hair et al. (2003), who classified research designs into three parts: exploratory,

descriptive and causal. The original research design for this study was intended to have only two phases. Phase One involved an exploratory research with the aim to conduct in-depth face-to-face interviews with owners of the Blogspots and websites for the purpose of refining the survey instrument for Phase Two only. Phase Two involved a quantitative survey of online apparel purchasers at point-of-purchase. However, as the research design and conceptual framework developed, the researcher identified a need to conduct a Phase Three in this study in order to ensure an appropriate representation of delivery service and customer service in Structural Equation Modelling (SEM). This is because responses on ‘delivery service’ and ‘customer service’ at the point-of-purchase stage (Phase Two) mainly reflect the expectations and not the actual true experience of the respondents. True evaluation of ‘delivery service’ and ‘customer service’ on overall satisfaction occur at the post-purchase stage after the respondents have received the products they purchased and the level of post-purchase stage service has been exposed. As a result, the researcher designed Phase Three to capture respondents’ true subjective evaluation of their experience relating to these two constructs at the post-purchase stage. In the revised research design, Phase Three involved quantitative survey of respondents who have participated in Phase Two, and the aim of Phase One’s exploratory research was also consequently expanded. The in-depth face-to-face interviews in Phase One subsequently helped to refine the survey instruments for Phase Two and Phase Three. Thus, to achieve the research objectives, this study followed a process depicted in Figure 4.1 which identifies the required procedures for each phase in this study. Phase One involved exploratory research, whereas Phase Two (point-of-purchase) and Phase Three (post-purchase) involve descriptive and causal research.

The aim of this study was to investigate user’s overall satisfaction with online apparel dealings in Malaysia at point-of-purchase and post-purchase. This study also attempted to identify any differences in the overall satisfaction items between point-of-purchase and post-purchase, as well as in group comparison. Furthermore, mediation effect from overall satisfaction and attitude were investigated in their relationships involving behavioural intention.

#### 4.2.3.1 Phase 1 (Exploratory research)

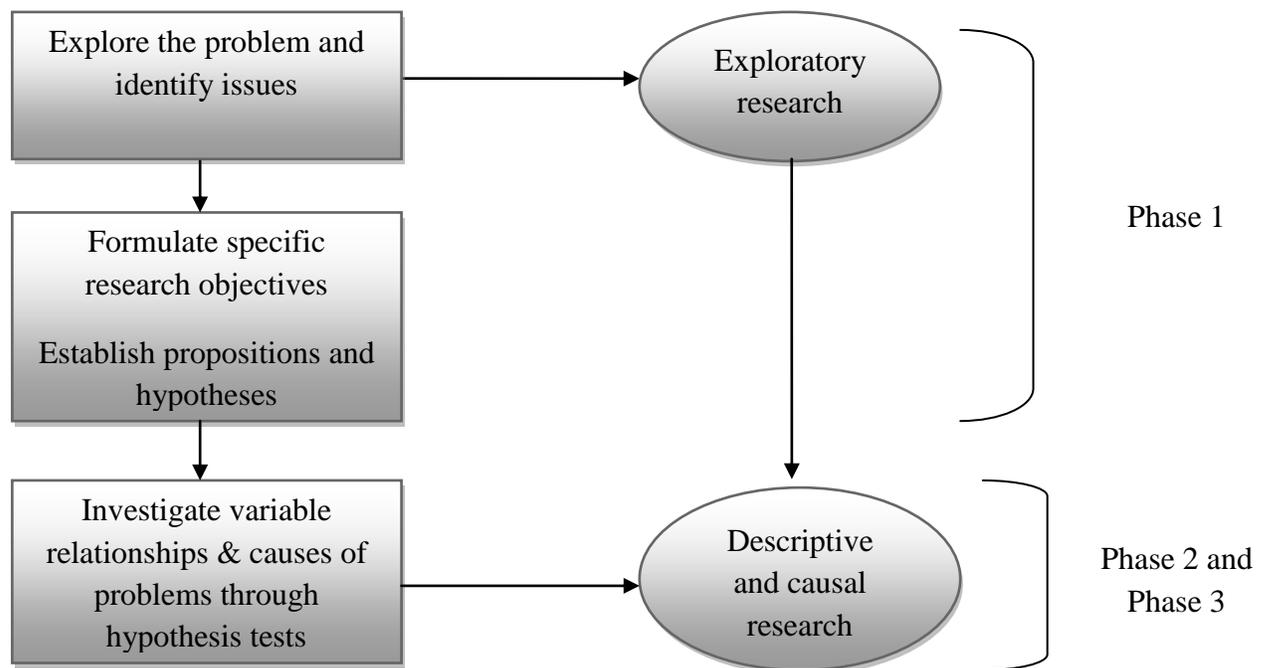


Figure 4.1 Adapted from Ab Hamid (2006)

Phase One involved exploratory research and was primarily used to gain a deeper understanding of a topic in which previous theories or ideas do not apply. According to Parasuraman (1991) and Malhotra (1999), exploratory research is needed to shed light on new research areas for further investigation. Conducting an exploratory research study will guide researchers to define the problem statements and achieve the research objectives. Asian countries such as Malaysia are experiencing growth in online shopping. Although many studies have been conducted on the Internet, few studies have focused on customer satisfaction of the online apparel business, particularly at point-of-purchase and post-purchase. Hence, exploratory research will help the researcher to gain much-needed information about customers' experiences in the virtual environment to help shape the design of this study.

In the exploratory research phase (Phase One of the study), interviews with ten owners of online apparel businesses were conducted through Blogspots and websites in October 2010. The purpose of this research was to learn about what they served on their sites in order to develop or refine appropriate survey instruments for Phase Two (point-of-purchase) and Phase Three (post-purchase). The interview questions were emailed to the respondents in preparing them for the interview.

#### 4.2.3.2 Phase 2 (point-of-purchase) and Phase 3 (post-purchase)

Phases Two and Three involved descriptive and causal research. Descriptive research is a synonym for finding out “what is” questions and is normally done after the exploratory research. According to Malhotra (1999) and Hair et al. (2003), descriptive research is strict, pre-planned and structured and typically based on a large sample. However, there is no specific definition of what constitutes descriptive research and AECT (2001) suggested that it varies, depending on the research question, design and analysis of data for a given topic. In this research phase, a descriptive study was done to describe demographic and online spending behaviour of the respondents in Phases Two and Three. Hair et al. (2003) and Burns and Bush (2002) stated that descriptive research designs are preferable for most quantitative studies. Conversely, AECT (2001) believes that descriptive research does not fit neatly into the definition of either quantitative or qualitative research methodologies. This is because the nature of descriptive research is dependent on the research question, design and data analysis of the given topic. Cross-sectional and longitudinal studies are two popular techniques used in descriptive research. A cross-sectional study involves data collected at a certain time. A longitudinal study uses time as the primary variable and tries to conduct an in-depth study of how a small sample changes over time. This research is a cross-sectional study that investigates how individuals respond to a set of structured questions about his/her feelings, thoughts and actions.

Causal research is a subsequent action of the descriptive research and examines the cause and effect of the relationship between factors (Hair et al. 2003). This study attempts to investigate the causal relationship between e-service quality, satisfaction, attitude and behavioural intentions at point-of-purchase and post-purchase. For instance, a causal experiment is appropriate to generate

a causal inference about the relationship on whether e-service quality causes satisfaction and whether satisfaction in turn affects behavioural intentions. (Parasuraman 1991). In addition, groups are compared on overall satisfaction within and between point-of-purchase (Phase Two) and post-purchase (Phase Three) for understanding their causal relationships

### **4.3 Research Strategy**

#### 4.3.1 Stages of data collection

This study involved three stages in collecting the data in which each stage corresponds to a research phase identified in section 4.2.3 and they were data collection for exploratory research in Phase One, and for descriptive and causal research in Phase Two (point-of-purchase) and Phase Three (post-purchase). Details on data collection in each phase are discussed below.

##### 4.3.1.1 Phase 1 – Exploratory research

In the past few years, there has been a dramatic rise in the number of companies which have a presence online. Almost all retailers have moved from their traditional shops to add a virtual shop and competition amongst e-retailers vying to share in this new market is high (Dennis et al. 2010). Since then, marketers are trying to provide a better position of their products and service that suits their customers' needs and wants to gain competitive advantage in the e-retailing marketplace (Dennis et al. 2010).

According to Malaysian Directory Blogger, there are in total 5261 blogs which use Blogspots to sell their products and share knowledge and experiences. The blog has 27 categories based on content. Among these, the blog for personal purpose has rated the highest with 1845 blogs, followed by shopping purposes, which has 911 blogs (Malaysia Blogger 2008). Apart from those 911 blogs, 808 blogs have been categorised as selling apparel. The following pictures provide examples of selling apparel online through blogshop (see Figures 4.2, 4.3 and 4.4).

Figure 4.2 Example of Blogspots ( <http://stylish-hijab.Blogspots.com>)



Figure 4.3 Example of Blogspots ( <http://dalzbuttoncraft.Blogspots.com>)

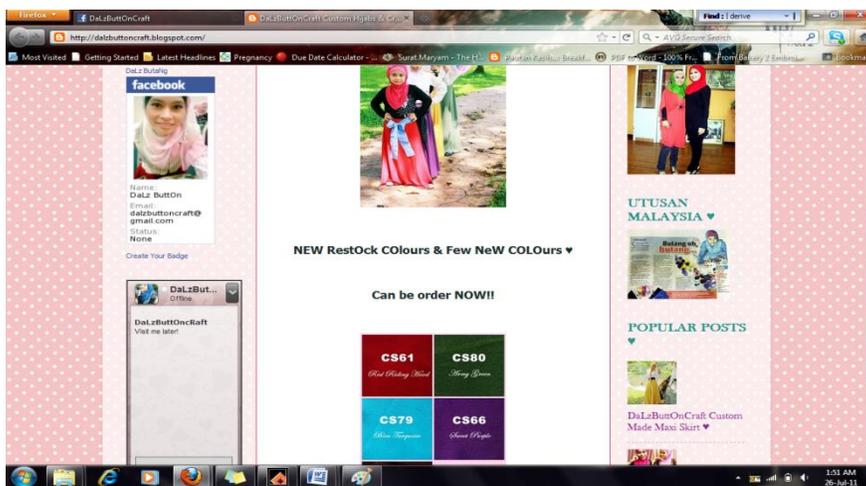


Figure 4.4: Example of Blogspots (<http://koreanstyleapparel.Blogspots.com>)



The picture below shows an example for selling apparel online through a website.

Figure 4.5 Example of website selling apparel ([www.radiusite.com](http://www.radiusite.com))

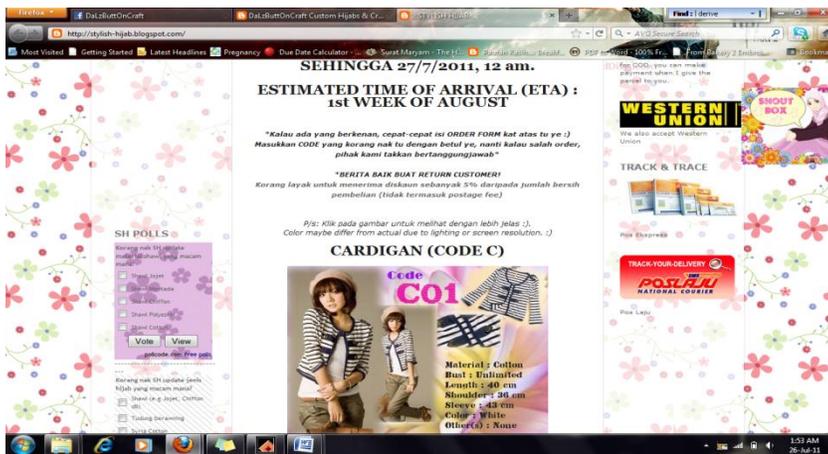
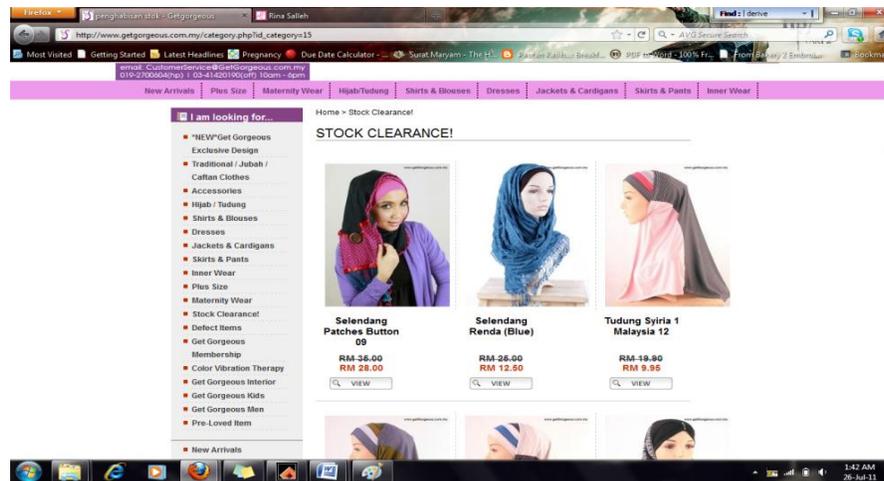


Figure 4.6 Example of website selling apparel ([www.getgorgeous.com.my](http://www.getgorgeous.com.my))



In Phase 1, this study conducted in-depth face-to-face interviews with ten owners of the Blogspots and websites, using convenience sampling methods. Respondents were contacted through email addresses obtained from their websites and they were briefed regarding the purpose of the interview. The qualitative approach focused on two research questions that help understand what information is used and features they placed on their online shops:

1. What information and features do you provide in your online shop?
2. How important it is for you to achieve satisfaction from your online customers?

In order to obtain more comprehensive responses from the respondents in their answers to the above two research questions, a systematic approach was followed. Interview sessions followed the guidelines of four parameters suggested by Miles and Huberman (1994) – setting, the actors, the events and the process.

Many small businesses choose Blogger as a medium for selling their product. This is because most of them lack experience in the design and the process of setting up online business, which is often expensive. In addition, newcomers usually incurred substantial Blogger maintenance

cost such as updating and hosting. In other words, small businesses who chose to market their product through blog are concerned about maintenance, hosting and updating the site. In my research context, a small online business is defined as one that is privately operated by or owned by groups of people with not more than 10 employees and which market their product online. They either used an existing online medium such as Blogger to commercialize their products or hired a developer to develop a website for this purpose but will manage this website by themselves to save costs.

Respondents were interviewed in a natural setting such as in a restaurant which had free access to Wi-Fi. This made it easier for them to show the researcher how their online shop operates in the virtual setting.

Before the interview, the researcher introduced herself to the respondents and briefly explained the purpose of interview. It was emphasized to the respondents that the interviewer was interested in their views as an owner of an online shop. It was explained that the study was for the purpose of academic research in a PhD programme. Respondents were first asked about the background to their businesses, then questioned about what information and feature they placed on their online shop. Lastly, their opinions were sought in regard to their awareness about customer satisfaction in the online setting.

During the interview, the researcher draws much as information from them as possible without influencing their responses. Most respondents did not want the interview to be recorded on tape but allowed the researcher to note key points on paper. Respondents showed their online businesses through the researcher's laptop and clarified queries from the interviewer regarding their sites. At the end of the interview, the researcher thanked the respondents for being willing to spare some time for the interview. Each interview lasted about 30 to 45 minutes.

#### 4.3.1.2 Phase 2 - Point-of-purchase data collection

Sekaran (2003 p.78) stated that interviewing, administering questionnaires, and observing people and phenomena are the primary data collection methods in survey research. This study used questionnaires in its online survey for Phase 2 and 3 and this method is outlined in section 4.4.4. The target population for this study was defined as individuals who purchased apparel online at point-of-purchase through Blogspots and websites in Malaysia. To establish the sample frame, a list of Blogspots and websites selling apparel online was obtained from the Internet. The respondents were obtained from the owners of the online shops. The respondents were approached by the researcher for permission to email the questionnaire online link to them and the researcher assured them that their particulars would be kept confidential and that their particulars would be deleted once the survey has been completed. Random sampling was used as this research sought to generalize the results obtained as much as possible from Internet users who purchased online. In this phase of the study, 339 online customers were surveyed at the point-of-purchase. However, the actual point-of-purchase sample with complete and usable information for this study was 268 online apparel customers (after deleting 71 cases due to incomplete responses, missing data and outliers). This sample size obtained in Phase Two survey falls within Schumacker and Lomax's (1996) suggested range of 200 to 500 sample size, which they considered as sufficient for SEM analysis. Respondents in this phase of the survey were asked if they wished to participate in a follow-up survey three months later. The latter survey is Phase Three of the research study which was to investigate their post-purchase experiences.

#### 4.3.1.3 Phase 3 - Post-purchase data collection

Respondents in Phase Three (post-purchase) data collection were recruited from Phase Two. These are the respondents who gave their consent, during the Phase Two survey, to be approached again for the survey in Phase Three and provided their email addresses for this purpose. Once the purchased product has been received by the respondents and the transaction completed, an email was then forwarded to these respondents inviting them to participate in Phase Three (post-purchase) survey. A web link providing direct access to this post-purchase

survey was given in this email. None of the respondents were compelled to participate in Phase Three if they decide to change their mind in the post-purchase stage. Once the Phase Three survey period has come to a close, the process of pairing and matching responses obtained at point-of-purchase (Phase Two) and post-purchase (Phase Three) from the same respondent was then undertaken based on the same email addresses used by the respondents in both these phases. All emails addresses were subsequently deleted for privacy reasons.

There were 197 participants in Phase Three of this study but after deleting incomplete responses, missing data and outliers, the sample consists of 154 online apparel respondents. Kline (1998) believed that a sample size under 100 was not enough to conduct SEM analysis while Nevitt and Hancock (2001) discouraged the use of bootstrapping as a resampling technique with sample size lower than 100. Because respondents in Phase Three were recruited from Phase Two of the study, the sample size in the former group is smaller than the latter group. However, the sample size (n=154) in Phase Three of this study is more than 100. As a result, bootstrapping can be employed to address potential limitation associated with a small sample size for Maximum Likelihood estimation.

## **4.4 Research Instrument and Facilitation Software**

### **4.4.1 Designing the survey instrument**

In this section, the researcher describes the survey instrument used in Phases Two and Three in terms of medium of instructions in the questionnaire, measurement scales, questions wording and content, format of responses and lastly the sequence of questions. The questionnaires were first written in English only. Two weeks after they were launched, owners of the online shop recommended the questionnaires be written in dual languages - Bahasa Melayu and English. This was due to most of online shoppers not being literate in English and preferring to communicate in the national language which is Bahasa Melayu (Haque and Khatibi, 2006). The translation (from English to Bahasa Melayu) was done by a language expert at Sultanah Zanariah Library, Universiti Teknologi Malaysia. This translation was also audited by the researcher who is fluent in both Bahasa Melayu and English. To ensure accuracy, the questionnaires were translated back from Bahasa Melayu to English. The researcher adhered to the recommendation given by Norizan (2001) in the construction of these questionnaires. According to Norizan (2001), to obtain accurate responses the questions should be designed to be straightforward and comprehensible, avoiding ambiguities, estimations and leading, double-barrelled, vague and presumptive questions.

### **4.4.2 Level of Measurement**

Three levels of measurement scales were used in this study: nominal, ordinal and interval. According to Straker (2002-2011), nominal data is usually used for describing something because it has no numeric value and nominal items are usually categorical. For instance, respondents were asked to select their highest education level from a list provided in the survey. Ordinal scales are often defined by assigning numbers in their relative sequence (Straker 2002-2011): for example, age group, money spent on online shop and income. Interval scales were used to measure the subjective characteristics of respondents. In this study, interval scales were used to discover respondents' experiences of e-Service Quality, post-purchase, attitude, behavioural intention and overall satisfaction. Various types of scales are available for measuring satisfaction such as a Likert scale, verbal scale, SIMALTO scale and numbering rating scale.

If a researcher needs to provide for responses in varying degrees for each item, a Likert Scale response can be an excellent option because it requires respondents to rate a number of statements, usually ranging from strongly disagree to strongly agree and vice-versa. Questionnaires using a Likert Scale as a measuring instrument should combine positive and negative statements to avoid bias. This scale is commonly used to measure customer satisfaction and to reflect specific good or bad aspects of the service or product. The response scale, therefore, should reflect whether the satisfaction item describes the subject matter for measurement. The Likert Scale helps researchers to manage qualitative data by assigning values to attitudes which make the data beneficial for statistical analysis. The numerical number assigned to each potential choice (the anchor) enables researchers to calculate a mean figure for all responses. This final average score represents overall level of completion, attitude or satisfaction toward the subject matter.

Many previous studies (e.g Yeap and Ramayah 2011; Carlson and O’Cass 2010; Har and Eze 2011) on measuring customer satisfaction used the Likert Scale as one of the command tools to measure service quality. The objective of a customer satisfaction survey is to obtain a positive trend over time and should enable the organization or researcher to discover problems, take action, measure and look for improvements in results. Likert Scales usually ranged between five-level item (five-point Likert scale) to ten-level-item (ten-point Likert scale). Five-point and seven-Likert scales are two popular options which are often used in measuring satisfaction. For example, Chu (2002); Rajamma and Neeley (2005); Bauer et al. (2006); Liu and Wang (2007); Siadat et al. (2008) and Yeap and Ramayah (2011) all used the 5-point Likert scale ranging from 1 (“strongly disagree”) to 5 (“strongly agree”) to measure customer satisfaction in their studies.

The verbal scale is one of the simplest measurement scales because it is much more balanced than the Likert scale (Hill et al. 2003). The benefit of integrating the concepts being measured into the scale, is that it helps to reduce the confusion among respondents. On the other hand, this scale is limited for statistical analysis because the frequency distribution is the only means for analyzing the data. Since the verbal scale is ordinal data, it is not significantly acceptable to

convert the verbal data into numbers to generate representative satisfaction scores because the distance between highly satisfied and satisfied is never known and as a result, the study outcome may not be reliable.

Simultaneous Multi-Attribute Trade-Off or SIMALTO scale is a complex scale which requires respondents to rate their expected, experienced and ideal levels of performance on a variety of key processes. It is not easy or applicable for self-completion questionnaires (Hill et al. 2003). Moreover, this scale is most effective for personal interviews where the presence of a skilled interviewer is required for reliable completion. However, according to Hill et al. (2003), this scale has the benefit of meticulousness of information generated and best use for comparison between different types of expectation of different organizations. As stated before, because of its complexity and applicability for comparing performances of different organizations, this scale is not suitable for measuring satisfaction.

The Numerical Scale is one in which the response option has a numerical descriptor, commonly 1 to 5, and which can reach up to 10. The endpoints are usually anchored to provide direction of response; for instance strongly dissatisfied and strongly satisfied or not important to extremely important. This scale has the advantage of providing a clear picture of results and implications. In customer satisfaction questionnaires, the numerical scale is best for organizations which want to gain an understanding in areas for improvement in services and products. Numerical scales are usually inappropriate for measuring attitudes because they may exclude the negative part of the continuum in measurement values (Lubian 2010).

Despite these research studies using the 5-point Likert Scale, there has been an argument that it is not a robust scale for capturing the participant's true evaluation. Finstad (2010) compared the 5-point and 7-point Likert Scales and found that 5-point Likert Scale was unable to adequately capture the data and was not sufficiently sensitive to record true robustness in respondents' evaluations of the system. The finding was supported by Russell and Bobko (1992, p.339) who found that 5-point Likert Scale items were "too coarse" a method for gathering data. Taking into account this weakness in the 5-point Likert scale, the 7-point Likert Scale was used as a rating

scale for my questionnaires, with the range 1 = “strongly disagree”, 2 = “disagree”, 3 = “slightly disagree”, 4 = “neutral”, 5 = “slightly agree”, 6 = “agree” and 7 = “strongly agree”. This decision was supported by the finding of Finstad (2010) that the 7-point Likert Scale was more appropriate for electronically-distributed questionnaires. He added that using this rating scale can better reflect a respondent’s true subjective evaluation in a robust questionnaire than the 5-point Likert Scale. Moreover, many previous studies measuring customer satisfaction and service quality used the 7-point Likert Scale (Teo and Liu 2005; Liu et al. 2006; Xia et al. 2008).

#### **4.4.3 Operationalization of constructs**

This section discusses construct operationalization which involves establishing the link between the theoretical underpinnings of concept(s) behind each construct and one or more related specific indicators. The purpose is to make the constructs more distinguishable and measurable in order to render the theory more testable (Malhotra 2003). This is an important step in the study for Phase 2 (point-of-purchase) and Phase 3 (post-purchase) because a lack of reliability or inconsistency in the operationalization of constructs can invalidate the study. Wherever possible, initial scale items were taken from previously-validated measures in e-satisfaction in regard to online shopping customer satisfaction and service quality. The measurable items in this study are consistent with specification used for measuring e-satisfaction in prior studies. They were reorganized and adapted to the current context based on responses obtained from interviewing owners of Blogspots and websites in Phase 1 (exploratory research). The Phase 1 (exploratory study) which involved interviewing the owners of the online apparel businesses was helpful in establishing certain questions to be used in Phase 2 to appropriately capture the nature of the items for measuring their respective constructs such as expected delivery service, expected customer service, transaction capability and payment and also delivery service in Phase 3. Other constructs in Phase 2 like information quality, merchandise attributes, website design and security design and also customer service in Phase 3 were developed based on the literature review and the interview’s result did not suggest any anomalies or additional information that needed to be considered or included when developing questions for these constructs in the Malaysian context. It is worth noting that reliability and validity tests, on the constructs and their

respective measurable items, were undertaken in the Structural Equation Modelling (SEM) process to ensure accuracy of the study in regard to constructs operationalization. Reliability and validity tests are described in section 4.5.2.5 'Measurement model validity' in this chapter.

The survey instrument in Phase 2 (point-of-purchase) consisted of five dimensions. The first dimension was designed for service quality and contained eight constructs which were operationalized as per Table 4.2. Items for 'general belief' about online shopping were adopted from Hirst and Ashwin (2009), Rajamma and Neeley (2005) and Swinyard and Smith (2003). 'Information quality' of purchase website was operationalized by the following variables: accuracy, comprehensibility, completeness and relevance. These items were adapted from previous research studies by Muyllea et al. (2004) and Jeong et al. (2003). The 'website design' construct was operationalized by website structure, navigation, combination of colours and ease of use. These items were adopted from Kim and Stoel (2004), Muyllea et al. (2004) and Jeong et al. (2003) 'Merchandise attributes' was divided into aspects of purchase incentive and product variety, being adapted from Xia et al. (2008) and Szymanski and Hise (2000). 'Security & privacy' issues were considered and adapted from Wolfinbarger and Gilly (2003).

Items from Kim and Stoel (2004) and Xia et al. (2008) were adapted for 'transaction capability and payment'. The interviews revealed that to satisfy their customers, the owners of the online apparel businesses offered customers a minimum deposit requirement, provided many options for payment such as post office remittance, online payment and cash on delivery (COD) and also various options in receiving proof of payment (e.g. email, SMS etc.). These added values are incorporated into the questionnaire in order to appropriately measure the 'transaction capability and payment' construct. 'Expected service delivery' was adapted from Rossiter (2007) and three items were developed and added by the researcher to refine the definition of this construct based on responses from the in-depth interviews in Phase 1 of the study. The interviews revealed that the major delivery activities and expectations specific to online apparel retailers in Malaysia were that consumers expect a standard price for a delivery service, expect online apparel retailers to provide clear terms and conditions for delivery service and also expect to be rewarded through this service for purchasing more items. These activities were incorporated into the questionnaire

in order to appropriately measure the ‘expectation delivery service’ construct. The interview’s finding also refined the ‘expected customer service’ questions offered by Wolfinbarger and Gilly (2003) in their study that were used in the United States. For instance, the findings from question 2 were extracted into four questions in the Phase 2 survey. Based on the interviews finding, online business retailers offered customers a refund if they were not satisfied with the purchase, guaranteed an exchange if customers were not satisfied with the product, provided online tracking for products, and customer could contact them through many options such as by chat room, email and phone. These findings guided respondents in the Malaysian context in understanding the item being referred to.

The second dimension, attitudes, had been measured previously by Jarvenpaa et al. (2000) Teo and Liu (2005) and Chen et al. (2002). The third dimension was overall satisfaction and the items were adopted from a study by Xia et al. (2008). The fourth dimension was behavioural intention and the items were adapted from Parasuraman et al. (1988). Table 4.2 below provides a summary of operationalization of each construct together with their items and references at the point-of-purchase stage.

Table 4.2: A summary of operationalization of constructs at point-of-purchase

Construct	Items	References
<b>General belief</b>	1. I believe that shopping over the Internet is easy	Hirst and Ashwin (2009)
	2. I believe shopping online is compatible with my lifestyle	Rajamma and Neeley (2005)
	3. I believe shopping online allows me to get a better price	Swinyard and Smith (2003)
	4. I believe that the risk of purchasing online is very high	
	5. I believe that Internet shopping provides better service than in-store shopping	
<b>Information quality</b>	1. I believe that the website provides accurate information	Muyllea et al. (2004) Jeong et al. (2003)

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2. The information provided on the website is reliable
  3. The information provided on the website is easily understood
  4. The website contains all the information that I need for the purpose of my purchase decision
  5. The information on the website is relevant.

**Website design**

1. I like the layout of the website Kim and Stoel (2004)
2. The design of the website is creative Muyyile et al. (2004)
3. The display pages within the website are easy to read Jeong et al. (2003)
4. The start page easily leads me to the information I need
5. It is easy to move around in this website
6. This website uses a good colour combination
7. The website is easy to use
8. The website loads quickly

**Merchandise attributes**

1. This website offers comparatively low prices for their merchandise compared to other websites Xia et al. (2008)  
Szymanski and Hise (2000)
  2. This website provides extra incentives to purchasing such as discount offers and the collection of bonus points
  3. This website provides extra incentive to purchase through prizes from customer contests
  4. The range of products in this web site is comprehensive
  5. There are many choices for different
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types of merchandise on the website

6. This website allows me to reserve items for 2-3 days

<b>Transaction capability &amp; payment</b>	<ol style="list-style-type: none"><li>1. This website allows customers to reserve items with a minimum deposit requirement*</li><li>2. This website provides several options for payment such as post office remittance, online payment and cash on delivery*</li><li>3. I feel comfortable using the payment options provided by the website</li><li>4. I have many options to receive proof of my payment to the website (such as email, SMS etc.)*</li><li>5. When I use the website, the waiting time between my actions and the website response is very fast</li></ol>	Kim and Stoel (2004) Xia et al.(2008)  *Design based on findings from interviews
<b>Security/privacy</b>	<ol style="list-style-type: none"><li>1. I feel secure doing transactions with this website</li><li>2. The website has adequate security features</li><li>3. This website provides clear and understandable terms and conditions</li><li>4. I feel my personal information is secure on this website.</li></ol>	Wolfenbarger and Gilly (2003)
<b>Expected delivery service</b>	<ol style="list-style-type: none"><li>1. The website offers many options for the delivery service such as standard post, express delivery and home delivery.*</li><li>2. The website offers a standard price for the delivery service*</li><li>3. The website provides clear terms and conditions for delivery service</li></ol>	Rossiter (2007)  * Design based on findings from interviews

	4. The website offers free service delivery if the customers purchase more than one item*	
<b>Expected customer service</b>	<ol style="list-style-type: none"> <li>1. If I am not satisfied with my purchases, this website guarantees me a refund*</li> <li>2. If I am not satisfied with the products, this website guaranteed an exchange*</li> <li>3. The website provides online tracking for products*</li> <li>4. Sales personnel are ready and willing to respond to customer needs.</li> <li>5. There are many options on how to make contact with customer service such as chat room, email and phone*</li> </ol>	<p>Wolfenbarger and Gilly (2003)</p> <p>* Design based on findings from interviews</p>
<b>Attitude</b>	<ol style="list-style-type: none"> <li>1. This is a nice web site</li> <li>2. I have a positive attitude towards the website</li> <li>3. I think that using the website is beneficial to me</li> <li>4. Using the website to purchase apparel online is efficient</li> <li>5. I like the idea of using the Internet to shop from the website</li> <li>6. I find using the Internet to shop from the website is appealing</li> </ol>	<p>Javerpaa and Tractinsky (1999)</p> <p>Jarvenpaa et al. (2000)</p> <p>Teo and Liu (2005)</p> <p>Chen et al. (2002)</p>
<b>Customer satisfaction</b>	<ol style="list-style-type: none"> <li>1. I enjoyed purchasing using the website</li> <li>2. Overall, I am satisfied using the website to purchase apparel</li> <li>3. In general, I was pleased with the quality of the service that the website provided</li> </ol>	Xia et al. (2008)
<b>Behavioural intentions</b>	1. I will use this website for future online purchase of apparel items	Parasuraman et al. (1988)

2. I will recommend this website to friends and family for online purchase of apparel items
3. I would like to become a regular customer of this website
4. I would not consider switching to another similar web site
5. I will say positive things about the web site

The survey in Phase 3 (post-purchase) was used to capture the experiences of customers after they had received the products purchased. The survey was founded on the provision of an email address from respondents in Phase 2 (point-of-purchase). These respondents' email addresses allowed the researcher to trace and match responses given by the same respondent in Phase 2 (point-of-purchase) and Phase 3 (post-purchase). This procedure is necessary for construct and group comparisons in non-parametric data analysis.

For Phase 3 (post-purchase) survey, three items in service delivery were adapted from previous research (Xia et al. 2008). The interviews revealed that upon delivery service, customers were notified when their items were to be delivered and this item was added to refine a question by Xia et al. (2008) which was conducted in China. As for items in customer service, they were adapted from Xia et al. (2008) and Rossiter (2007). Overall satisfaction items and behavioural items were the same questions as those used in Phase 2 (point-of-purchase). The purpose of having the same items was to track whether customers' overall satisfaction and/or behavioural intention are significantly different between point-of-purchase and post-purchase, and within a group. A construct will only be tracked if it retained the same indicators or items in the measurement and structural models at both point-of-purchase and post-purchase. Table 4.3 below illustrates a summary of operationalization for each construct in post-purchase stage.

Table 4.3: A summary of operationalization of constructs at post-purchase

Construct	Items	References
<b>Delivery service</b>	1. The product was delivered on time as promised by the website	
	2. The items sent were properly packaged	Xia et al. (2008) *Design based on findings
	3. I was notified when the items were to be delivered*	from interviews
	4. I received what I ordered from the website	
<b>Customer service</b>	1. Customer service personnel were always willing to help me	
	2. Inquiries were answered promptly	Xia et al. (2008)
	3. The online tracking link worked well	Rossiter (2007)
	4. The business was able to handle customer complaints directly and immediately	

#### 4.4.4 Online survey

In this study, SurveyMonkey (<http://www.surveymonkey.com>) was chosen as a platform to collect data. SurveyMonkey Inc. is the largest survey company and has built technology based on over 10 years' experience in survey methodology and web development which focuses on

helping customers collect over 1.5 million online survey responses every day. It comes with many features (e.g. accessible and easy) and affordable prices and plans (Marra and Bogue 2006). There are four kinds of plan offered by this web survey - Basic, Select, Gold and Platinum Plans. For this research, the Select Plan was chosen at a cost of A\$299 per year. This plan was suitable for the nature of the study in this thesis because it can download the full responses to be posted by the researchers and respondents, unlike the Basic Plan which has limited questions, does not integrate with statistical analysis tool nor allow responses to be downloaded.

#### **4.4.5 Response frequency**

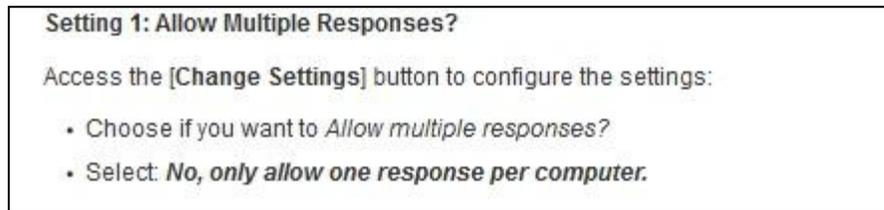
Although there are benefits in conducting an online survey, there are still many issues in using this tool. A key concern is how to ensure that participants will respond only once; and avoid repeated participation from a respondent in the same survey because repeated participation could significantly skew or bias the result.

"Ballot stuffing" occurs when respondents take the same survey more than once. This might happen if respondents did not realise they had already answered it or if they deliberately wanted to share their experiences more than once. Many respondents do not know that their multiple responses can skew the final results of the study. To overcome this problem, many options have been developed by the vendor software such as SurveyMonkey.

One of the well-known solutions is to compare the host name or Internet protocol (IP) addresses of the submission source. Each computer (known as a host) on the Internet has at least one IP address that uniquely identifies it from all other computers on the Internet. To make sure this solution is successful, the computer should enable cookies. According to Bhaskaran and LeClaire (2010), a cookie is information stored in the browser which can be used as identification of the user session. Through this method, the storage IP will not allow the same user to answer the survey more than once. SurveyMonkey has created a web-link collector to prevent this situation and researchers can activate it in their survey. If they are not allowed to make multiple responses, they can select the "No, only allow one response per computer" option, thus restricting one

response from each computer in a survey. Figure 4.7 shows the options available to researchers using SurveyMonkey.

Figure 4.7 Options available to avoid multiple responses in SurveyMonkey



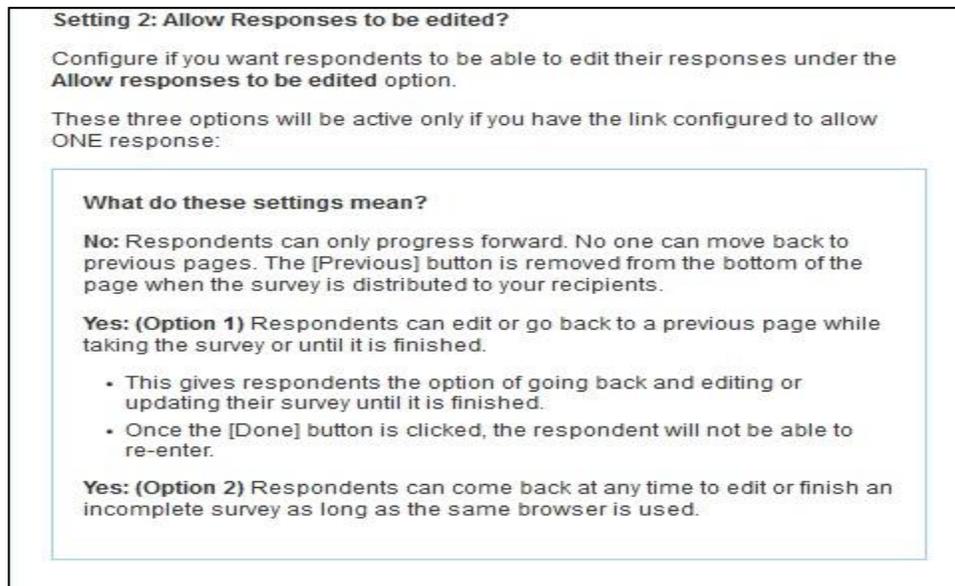
However, if the respondent's browser is set to dump cookies each time it is closed, these settings will not work. This is because the cookie will be refreshed and a blank survey will open the next time the link is accessed. Another problem in setting the system and not allowing more than one response per computer is if another respondent wants to complete the survey using the same computer: those other responses will be rejected (Bhaskaran and LeClaire 2010). Sue and Ritter (2007) also added that this method is acceptable but not recommended because the automatic rejection will result in the rejection of valid responses and can encourage a respondent to use another computer to repeat responses to the survey.

Another strategy used is to prevent respondents from editing their responses. This can be done by disabling the previous button on each page. In other words, each page should have the "Next" button only. However, this method also has a weakness where a respondent's time should be considered. For example, if the "Go back" button is disabled, a respondent who has completed only half of the survey or needs to refine their answers has to re-start from the beginning to complete the survey.

SurveyMonkey has provided three options to researchers in data collection (as shown in Figure 4.8). In the main, respondents are either allowed to revert to the previous pages to edit response or not allowed to do so. If respondents are allowed to edit their responses, there are two options available. Option 1 (as in Figure 4.9) allows respondents to edit and revert to previous pages while taking the survey or until it is completed. Option 2 allows respondents to edit and revert to

previous pages as well as exit and gain access to the same survey that was left incomplete the previous time so long as the same browser is used.

Figure 4.8 Options available on allowing responses to be edited by SurveyMonkey



According to Selm and Jankowski (2006), another option is to use submission time as a filter for eliminating duplicate responses. The same survey completed within a two minute interval from the same IP address can be regarded as a duplicate response from a respondent. Such responses are then eliminated. Screening for duplicate responses can be carried out by sorting the responses through a basic spreadsheet tool such as Microsoft Excel. Duplicates can be identified on the basis of completion of the same survey within a two-minute interval from the same IP address. In SurveyMonkey, this basic spreadsheet containing IP address and submission times of all responses can be downloaded from its Analyze tool.

One effective way to ensure that there are no multiple survey responses from the same participants is by inviting them to participate in the survey through their email addresses. In this study, the email sent to each respondent contains a unique URL (Universal Resource Locator) whereby recipient's information is encoded to this link. However, using the email address may

reveal the identity of the respondents which again leads to privacy concerns and respondents may not feel comfortable or happy when they see their email address has been linked to the survey (Singh, et al. 2009). This is not an issue in this study because email addresses were obtained with prior consent from the respondents and respondents were made aware of the fact that their email addresses will be deleted once their responses at point-of-purchase and post-purchase were paired and matched for data analysis purposes. Their privacy and anonymity were guarded according to the University ethics requirements.

The last option to prevent multiple responses is to give clear instructions at the start of the survey. The message should inform respondents and seek their cooperation to complete the survey only once. SurveyMonkey also suggests this in its tips on how to prevent ballot stuffing. Filter questions can also be used to prevent this problem. This can be done by adding skip logic at the beginning of the questionnaire or as the first question or first set of questions. In SurveyMonkey, the skip logic can help to screen and identify targeted respondents and only allow them to proceed with the questionnaire if they fulfil the logic criteria.

Since I used SurveyMonkey as a tool for gathering data, I had chosen the most appropriate options that best prevent multiple responses from one respondent. The first step was to clearly state that the respondent should answer the survey only once. This was done by providing a skip logic question. If they answered the skip logic question that they have already answered the survey, they will automatically be excluded from the survey. If they have not participated before in this survey, they will be allowed to proceed. The next button would lead them to the rest of the questions relevant to the study. In addition to using skip logic question in the survey process, the researcher also selected the option of only allowing respondents to progress forward in a survey and not allowing respondents to move back to edit pages in order to minimise or prevent “ballot stuffing”. This study did not rely on IP addresses to track the same respondent because it would prevent other people who use the same computer from participating in this survey. Although this may create a risk that the same users would answer many times, this study is based on trust between the researcher and respondents.

#### **4.4.6 Analysis software**

As pointed out by Coorley (1978 p.13) and cited in Zeidan (2006) and Shammout (2007), “The purpose of the statistical procedures is to assist in establishing the plausibility of the theoretical model and to estimate the degree to which the various explanatory variables seem to be influencing the dependant variable”. Therefore, this thesis uses Statistical Package for Social Sciences (SPSS) Version 20 to analyse the preliminary data and nonparametric analysis and Structural Equation Modelling (SEM) Version 20 to examine one factor congeneric model and confirmatory factor analysis (CFA) and the overall structural model. A further justification describing these statistical tools is discussed in this section.

Data gathered from the questionnaires were first analysed using SPSS Version 20. According to Malhotra (1999) and Zikmund (2003), this software is widely accepted for conducting data analysis. It was used in this study to clean and screen the data in terms of coding, missing data (i.e. using t-test), detecting outlier (i.e. using normal probability plot, Box and Whisker) and also normality (i.e., using skewness and kurtosis). The non-parametric tests (Wilcoxon Rank Sum Test and Mann-Whitney U tests) in SPSS were used to analyse data from Phases Two (point-of-purchase) and Three (post-purchase) for group comparisons and examining differences in overall satisfaction

## 4.5 Data Analysis Method

### 4.5.1 Data screening

As the first step in the data analysis, the researcher conducted data screening for missing values outliers (both univariate and multivariate outliers) and data normality.

#### 4.5.1.1 Dealing with missing values

There are three options on how to deal with missing values. The first option is to leave the data "as is" with the missing values in place. Many studies usually takes this option if the number of missing data is quite small, the missing data are typically non-random and create composite score. Option two is to delete cases with the missing values, while the last option is to replace the missing values (imputation). In this study, researcher had deleted the cases that contain the missing data.

#### 4.5.1.2 Detecting for outliers (univariate and multivariate)

Outliers refer to values that are substantially smaller or larger than other values in the data set. Such values can distort the outcome of the data analysis and should be eliminated before data analysis. There are 2 types of outliers: univariate and multivariate outliers. Univariate outliers occur within a single variable. These outliers can be assessed by using frequency distribution and BOXPLOT from SPSS, or through examining the z-values of the variables. In this study, univariate outliers were eliminated based on cases with z-values greater than 3 standard deviations (Kline, 2005).

Multivariate outliers, on the other hand, occur within the combination of two or more variables. A sample data is considered to be multivariate normal if the value of Mardia's normalised estimate of multivariate kurtosis is below 5 (Bentler, 2004). Multivariate outliers are detected by examining the Mahalanobis Distances ( $D^2$ ) statistic. This statistic measures the distance in standard deviation units between a set of scores for an individual case and the sample means for

all variables (Tabachnick and Fidell, 2006). Cases which are considered multivariate outliers are those with a  $D^2$  of relatively low p value ( $p < 0.001$  for the  $\chi^2$  value) and have to be deleted from the sample. The deletion of outliers (univariate and multivariate) may improve the normality distribution of the data.

#### 4.5.1.3 Normality

The data needs to follow a normal distribution in order for most analyses to work properly especially in SEM. There are two aspects to normality of a distribution, skewness and kurtosis and both must be tested before normality can be established. Skewness describes how unevenly the data is distributed with a majority of score. This can be done using descriptive/explore analysis in SPSS and the standard error for skewness are given by default. Kurtosis involves the peakedness or flatness of the distribution. Kurtosis is normally illustrated as bell-shaped and not too peaked or flat.

### 4.5.2 Structural Equation Modelling (SEM)

Structural Equation Modelling (SEM) is “a collection of statistical techniques that allows a set of relationships between one or more independent variables, either continuous or discrete, and one or more dependant variables, either continuous or discrete, to be examined” (Tabachnick and Fidell, 2001 p. 653). Thus, SEM is a statistical technique developed to analyse quantitative data. Many fields use this method because it provides researchers with a comprehensive method for quantifying and testing theories. Typically, SEM uses the model testing method to investigate the causal relationship among variables in the study. The data was collected using the hypothesis testing approach proposed by the researcher. The hypothesized model was tested statistically in a simultaneous analysis of the entire system of variables to determine the extent to which it is consistent with the data.

According to Bollen (1989), Hair et al. (1995), Kline (2005) and Anderson and Gerbing (1988), SEM also has the ability to assess the unidimensionality and reliability and validity of each construct. It also enables confirmatory factor analysis which provides a test of overall model fit

to the data. Therefore, taking advantage of these capabilities, this thesis used confirmatory factor analysis (CFA) in SEM for analysing the data. Confirmatory factor analysis (CFA) is a method used in assessing unidimensionality. According to Bollen (1989), CFA is a better way to test the hypotheses in grounded theoretical model. CFA is suitable for this study because the scale items used were adopted from previous research and were well-grounded in theory. In addition, this technique is more flexible (Dunn, Seaker et al., 1994) and more powerful (Anderson and Gerbing 1988; Hair, Anderson et al. 1995) as compared to exploratory factor analysis (EFA). Furthermore, many previous studies used SEM as their statistical tool to analyse data on e-satisfaction (Teo and Liu, 2005; Wang and Head 2007; Udo, Bagchi et al. 2010).

To determine statistical relationships among the items of each construct and between constructs AMOS Version 20 (Analysis of Moment Structure) was used in this study. Through this software, the researcher specifies, estimates, assesses and presents each model in a causal path diagram to show the hypothesized relationships among variables. Each model is then tested to determine data fit and used for testing hypothesized relationships. All hypotheses are tested at 5% level of significance.

#### 4.5.2.2 Assumptions, requirements and issues of SEM

Before using SEM as an analysis tool, a researcher must consider and meet a number of assumptions.

##### 1. Sample size

Although there is no standard sample size for conducting SEM, the minimum sample for each parameter in the regression model based on previous studies ranged between 10 to 20 respondents (Mitchell 1993). Kline (1998) believed that a sample size under 100 was not enough to conduct SEM analysis. This was supported by Schumacker and Lomax (1996) who found that many previous studies using SEM tend to have a sample size of between 250 to 500 sample size and that has been a rule of thumb in sample size for SEM. Hair et al. (2005) considered 200 to be an ideal sample size. Taking into consideration the a aforementioned suggestions, the sample

sizes of 268 respondents in Phase 2 (point-of-purchase) and 154 respondents in Phase 3 (post-purchase) fall within acceptable range of sample sizes.

## 2. Random Sampling

Respondents in this study were selected based on random sampling from the population. Random sampling means each item or element of the population has an equal chance of being chosen at each draw. The sample is random if the method for obtaining the sample meets the criterion of randomness; that is, each element has an equal chance at each draw.

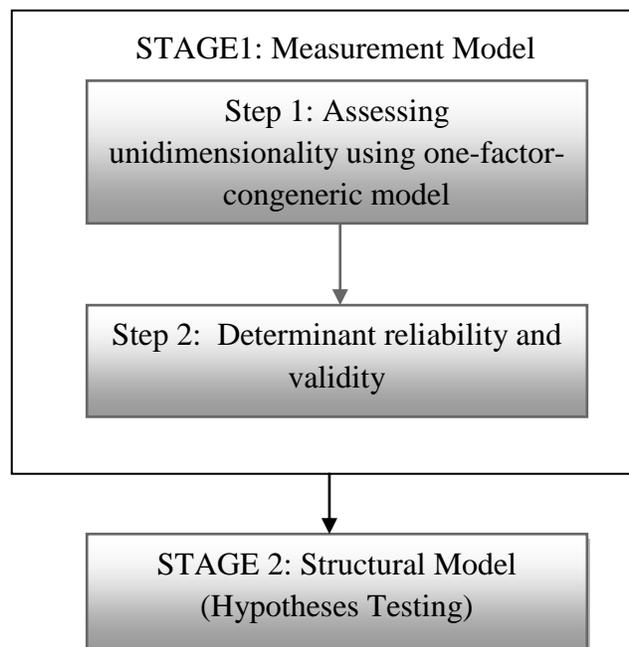
## 3. Multivariate Normality

Each indicator variable should have a normal distribution data. This is because abnormal data will affect the result of Chi Squared Goodness-of-Fit (which is one of indices to examine hypothesis model fit with research data). If the data does not have a normal distribution, it can reduce the reliability of SEM analysis. In this study, the researcher identified and deleted univariate and multivariate outliers based on the processes mentioned in section 4.5.1.2 'Detecting for outliers (univariate and multivariate)' of this chapter. The researcher also re-ran each model using a bootstrap procedure when the Mardia's coefficient was above 5 and continued to indicate multivariate non-normality of the data. Bootstrapping is an approach for estimating standard errors in regression analyses without making any distributional assumptions (Chernick 1999). In this study, the Bollen-Stine bootstrap was employed to correct for standard error and fit statistic bias that occurs due to non-normal data. This process involves repeatedly resampling the sample population with replacement to approximate what would happen if the entire population were sampled. The number of bootstrap samples drawn for each analysis was set to 2000. If the Bollen-Stein bootstrap p-value is greater than 0.05, it indicates there is insufficient evidence to reject the hypothesized model and this suggests a good model fit (Bollen and Stein, 1993).

#### 4.5.2.3 Two-stage SEM

As recommended by Anderson and Gerbing (1988) and supported by Hair et al (1995), this thesis adopted a two-stage approach in order to perform SEM. This approach starts with the process of estimating the measurement parts of the overall models in Stage 1 by conducting a series of one-factor congeneric measurement models to clean up each construct and to ensure that each is fitting well. Congeneric modelling was first introduced by Joreskog (1971), in which each indicator reflects the same generic true score but each gives to the score in varying degrees (Joreskog 1971). Revelle (2007) added that the congeneric model is known as the least-restrictive model because the paths are equal but the errors can be unequal where all paths are allowed to vary. This is supported by Graham (2006) citing Raykov (1997) who stated that the congeneric model is the least-restrictive and most commonly used to test the reliability estimation. Stage 2 involves establishing and estimating the structural model based on Stage 1 as per illustrated in Figure 4.9.

Figure 4.9 Step by step for SEM



In estimating the measurement parts of the model, the causal relationships between the observed variables (items) and the underlying theoretical constructs were hypothesized. The aim of this step was to confirm unidimensionality of each of the indicators with its latent variable so that it can have a good fit. This is supported by Hair, Anderson et al. (1995, p.641) who defined unidimensionality as “an assumption underlying the calculation of reliability and is demonstrated when the indicators of a construct have acceptable fit on a single-factor (one-dimensional) model”. Therefore, the purpose of this step is to ensure that a set of items empirically measures a single dimension.

Furthermore, the underlying constructs used in this study ‘e-service quality’, ‘attitude’, ‘overall satisfaction’ and ‘behavioural intentions’ were expected to be valid constructs for this model because they have already been demonstrated empirically to be valid in the literature. However, validity of these constructs will be examined in this study and the procedure used is addressed in section 4.5.2.5 ‘Measurement model validity’ in this chapter. The procedure for ascertaining the reliability of these constructs is also addressed in the same section. Following this, the hypothesized path model is tested based on theoretical considerations which this study will clearly identify in the proposed structural model. The structural model fit is also evaluated in this step. Arbuckle (2005 p.90) defined the structural model as “the portion of the model that specifies how the latent variables are related to each other”. Indeed, Byrne (2010) added that the purpose of the structural model is to specify which latent constructs directly or indirectly influence the values of other latent constructs in the model.

#### 4.5.2.4 Model fit evaluation

The overall model fit was assessed to ensure that the model was an adequate representation of the entire set of causal relationships. In SEM, there are series of goodness-of-fit indices which help the researcher to determine whether the model fits the data or not. They can be divided into three groups: absolute fit indices, incremental fit indices and parsimony fit indices.

Absolute fit indices: Absolute fit indices are used to examine how good an *a priori* model fits the data sample (McDonald and Ho 2002 cited in Hooper et al., 2008). These fit indices do not rely on a comparison baseline but measure how well the model fits in comparison. For example, model chi-square, Root mean square error of approximation (RMSEA), Goodness-of-fit statistic (GFI), Adjusted goodness-of-fit statistic (AGFI), the Root mean square residual (RMR) and the Standardized root mean square residual (SRMR).

Incremental fit indices: Another name for incremental fit indices is comparative relative fit indices. This category does not use Chi-square but does compare value to a baseline. Included in this category are the Normed-fit index (NFI) and Comparative fit index (CFI).

Parsimony fit indices: Parsimonious fit of the model was tested by Parsimonious normed fit index (PNFI) and Parsimonious goodness-of-fit (PGFI) for comparing competing models. This was done to achieve a specific level of fit with a smaller number by estimated free parameters.

After calculating these indices, the results were checked against the guidelines summarised in Table 4.4 below.

Table 4.4 A summary for guidelines for goodness-of-fit

<b>GOF Criterion</b>	<b>Value Range</b>	<b>Acceptable Level</b>
<b><u>Absolute Fit</u></b>		
<b>Chi-square</b>	Tabled value	Compares with tabled value for given df (CMIN/df < 5).
<b>Goodness of fit(GFI)</b>	0 (no fit) to 1 (perfect fit)	Value close to 0.90 reflects a good fit
<b>Adjusted GFI (AGFI)</b>	0 (no fit) to 1 (perfect fit)	Value >0.90 reflects a good model fit
<b>Root-mean-square error of approximation</b>	<0.10	<0.10 reflects good fit <0.05 reflects very good fit

<b>(RMSEA)</b>				<0.01 reflects outstanding fit
<b>Normed fit index (NFI)</b>	0 (no fit) (perfect fit)	to 1		Value close to 0.90 reflects a good fit
<b>Non-normed fit index (NNFI)</b>	0 (no fit) bound value	no upper		Value close to 0.90 reflects a good fit
<hr/> <b><u>Incremental fit indices</u></b>				
<b>Comparative fit index (CFI)</b>	0 (no fit) (perfect fit)	to 1		Value close to 0.90 reflects a good fit
<b>Incremental fit index (IFI)</b>	0 (no fit) (perfect fit)	to 1		Value close to 0.90 reflects a good fit
<b>Relative fit index (RFI)</b>	0 (no fit) (perfect fit)	to 1		Value close to 0.90 reflects a good fit
<hr/> <b><u>Parsimonious Fit</u></b>				
<b>Parsimonious goodness of fit index (PGFI)</b>	0 (no fit) (perfect fit)	to 1		Compares values in alternative models
<b>Parsimonious normal fit index (PNFI)</b>	0 (no fit) (perfect fit)	to 1		Compares values in alternative models

In this study, the researcher presented the model fit based on Standardized RMR (SRMR), Chi-Square, CMIN/df, RMSEA and CFI based on suggestion by Kline (2005). Details are listed in Table 4.5.

Table 4.15 Fit Index Combination for this study based on (Kline 2005)

<b>Fit Index Combination</b>	<b>Combinational Rules</b>
<b>Chi-Square</b>	Low $X^2$ relative to degrees of freedom with an insignificant p value ( $p > 0.05$ )
<b>SRMR</b>	SRMR less than 0.08
<b>CMIN/df</b>	3:1 (Kline 2005)
<b>CFI</b>	Values greater than 0.90
<b>RMSEA</b>	Should not be less than 0.10

#### 4.5.2.5 Measurement model validity

##### 4.5.2.5.1 Construct validity

The purpose of conducting CFA in SEM is to examine the construct validity of a proposed measurement theory. Hair et al. (1998) define construct validity as the extent to which a set of measured items actually reflects the theoretical latent construct those items are designed to measure". In other words, construct validity is used to measure the theoretical concept. This is supported by Malhotra (1999), who referred to construct validity as measuring which constructs hypothetically relate to one another based on the theories. Construct validity can be divided into convergent validity and discriminant validity. Convergent validity examines whether the measure of the same construct are highly correlated while discriminant validity determines that the measures of a construct have not correlated too highly with other constructs (Sekaran 2000). To summarize, "validity measures" refers to developing correct and adequate measures for the concept being tested (Yin 1994; Malhotra 1996).

##### 4.5.2.5.2 Factor loadings

To demonstrate convergent validity, the magnitude of the direct structural relationship between the item and the latent construct (or factor) should be statistically different from zero (Holmes-

Smith et al. 2006). In other point, Hair et al. (1995) suggests that standardized loading estimates should be 0.5 ideally and 0.7 or higher. In many cases, standardized parameter estimates is normally been used because they constrained to range between -1.0 to +1.0. Thus, the cut-off and acceptable factor loading is 0.5 and above, which was applied to this thesis.

#### 4.5.2.5.3 Average variance extracted (AVE)

Fornell and Larcker (1981) stated that AVE is used as an indicator for supporting convergent validity. The rule of thumb for AVE is the value of AVE should be 0.5 or higher which suggest adequate convergence. AVE calculation should be applied to latent variables only.

The AVE formula is:

$$AVE = \frac{\sum_{i=1}^n L_i^2}{n}$$

Where

$L_i$ = standardized factor loading

$i$ =number of items

$n$ = items

#### 4.5.2.5.4 Item reliability & construct reliability (C.R)

Zikmund (2003, p.330) defines reliability as “the degree to which measures are free from random error and therefore yield consistent results”. This is supported by Carmines and Zeller (1979) who concluded that reliability is the extent to which a measurement of a phenomenon provides stable and consistent results. In other words, reliability refers to the extent to which a scale will give consistent results if the repeated measurements are made on the variables of concern (Malhotra 2003). The researcher used scores of squared multiple correlation (SMC) to assess item reliability (Kline 2010). The construct reliability on the other hand employed the following formula derived by Fornell and Larcker (1981).

$$CR = \frac{\left(\sum_{i=1}^n L_i\right)^2}{\left(\sum_{i=1}^n L_i\right)^2 + \left(\sum_{i=1}^n e_i\right)}$$

$L_i$ = factor loading for each construct

$e_i$ = sum of the variance terms for a construct

The general convention in research is to strive for reliability values of 0.70 or higher (Nunnally and Bernstein 1994). In other words, they suggested the rule of thumb for construct reliability is not less than 0.7 or higher. Bagozzi and Yi (1988) suggested that the value of CR should be equal to or greater than 0.60. As for item reliability, it has been suggested the value should exceed 0.5 (Robinson et al. 1991).

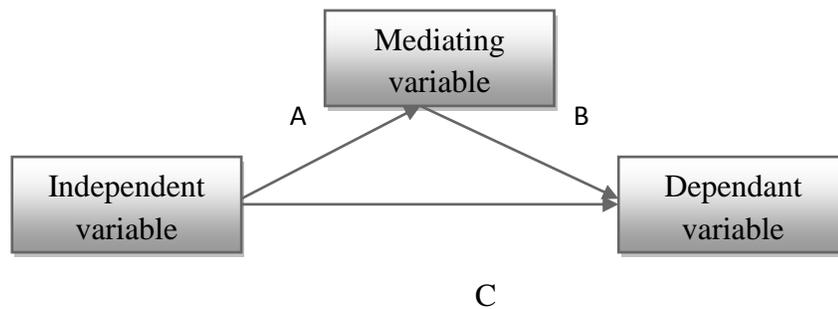
#### 4.5.2.5.5 Discriminant validity

Discriminant validity analysis refers to testing statistically whether two constructs are different to another and their interrelationship does not represent a measurement of a single construct. In this study, the structural equation modelling technique suggested by Bagozzi et al. (1991) is used for this test. In this procedure, discriminant validity of the factors is tested by constraining the correlation between two constructs to 1.00 (constrained model) and the results are then compared against those of the model where the correlation is freely estimated (unconstrained model). If the constrained model has significantly worsened in model fit as compared to the unconstrained model, we could conclude that the constructs differ. In AMOS, we used the p-value of the nested model comparison (tested on the assumption that the model unconstrained is correct) for the discriminant validity test. If this p-value is less than 0.05, we conclude that the two constructs are indeed not one construct and this provides evidence for discriminant validity for these two constructs. This procedure can only be carried out for one pair of constructs at a time. The discriminant validity test results for e-service quality constructs at point-of-purchase and constructs at post-purchase are presented in Chapter 5.

#### 4.5.2.6 Testing for Mediation

In some studies, the researcher developed research questions which intend to investigate the effect of a mediating variable in the relationship between an independent variable and its corresponding dependant variable in a model. Figure 4.12 shows the example of mediating variables.

Figure 4.12 Example of mediating variables



Mediation implies a causal hypothesis whereby an independent variable causes a mediator which causes a dependant variable as illustrated in Figure 4.12. This study investigated the effect of a mediating variable in the relationship between an independent variable and its correspondent variable. Figure 4.12 shows the mediation relationships and there is: a direct effect (C) between independent variable and a dependent variable; an indirect effect (A) between an independent variable and a mediator variable, and another indirect effect (B) between a mediator variable and a dependent variable.

There are two types of mediation effect: partial mediation and complete mediation. Partial mediation refers to the situation in which the path from an independent variable to a dependent variable is reduced in absolute size but is still statistically significant when the mediator is introduced. Complete mediation, on the other hand, is when this path is reduced in absolute size and is no longer statistically significant. The mediation effect will only be investigated in this study if the direct effect between an independent variable and a dependent variable is statistically significant (Hair et al. 1998). Otherwise the results from the mediational analysis are of little value. Hair et al. (1998) recommended the following steps in testing for mediation effects:

1. Establish the individual relationships among variables are statistically significant relationship:

- Establish the direct effect between independent variable and dependent variable
- Establish the direct effect between independent variable and mediating variable
- Establish direct effect between mediating variable and dependant variable

2. Assess the initial model with the direct effect of C. Then assess the model when the mediating variable is entered. In this step, the researcher needs to ensure that:

- a. When the mediating variable is entered into the model, the effect should be reduced. If it is reduced but still significant, then the partial mediation has happened.
- b. If the effect is reduced up to the level where it is no longer significant, then the “complete mediation” has occurred

### **4.5.3 Non-parametric test**

#### **4.5.3.1 Wilcoxon Ranked Sum Test**

A non-parametric test is normally been referred to as distribution free. According to (Siegel and Castellan 1988), a non-parametric test that requires few if any assumptions about the underlying population are questionable. For example, these tests do not require the assumption of normality or the assumption of homogeneity of variance. In this study, Wilcoxon Signed Ranks Test was used in analysing the data gathered from Phase 3 (Post-Purchase). Wilcoxon Signed Ranks test is designed for matching pairs the data, for example before and after. The advantage of using this test is that it does not require the assumption that the population is normally distributed.

#### **4.5.3.2 Mann-Whitney U Test**

The Mann-Whitney U test is another nonparametric test which can be used in place of an unpaired t-test. The function of this test is to test the two samples which come from the same population or whether one sample tends to be larger than the others. This nonparametric test works by ranking all the values from low to high, then comparing the mean rank in the two groups. In this thesis, this test was used for group comparison on overall satisfaction based on language (English and Bahasa Melayu) used by respondents in answering the survey.

## **4.6 ETHICAL CONSIDERATION**

The researcher should understand the basics of ethical research and how this might affect the research project (Polonsky and Waller 2005). Sekaran (2000, p.17) refers to ethics in business research as “a code of conduct or expected social norm of behaviour while conducting research”. In accordance with this, as part of Victoria University requirements, all projects which involve people as subjects must have approval from the University Human Research Ethics Committee before conducting of any fieldwork. That requirement applied to this thesis. First, in the ethics application, the researcher addressed the issues of participant privacy and confidentiality: the procedures aim to ensure that there are no potential risks associated in this project. Second, the Bahasa Melayu questionnaire was translated by an accredited person. Third, letters of formal invitation enclosed with the instrument were emailed to the business owners to obtain permission to conduct the interview and final survey. The detailed information included the aims of the study, its significance to them, the intended use of data and the issues with regard to the ensuring confidentiality. As part of the Victoria University requirement, consent forms for conducting this research were obtained. The following steps were taken to ensure the confidentiality of the data.

1. The names of the respondents were kept confidential and kept anonymous.
2. Personal information of the respondents has not been identified in any finding.
3. Raw data collected has not been used for any other purposes except for this study.
4. Data were kept in a safe place.

As a result of the above considerations, the Ethics Committee at Victoria University granted its approval for this research to be conducted.

#### **4.7 SUMMARY**

This chapter started with a discussion on justification for use of a post-positivist research paradigm. As a result, the paradigm for this study was post-positivist. The comparison of the qualitative and quantitative approach in research as well as identifying the pro and constraint of each approach was briefly used in the different phases of the study. For example, qualitative inquiry approach used Phase 1 and quantitative inquiry was applied in Phase 2 and Phase 3. Also

in this chapter, the process of construct operationalization was described and the survey instrument, measurement scale and survey method used in this study were discussed. In addition, strategies in minimizing or preventing duplicate responses were also stressed out by the researcher. Lastly, assumptions, requirements and issues of SEM and the procedures in specifying and assessing models in SEM were also discussed. The conditions for investigating mediation variables and non-parametric tests (Wilcoxon Ranked Sum Test and Mann-Whitney U Test) were also presented in this chapter. In the following chapter, Chapter Five, descriptive analysis, structural equation modelling and non-parametric test that were carried out along with the results are presented.

# **CHAPTER FIVE**

## **DESCRIPTIVE ANALYSIS, STRUCTURAL EQUATION MODELING AND NON-PARAMETRIC TEST**

### **5.1 INTRODUCTION**

The research methodology and research design were discussed in detail in Chapter Four ‘Research Methodology’. Chapter Five summarizes and presents the findings of the descriptive statistics, structural equation modelling, and non-parametric tests. Before conducting any statistical analyses, data cleaning and screening was conducted according to the procedure described in section 4.5.1 ‘Data screening’ of Chapter Four. The goals of this chapter are as follows:

1. Describe the sample demographic as well as characteristics of the respondents in Section 5.2.
2. Discuss the development of the congeneric models for point-of-purchase in Section 5.5 and post-purchase in Section 5.9.
3. Examine the measurement model for first-order CFA and second order e-Service Quality in Section 5.7
4. Examine the hypotheses using structural equation modelling (SEM) for point-of-purchase in Section 5.8 and post-purchase in Section 5.11.
5. Examine the mediating variables in Section 5.8.6
6. Conduct non-parametric tests on time and group comparisons using Wilcoxon Ranked Sum Test and Mann-Whitney U test in Section 5.12.

### **5.2 DEMOGRAPHIC DESCRIPTIVE STATISTICS**

As mentioned in Chapter Four, this study conducted two surveys in data collection, one at point-of-purchase (Phase 2) and another at post-purchase (Phase 3). The post-purchase survey

followed the point-of-purchase survey and required the same respondent to complete a second questionnaire.

### 5.2.1 Demographic profile of respondents at point-of-purchase

Table 5.1 Respondents' Profiles at Point-of-Purchase

Characteristic		Frequency	Relative Frequency (%)
<b>Gender</b>	Male	21	7.8
	Female	247	92.2
<b>Race</b>	Malay	101	86.2
	Chinese	95	8.6
	Indian	72	5.2
<b>Status</b>	Single	186	69.4
	Married	82	30.4
<b>Education</b>	Secondary	9	3.4
	Certificate	10	3.7
	Diploma	61	22.8
	Bachelor Degree	155	57.8
	Master	29	10.8
	Ph.D	4	1.5
<b>Frequency of shopping online in the last 6 months</b>	1-2	49	18.3
	3-5	102	38.1
	6-10	76	28.1
	Above 10	41	15.3
<b>Income</b>	Below RM500	51	19.0
	RM501-RM2000	85	31.7
	RM2001-RM4000	111	41.4
	RM4001-RM6000	20	7.5
	RM6001-RM8000	1	4
<b>Age</b>	<18 years old	4	1.5
	18 to 24 years old	110	41
	25 to 30 years old	117	43.7
	31 to 36 years old	31	11.6
	37 to 42 years old	6	2.2
<b>Spending</b>	Below RM50	44	16.4
	RM51-RM150	121	45.1
	RM151-RM250	48	17.9
	RM251-RM350	35	13.1

	RM351-RM450	17	6.3
	RM 451-RM550	3	1.1
<b>Current purchase</b>	Below RM50	74	27.6
	RM51-RM150	104	38.8
	RM151-RM250	39	14.6
	RM251-RM350	17	6.3
	RM351-RM450	16	6.0
	RM451-RM550	18	6.7
<b>Language</b>	English	140	52.2
	Bahasa	128	47.8

The Phase 2 survey (point-of-purchase) recruited a sample size of 268 respondents. Table 5.1 shows that most respondents who participated in this survey were females (92.2%). In terms of age group, 43.7 % respondents are in the age group 25 to 30 years old and 41% in a relatively younger generation 18 to 24 years old. 69.4 % of online shoppers in this survey are single and 30.4% are married. In addition, Malay respondents (86.2 %) constituted the highest proportion among races in the sample of point-of-purchase respondents, followed by Chinese (8.6%) and Indian (5.2%). 57.8% of online shoppers hold a Bachelor Degree qualification while 1.5% hold a PhD. In this survey, 48.9 % respondents aggregated within two groups tend to fall into the income bracket of between RM2001 and RM6000.

Table 5.1 also shows that 38.1% of the respondents shopped online 3 to 5 times in the past 6 months and 28.1% shopped 6 to 10 times in the same period. 45.1 % respondents normally spent RM51 to RM150 in previous online shopping transaction and only 3 respondents (1.1%) spent RM451 to RM500. This amount is the same as their current purchase at the point-of-purchase survey. The highest proportion of spending on current purchases was between RM51 and RM150 (38.8%). This shows that respondents will generally not spend more than RM150 in online transactions. However, 18 respondents (6.7%) spent more than RM451 (141AUD) on their current purchases.

### 5.2.2 Demographic profile of respondents at post-purchase

The Phase 3 survey (post-purchase) recruited a sample size of 154 respondents. Table 5.2 shows the demographic for these respondents at post-purchase. As shown in Table 5.2, female respondents (90.9%) remain the dominant group in this post-purchase survey. In term of race, Malay respondents (83.8%) also remain the dominant group. Respondents who are single (67%) constitute the largest group. In terms of educational background, 54.5% of the respondents hold a Bachelor Degree followed by Diploma holders (22.7%) the second largest group in education profile. The smallest group was Ph.D holders (1.9%). 87.5% of respondents used online shopping for apparel not more than 10 times in the past six months. Respondents with an income between RM501 and RM4000 (73.1%) were the largest group in this survey and respondents aged between 18 and 30 years old constitute the largest group, 84.7%.

Table 5.2 Respondents' Profile for Post-purchase

	<b>Characteristic</b>	<b>Total</b>	<b>Percentage (%)</b>
<b>Gender</b>	Male	14	9.1
	Female	140	90.9
<b>Race</b>	Malay	129	83.8
	Chinese	16	10.4
	Indian	9	5.8
<b>Status</b>	Single	104	67.5
	Married	50	32.5
<b>Education</b>	Secondary	8	5.2
	Certificate	7	4.5
	Diploma	35	22.7
	Degree	84	54.5
	Master	17	11
	Ph.D	3	1.9
<b>Frequency of shopping online in the last 6 months</b>	1-2	35	22.7
	3-5	58	37.7
	6-10	42	27.1
	Above 10	19	12.3
<b>Income</b>	Below RM500	51	19.0
	RM501-RM2000	85	31.7

	RM2001-RM4000	111	41.4
	RM4001-RM6000	20	7.5
	RM6001-RM8000	1	4
<b>Age</b>	<18 years old	4	2.6
	18 to 24 years old	64	41.6
	25 to 30 years old	64	41.6
	31 to 36 years old	18	11.7
	37 to 42 years old	4	2.6
<b>Spending</b>	Below RM50	22	14.3
	RM51-RM150	69	44.8
	RM151-RM250	37	24.0
	RM251-RM350	20	13.0
	RM351-RM450	4	2.6
	RM 451-RM550	2	1.3
<b>Current purchase</b>	Below RM50	36	23.4
	RM51-RM150	68	44.2
	RM151-RM250	21	13.6
	RM251-RM350	12	7.8
	RM351-RM450	9	5.8
	RM451-RM550	8	5.2
<b>Language</b>	English	90	58.4
	Bahasa	64	41.6

Based on Tables 5.1 and 5.2, the sample in Phase 2 (point-of-purchase) shares a similar profile as the sample in Phase 3 (post-purchase) indicating that the post-purchase sample remained representative of the population as was the point-of-purchase sample. Females were dominant as online shoppers in both the phases of this study. This is consistent with the figures from NetValue and NOP<sup>4</sup> which reported that online shopping was dominated by women in the UK (e-volve 2001). Online apparel purchasers also tend to be female in the UK. Armitt (2004) reported the finding from the firm Verditt<sup>5</sup> which showed that the general spending growth rate of 71.4% for women during 2003 was six times faster than male online shoppers. In addition, it was reported that females spent more than males on online purchases in which clothing is one of

<sup>4</sup> NetValue is a European leader in Internet measurement and behaviour.

<sup>5</sup> Verditt is a research company in UK and European retail markets. It provides research and consultancy services.

the female's top spending item. However, Eurostat (2009) suggest that the gap in online shopping between female and male is narrowing in Europe. Fairfax Media Publications reported that men in Australia increased their online spending by one-third and doubled compared to women in 2007 and 2011 (Smith 2011). Ergin and Akbay (2008) also found that apparel was one of the top transactions types among women online shoppers, whereas the top transaction for men were computers/electronics, sports equipment, books, tickets and movies.

### **5.3 STAGES IN STRUCTURAL EQUATION MODELLING**

As mentioned in section 4.5.2.3 'Two-stage SEM' of Chapter Four 'Research Methodology', there are two stages in Structural Equation Modelling (SEM) that need to be undertaken in this study. In the first stage, a one-factor congeneric model analysis was performed by specifying the causal relationships between each construct and its observed variables (indicators). This was done through confirmatory factor analysis (CFA) using AMOS software version 20. In the second stage, the paths relationship between the underlying exogenous and endogenous constructs were specified in the full structural model using the same software. In Phase 2 (point-of-purchase) of the study, the exogenous construct was e-service quality (e-SQ) and its reflective latent variables which were 'general belief' (gb), 'information quality' (info), 'website design' (wd), 'merchandise attributes' (ma), 'transaction capability & payment' (tc), 'security & privacy' (sp), 'expected customer service' (ecs) and 'expected service delivery' (eds) The endogenous constructs in this point-of-purchase study were 'attitude' (att), 'overall satisfaction' (os) and 'behavioural intention' (bi). In Phase 3 of the study (post-purchase), the exogenous constructs were 'delivery service' (ds) and 'consumer service' (cs) while the endogenous constructs were 'overall satisfaction' (os) and 'behavioural intention' (bi).

### **5.4 PREAMBLE TO SEM: PROPOSITIONS AND HYPOTHESES**

The propositions put forward in Chapter Three "Construction of the framework" are tested in this chapter through their hypothesis statements. Proposition is a broad statement generally

established through theory or literature review, whereas a hypothesis is the result of operationalizing a proposition in an empirically tested form (Elsen 2011).

Table 5.3 Summary of all propositions and hypotheses

Propositions	Hypotheses
P1: e-Service Quality (e-SQ) has a significant positive effect on overall satisfaction	H1: e-Service Quality has a significant positive effect on overall satisfaction
P2: Perceived e-service quality has a significant positive influence on consumer behavioural intentions	H2: e-Service Quality (e-SQ) has a significant positive influence on consumers behavioral intention
P3: Perceived e-Service Quality (e-SQ) has a significant positive influence on attitude among customers towards the website	H3: e-Service Quality (e-SQ) has a significant positive influence on consumers' attitude towards the website
P4: Consumers' evaluations of satisfaction with a website have a significant positive influence on attitudes towards the website	H4: Consumers' evaluations of satisfaction with a website have a significant positive influence on attitudes towards the website
P5: Consumer evaluations of satisfaction have a significant positive influence on behavioural intention	H5: Consumer evaluations of satisfaction have a significant positive influence on behavioral intention
P6: Consumer attitudes towards a website will have a significant influence on behavioural intentions related to the website.	H6: Consumer attitudes towards the website will have a significant influence on behavioral intentions related to the website

P7: Overall satisfaction (OS) mediates e-Service Quality (e-SQ) and attitude (ATT)	H7: Overall satisfaction (OS) mediates e-Service Quality (e-SQ) and attitude (ATT)
P8: Overall satisfaction (OS) mediates e-Service Quality (e-SQ) and behavioural intention	H8: Overall satisfaction (OS) mediates e-Service Quality (e-SQ) and behavioral intention (BI)
P9: Attitude (ATT) mediates overall satisfaction (OS) and behavioural intention (BI)	H9: Attitude (ATT) mediates overall satisfaction (OS) and behavioral intention (BI)
P10: Post-purchase has a significant impact on overall satisfaction	H10: Post-purchase has a significant impact on overall satisfaction
P12: Consumer evaluations of satisfaction have a significant positive influence on behavioral intention	H12: Consumer evaluations of satisfaction have a significant positive influence on behavioral intention
P13: There is a significant difference between point-of-purchase and post-purchase on satisfaction	H13: There is a significant difference in overall satisfaction items between point-of-purchase and post-purchase for all respondents
P14: Demographic influences satisfaction	H14: There is a significant difference in overall satisfaction items between point-of-purchase and post-purchase for respondents who answered the survey in Bahasa Melayu
P14: Demographic influences satisfaction	H15: There is a significant difference in overall satisfaction items between point-of-purchase and post-purchase for respondents who answered the survey in English

P15: Demographic influences satisfaction	H16: There is a significant difference in overall satisfaction items between respondents who answered the survey in English and Bahasa Melayu at point-of-purchase
P15: Demographic influences satisfaction	H17: There is a significant difference in overall satisfaction items between respondents who answered the survey in English and Bahasa Melayu at post-purchase
P16: There is a significant difference between point-of-purchase and post-purchase on behavioural intention	H18: There is a significant difference in behavioral intention items between point-of-purchase and post-purchase for respondents who answered the survey in English
P14: Demographic influences behavioural intention	H19: There is a significant difference in behavioral intention items between point-of-purchase and post-purchase for respondents who answered the survey in Bahasa Melayu
P14: Demographic behavioural intention	H20: There is a significant difference in behavioral intention items between point-of-purchase and post-purchase for respondents who answered the survey in English
P15: Demographic influences behavioural intention	H21: There is a significant difference in behavioural intention items between respondents who answered the survey in English and Bahasa Melayu at point-of-purchase
P15: Demographic influences behavioural intention	H22: There is a significant difference in behavioral intention items between respondents

who answered the survey in English and Bahasa Melayu at post-purchase

## **5.5 POINT-OF-PURCHASE SURVEY: ONE-FACTOR CONGENERIC MODEL ANALYSIS**

This section discussed the one-factor congeneric model analysis for e-Service Quality (e-SQ), attitude, overall satisfaction and behavioural intention constructs and their respective underlying observed variable in Phase 2 (point-of-purchase) survey.

### **5.5.1 e-Service Quality (e-SQ)**

Based on the responses from 268 customers who purchased apparel online one factor congeneric models using Maximum Likelihood CFA were tested for each of the reflective latent variables in the e-service quality, attitude, overall satisfaction and behavioural intention constructs. Congeneric assumes that each indicator measures the same latent variable with possibly different scales, possibly different degrees of precision and with possibly different errors. To use this model, the variance of the latent true variable needs to be set at 1, where the paths from this true variable to the items are left free to be estimated. AMOS Version 20 was used to perform this analysis.

#### **5.5.1.1 One-factor congeneric model for ‘General Belief’**

This section presents a unidimensional model for general beliefs about online shopping. The initial model consisted of five observed variables. However, from the analysis, one indicator variable, b4 which is “ I believe that the risk of purchasing online is very high”<sup>6</sup> had an unacceptably low standardized regression weight (-0.24) and is considered weak (factor loading

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<sup>6</sup> This statement is a negative statement and its scales were reversed when the researcher coded its responses, in preparation for analysis one-factor congeneric model

below 0.5) and thus was dropped. This is in accordance with Hair et al. (1995) who stated that an acceptable factor for retention in the model should have a loading or weight of at least 0.5 and is statistically significant. Item b5 “I believe that Internet shopping provides better service than in-store shopping” was dropped and this improved the specification of the model which is supported by better model fit indices. The construct then had only three items and further parameter constraints had to be imposed to identify the model. The critical ratio differences (CRDIFF) were used as a guide to determine which parameters needed to be constrained. This method produces a list of critical ratios for each pairwise parameter estimates. The rule of thumb is that when the pair parameters provide a magnitude less than 2, one of these pairs may be constrained to equality to identify the model. In this case, the CRDIFF test showed that it was valid to equate the first and third measurement errors (e1 and e3). The three-indicator variable model of general belief consists of reasonable factor loadings where each item loads more than 0.6 (greater than factor loading of 0.5) as illustrated in Table 5.4, suggesting that the indicators are reasonable measures of general belief. Each of the three indicators is statistically significant at 5% .The fitted measures suggested a good fit model with CMIN, CFI, NFI, SRMR and RMSEA, all above the desired level.

Figure 5.1: One-factor congeneric model for general belief construct

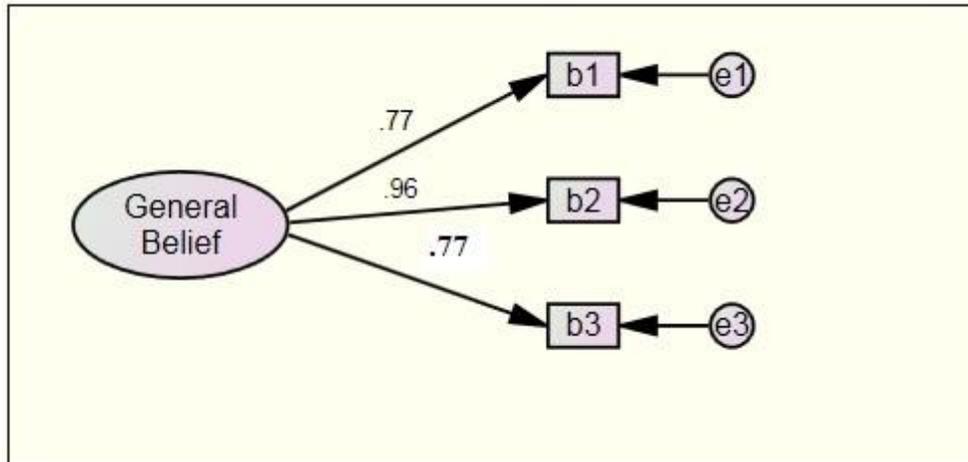


Table 5.4: Goodness-of-fit Statistics for the One-factor Congeneric Model of General Belief

		Estimate	p-value	Goodness-of-fit measures
<b>b1</b>	<--- I believe that shopping over the Internet would be easy	.77	***	$\chi^2= 0.069$ CMIN/DF=0.069
<b>b2</b>	<--- I believe shopping online is compatible with my lifestyle	.96	***	CFI=1.000 SRMR= 0.002 RMSEA= 0.000
<b>b3</b>	<--- I believe shopping online allows me to get a better price	.77	***	Mardia's= 2.089 Bollen stine (p)= 0.806

Notes:\*\*\*significant at 1%, \*\* significant at 5%, \* significant at 10%

### 5.5.1.2 One-factor congeneric model for 'Information Quality'

This one-factor congeneric model for the information quality construct in e-service quality consists of five indicators. However, one item - i5: "The information on the website is relevant" - was dropped and this improved the specification of the model which is supported by better model fit indices. All remaining indicators provided factor loading ranging from 0.55 to 0.94 (greater than factor loading of 0.5) and are statistically significant at 5%. The model has appropriate goodness-of-fit as shown in Table 5.5.

Figure 5.2: One-factor congeneric model for information quality construct

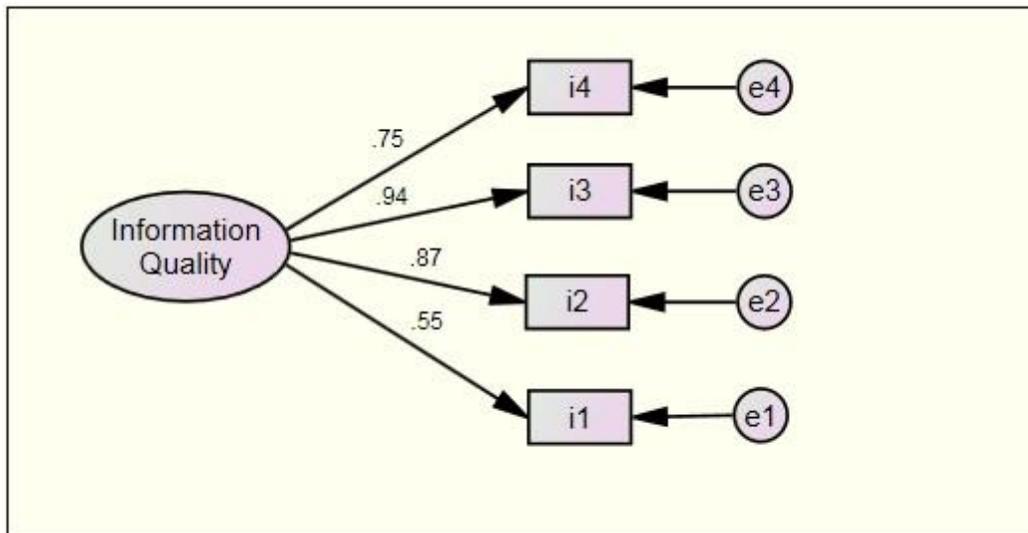


Table 5.5: Goodness-of-fit Statistics for the One-factor Congeneric Model of Information Quality

			Estimate	p-value	Goodness-of-fit measures
<b>i1</b>	<---	I believe that the purchase website provides accurate information	0.55	***	$\chi^2= 3.2666$ CMIN/DF= 1.633
<b>i2</b>	<---	The information provided in the website is reliable	0.87	***	CFI=0.995 SRMR= 0.01 RMSEA=0.049
<b>i3</b>	<---	The information provided in the website can be easily understood	0.94	***	Mardia's= 2.303 Bollen Stine (p)= 0.235
<b>i4</b>	<---	The website contained all the information that I needed for the purpose of my purchase decision	0.75	***	

Notes: \*\*\*significant at 1%, \*\* significant at 5%, \* significant at 10%

### 5.5.1.3 One-factor congeneric model for 'Website Design'

This section reports the measurement model for the website design construct. The model consisted of eight observed variables. However, items for w2: "The design of the website is creative", w5: "It is easy to move around in this website", w7: "The website is easy to use" and w8: "The website loads quickly" were dropped due to the misspecification of the data. All remaining indicators provided factor loading ranging from 0.69 to 0.91. Each of the four indicators is statistically significant at 5% and provided reasonable goodness-of-fit as shown in Table 5.6.

Figure 5.3: One-factor congeneric model for website design construct

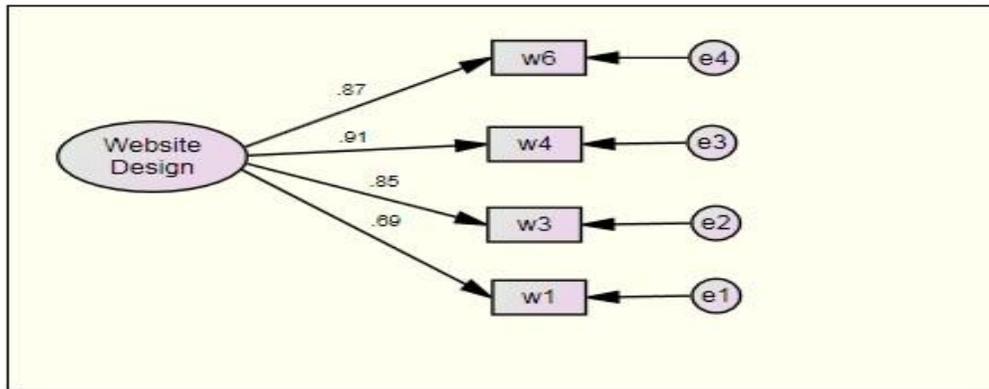


Table 5.6: Goodness-of-fit Statistics for the Congeneric Model of Website Design

			Estimate	p-value	Goodness-of-fit measures
w1	<---	I like the layout of the website	0.69	***	$\chi^2 = 1.424$ CMIN/DF= 0.712
w3	<---	The display pages within the website are easy to read	0.87	***	CFI=1.000 SRMR= 0.007
w4	<---	The start page easily leads me to the information I need	0.91	***	RMSEA=0.000
w6	<---	The website uses a good colour combination	0.87	***	Mardia's= 4.713 Bollen Stine (p)= 0.609

Notes: \*\*\*significant at 1%, \*\* significant at 5%, \* significant at 10%

#### 5.5.1.4 One-factor congeneric model for 'Merchandise Attributes'

This section presents a unidimensional model of merchandise attributes. Initially, this model contained six observed variables but two items were deleted due to misspecification of the model and they were - item m3: "This website provides extra incentive to purchase through prizes from customer contests" and item m6: "This website allows me to reserve items for 2-3 days" Furthermore, the fit indices indicate a good fit model where the Chi-Square, RMSEA, SSMR and

CFI yielded values within the acceptable ranges as shown in Table 5.7. The four-indicator model is illustrated in Figure 5.4

Figure 5.4: One-factor congeneric model for merchandise attributes construct

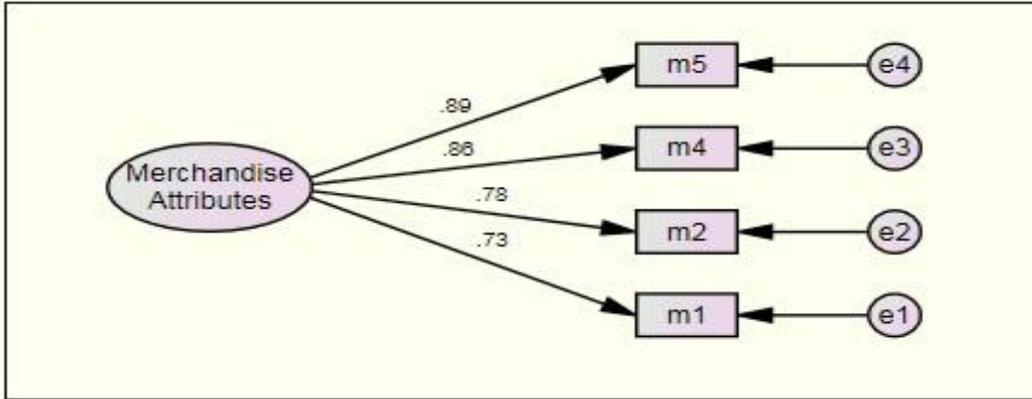


Table 5.7: Goodness-of-fit Statistics for the Congeneric Model of Merchandise Attribute

			Estimate	p-value	Goodness-of-fit measures
<b>m1</b>	<---	This website offers comparatively low prices for their merchandise compared t other websites	0.73	***	$X^2= 6.168$ CMIN/DF= 0.712
<b>m2</b>	<---	This website provides extra incentives to purchasing such as discount offering and collecting bonus points	0.85	***	CFI=0.993 SRMR= 0.017
<b>m4</b>	<---	The range of products in this website is comprehensive	0.94	***	RMSEA=0.088
<b>m5</b>	<---	There are many choices for merchandise of a particular type at the website	0.88	***	Mardia's= 3.175 Bollen Stine (p)= 0.075

Notes: \*\*\*significant at 1%, \*\* significant at 5%, \* significant at 10%

#### 5.5.1.5 One-factor congeneric model for ‘Transaction Capability and Payment’

The initial model of transaction capability and payment comprised of five items. However, one item - t2: “This website provides several options for payment such as post office remittance,

online payment and cash on delivery” was deleted due to mis-specification of the model. Four items remained and their factor loadings were above 0.5 and significant (see Figure 5.5) and provided a good model fit (see Table 5.8).

Figure 5.5: One-factor congeneric Model for Transaction Capability and Payment Construct

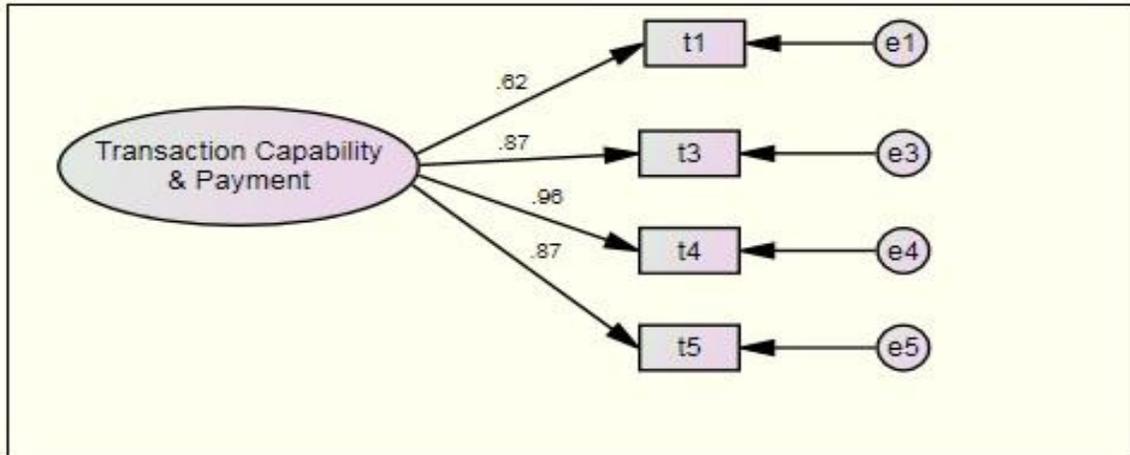


Table 5.8: Goodness-of-fit Statistics for the One-factor Congeneric Model of Transaction Capability and Payment

		Estimate	p-value	Goodness-of-fit measures
<b>t1</b>	<--- This website allows customers to reserve items with a minimum deposit requirement	.62	***	$X^2=5.368$ CMIN/DF= 2.638
<b>t3</b>	<--- I feel comfortable using the payment options provided by the website	.87	***	CFI=1.000 SRMR= 0.015
<b>t4</b>	<--- I have many options to provide proof of my payment to the website (such as email, SMS, etc)	.96	***	RMSEA=0.078
<b>t5</b>	<--- When I use the website, the waiting time between my actions and the website response was very fast	.87	***	Mardia's= 3.137 Bollen Stine (p)= 0.106

Notes: \*\*\*significant at 1%, \*\* significant at 5%, \* significant at 10%

### 5.5.1.6 One-factor congeneric model for ‘Security and Privacy’

This section presents a congeneric model of security and privacy. The model contained four observed variables. An inspection of the modification indices of this model revealed that item s4: “I feel my personal information is secure on this website” was responsible for the model misspecification. Thus, it was dropped and three indicators were left for the security and privacy model. The removal of item s4 resulted in a good fit of the data to the model, RMSEA= 0.078, CFI=1.000 and NFI= 1.000. All factor loadings exceeded 0.80. Given that this construct had only three indicators, further parameter constraints had to be added to the model. Based on the CRDIFF Table 5.9, items s2 and s4 needed to be constrained so that the model was identified.

Figure 5.6: One-factor Congeneric Model for Security and Privacy Construct

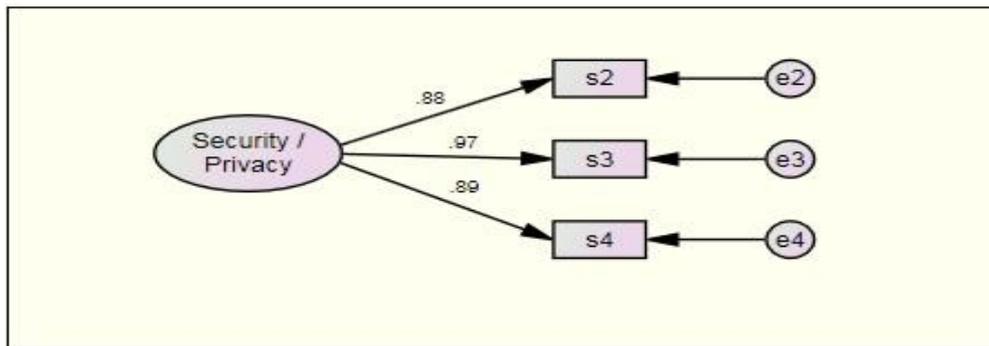


Table 5.9: Goodness-of-fit Statistics for Congeneric Model for Security and Privacy Construct

		Estimate	p-value	Goodness-of-fit measures
<b>s2</b>	<--- The website has adequate security features	.88	***	$\chi^2= 0.162$ CMIN/DF= 0.162
<b>s3</b>	<--- This website provides clear and understandable terms and conditions	.97	***	CFI=1.000 SRMR= 0.017 RMSEA=0.000
<b>s4</b>	<--- I feel my personal information is secure on this website	.89	***	Mardia's= 7.611 Bollen Stine (p)= 0.817

Notes:\*\*\*significant at 1%, \*\* significant at 5%, \* significant at 10%

### 5.5.1.7 One-factor congeneric model for 'Expected service delivery'

The one factor congeneric model of expected service delivery revealed that the data was a good fit to the model:  $p$ -value= 0.838, CMIN/DF= 0.042, RMSEA = 0.000, SRMR= 0.017, CFI=1.000. All factors loaded highly on this factor (greater than 0.80, see Figure 5.7) and were statistically significant at 5%. Item eds4: "The website offers free service delivery if the customers purchase more than one item" was dropped due to the mis-specification of the model. With three indicators remaining in this model, CRDIFF was used as a guide to identify the model. In this case, CRDIFF test indicated that it was valid to equate the path of items eds2 and eds3 to identify the model.

Figure 5.7 One-factor Congeneric Model for Expected Delivery Service Construct

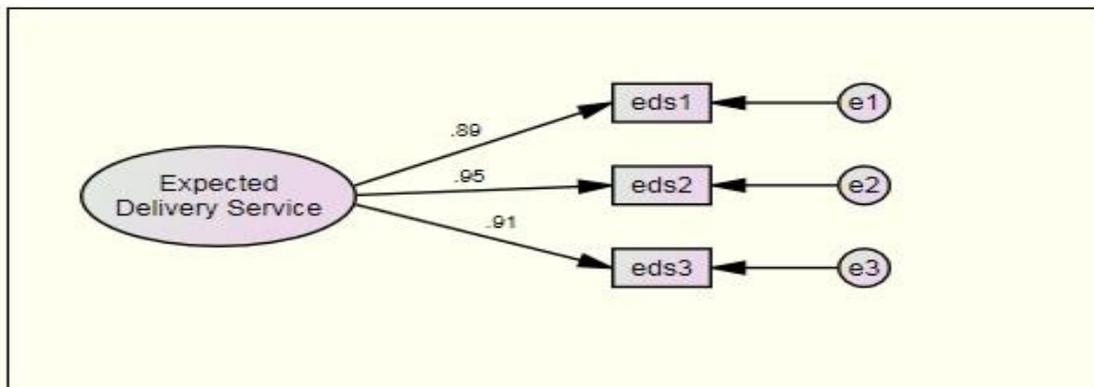


Table 5.10 Goodness-of-fit Statistics for One-factor Congeneric Model for Expected Delivery Service Construct

		Estimate	p-value	Goodness-of-fit measures
<b>eds1</b>	The website offers many options for delivery service, such as standard post, express delivery and home delivery	.89	***	$X^2=0.042$ CMIN/DF= 0.042
<b>eds2</b>	The website offers a standard price for the delivery service	.95	***	CFI=1.000 SRMR= 0.000 RMSEA=0.088

<b>eds3</b>	<--	The website provides	.91	**	Mardia's= 4.215
-		clear terms and conditions for the delivery service			Bollen Stine (p)= 0.884

Notes:\*\*\*significant at 1%, \*\* significant at 5%, \* significant at 10%

### 5.5.1.8 One-factor congeneric model for 'Expected customer service'

This one-factor congeneric model for expected customer service consists of five items. Two items - cs1: "If I am not satisfied with the products, the website guarantees me a refund" and cs2: "If I am not satisfied with the products, the website guaranteed an exchange" were dropped. This was done due to the misspecification of the model and CRDIFF analysis was performed to identify which parameter should be constrained and consequently the paths of cs3 and cs5 were set to equal constraints so that the model was identified (Byrne, 2010). The Mardia's coefficient for this construct was 6.126 (should be less than 5). Thus, Bollen-Stine bootstrapping had been activated and the p-values of the estimate parameter estimates using adjusted standard error) shows that they are still statistically significant at 5% level of significance. They were also in a good fit of the data to the model as presented in Table 5.11

Figure 5.8: One-factor Congeneric Model for Expected Customer Service Construct

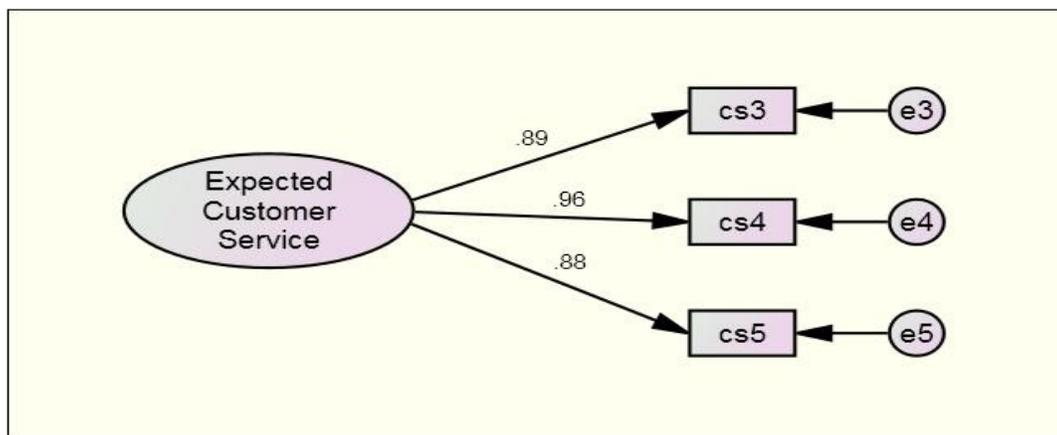


Table 5.11: Goodness-of-fit Statistics for One-factor Congeneric Model for Expected Customer Service Construct

			Estimate	p-value	Goodness-of-fit measures
<b>cs3</b>	<---	The business provides online tracking for products	.89	***	$X^2=0.056$ CMIN/DF= 0.056
<b>cs4</b>	<---	The business seems ready and willing to respond to customer needs	.96	***	CFI=1.000 SRMR= 0.0011 RMSEA=0.000
<b>cs5</b>	<---	There are many options on how to contact customer service such as a chat room, email and phone	.88	***	Mardia's= 6.126 Bollen Stine (p)= 0.869

Notes:\*\*\*significant at 1%, \*\* significant at 5%, \* significant at 10%

## 5.5.2 Overall Satisfaction

### 5.5.2.1 One-factor congeneric model for 'Overall satisfaction'

The measurement model of the overall satisfaction construct is also presented in the form of a one-factor congeneric model. Since the model contained three indicators, a good model fit could not be obtained due to the degree of freedom equal to zero. To overcome this problem, CRDIFF analysis was performed. Based on the result provided by CRDIFF, path of items os2 and os3 needed to be constrained so the model could be identified. All items loaded significantly on the overall satisfaction construct with the factor loading surpassing 0.90 (see Figure 5.9) and are statistically significant at 5%. Finally, the goodness-of-fit indices showed that the data fitted the model well. The Mardia's coefficient for this construct was 11.576, which is larger than 5. Thus, Bollen-Stine bootstrap was activated to correct for standard error and fit statistic bias. The bootstrap p-value for overall satisfaction construct is greater than 0.05 which indicates there is insufficient evidence to reject the hypothesized model and this suggest a good model fit

Figure 5.9: One-factor Congeneric Model for Overall Satisfaction Construct

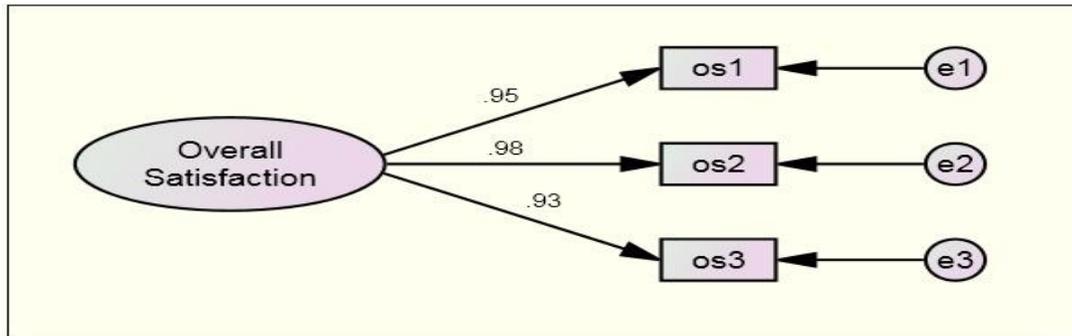


Table 5.12: Goodness-of-fit Statistics for One-factor Congeneric Model for Overall Satisfaction Construct

			Estimate	p-value	Goodness-of-fit measures
<b>os1</b>	<---	I enjoyed purchasing using the website	.95	***	$X^2=0.227$ CMIN/DF= 0.227
<b>os2</b>	<---	Overall, I'm satisfied using the website to purchase apparel	.98	***	CFI=1.000 SRMR= 0.009 RMSEA=0.000
<b>os3</b>	<---	In general, I was pleased with the quality of the service the website provided	.93	**	Mardia's= 11.576 Bollen Stine (p)= 0.604

Notes: \*\*\*significant at 1%, \*\* significant at 5%, \* significant at 10%

### 5.5.3 Attitude

#### 5.5.3.1 One-factor congeneric model for 'Attitude'

This one-factor congeneric model for attitude originally had six observed variables but two were deleted due to misspecification of the model. The deleted observed variables were at5: "I like the idea of using the Internet to shop from the website" and at6: "The idea of using the Internet to shop from the website is appealing". An inspection of the modification indices showed high covariances between error 3 (e3) and the error 4 (e4). According to Byrne (2010), such

relationship (as with at3 and at4 in this study) suggests strong content overlap. Item at3: “I think that using the website is beneficial to me” states that customers found that purchase online were beneficial for them while item at4: “Using the website to purchase apparel online is efficient” states that performing online shopping is useful. Clearly, these two items overlap and this error covariance parameter was included in the model below. After items at5: “I like the idea of using the Internet to shop from the website” and at6: “I find using the Internet to shop from the website is appealing” were removed and covariance items at3 and at4 were established, this model resulted in a good fit of the data as shown in the table below. Although the model showed a reasonably good model fit, the Mardia’s coefficient was still high at 14.773 (should be less than 5). Bollen-Stine was activated and the outcome shows that, each of the four indicators in the model remained statistically significant at 5% level of significance after corrected for standard error and fit statistic bias. See Table 5.13.

Figure 5.10: One-factor Congeneric Model for Attitude Construct

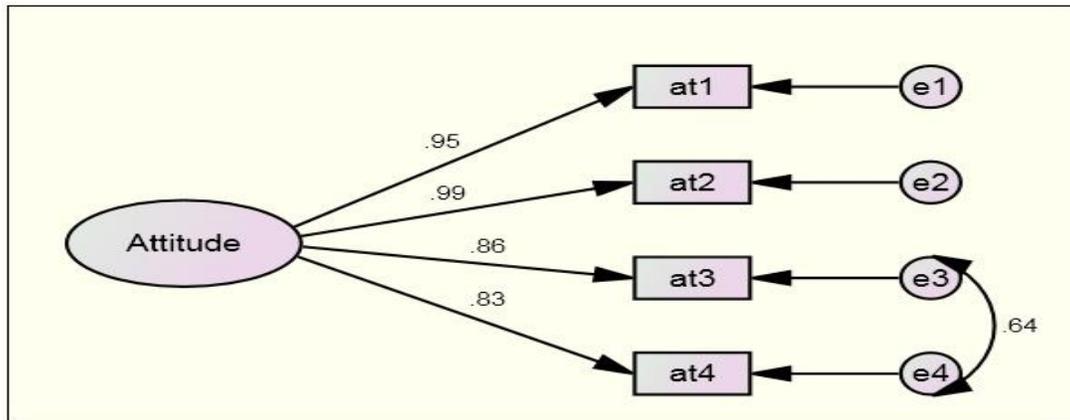


Table 5.13: Goodness-of-fit Statistics for Congeneric Model for Attitude Construct

			Estimate	p-value	Goodness-of-fit measures
<b>at1</b>	<---	This is a nice website	0.95	***	$\chi^2 = 0.879$ CMIN/DF= 0.879
<b>at2</b>	<---	I have a positive attitude towards the website	0.99	***	CFI=1.000 SRMR= 0.001
<b>at3</b>	<---	I think that using the website is beneficial to me	0.86	***	RMSEA=0.000

<b>at4</b>	<--- Using the website for purchasing apparel online is useful	0.83	***	Mardia's= 14.773 Bollen Stine (p)= 0.429
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Notes:\*\*\*significant at 1%, \*\* significant at 5%, \* significant at 10%

### 5.5.4 Behavioural Intention

#### 5.5.4.1 One-factor congeneric model for 'Behavioural intention'

Finally, the one-factor congeneric model of the behavioural intention construct was tested. Initially, this model had poor fit. After removing one item - bi2: "I will recommend this website to friends and family for online purchase of apparel items" from the model, it provided an excellent fit to the data. All remaining items loaded significantly on the behavioural construct and all factor loadings surpassed 0.70 (see Figure 5.11). This construct showed that the Mardia's coefficient was 6.954 (larger than 5). Thus, Bollen-Stine bootstrap was activated to correct for standard error and fit statistic bias. The bootstrap p-value for behavioural intention construct is greater than 0.05 which indicates there is insufficient evidence to reject the hypothesized model and this suggest a good model fit. Each of the four indicators in the model remained statistically significant at 5% level of significance after corrected for standard error and fit statistic bias.

Figure 5.11: One-factor Congeneric Model for Behavioural Intention Construct

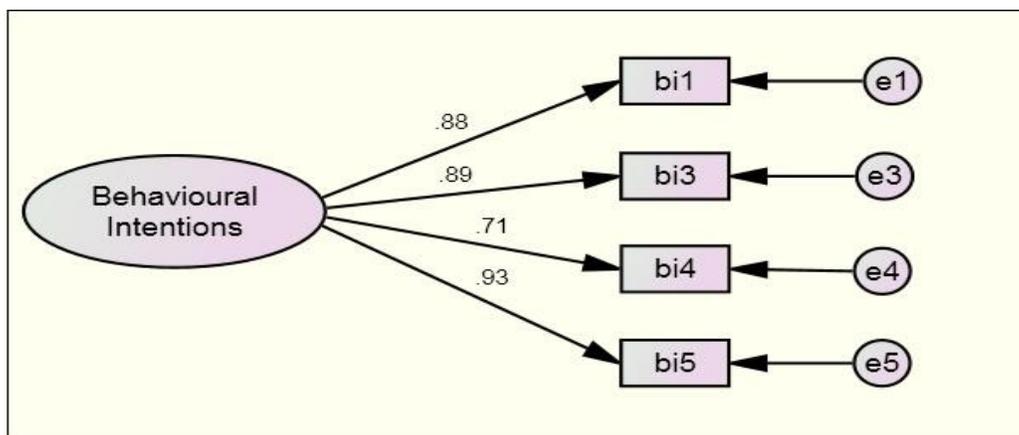


Table 5.14: Goodness-of-fit Statistics for One-factor Congeneric Model for Behavioural Intention Construct

			<b>Estimate</b>	<b>p-value</b>	<b>Goodness-of-fit measures</b>
<b>bi1</b>	<---	I will use this website for future online purchase of apparel items	0.88	***	$X^2=4.627$ CMIN/DF= 2.313
<b>bi3</b>	←-	I would like to become a regular customer of this website	0.89	***	CFI=0.997 SRMR= 0.012
<b>bi4</b>	←-	I would not consider switching to another similar website	0.71	***	RMSEA=0.070
<b>bi5</b>	←-	I will say positive things about the website	0.93	***	Mardia's= 6.954 Bollen Stine (p)= 0.137

Notes:\*\*\*significant at 1%, \*\* significant at 5%, \* significant at 10%

### 5.5 A summary of all one-factor congeneric models at point-of-purchase (Phase 2 survey)

Table 5.15 below presents a summary of all one-factor congeneric model constructs for this study. All constructs provide a good model fit with factor loadings greater than 0.5.

Table 5.15: Summary for all constructs at point-of-purchase

<b><u>Construct</u></b>	<b><u>Item deleted</u></b>	<b><u>Items remaining</u></b>	<b><u>Model fit</u></b>
<b>General Belief</b>	b4	b1,b2,b3	$X^2= 0.069$ CMIN/DF=0.069 CFI=1.000 SRMR= 0.002 RMSEA= 0.000 Mardia's= 2.089 Bollen stine (p)= 0.806
<b>Information Quality</b>	i5	i1,i2,i3,i4	$X^2= 3.2666$ CMIN/DF= 1.633 CFI=0.995 SRMR= 0.01 RMSEA=0.049 Mardia's= 2.303

			Bollen Stine (p)= 0.235
<b>Website Design</b>	w2,w5,w7,w8	w1,w3,w4,w6	$\chi^2 = 1.424$ CMIN/DF= 0.712 CFI=1.000 SRMR= 0.007 RMSEA=0.000 Mardia's= 4.713 Bollen Stine (p)= 0.609
<b>Merchandise Attributes</b>	m3,m6	m1,m2,m4,m5	$\chi^2 = 6.168$ CMIN/DF= 0.712 CFI=0.993 SRMR= 0.017 RMSEA=0.088 Mardia's= 3.175 Bollen Stine (p)= 0.075
<b>Transaction Capability &amp; Payment</b>	t2	t1,t3,t4,t5	$\chi^2 = 5.368$ CMIN/DF= 2.638 CFI=1.000 SRMR= 0.015 RMSEA=0.078 Mardia's= 3.137 Bollen Stine (p)= 0.106
<b>Security and Privacy</b>	s1	s2,s3,s4	$\chi^2 = 0.162$ CMIN/DF= 0.162 CFI=1.000 SRMR= 0.017 RMSEA=0.000 Mardia's= 7.611 Bollen Stine (p)= 0.817
<b>Expected Service Delivery</b>	esd4	esd1,esd2,esd3	$\chi^2 = 0.042$ CMIN/DF= 0.042 CFI=1.000 SRMR= 0.000 RMSEA=0.088 Mardia's= 4.215 Bollen Stine (p)= 0.884
<b>Expected Customer Service</b>	cs1,cs2	cs3,cs4,cs5	$\chi^2 = 0.056$ CMIN/DF= 0.056 CFI=1.000 SRMR= 0.0011 RMSEA=0.000 Mardia's= 6.126 Bollen Stine (p)= 0.869
<b>Attitude</b>	at5,at6	at1,at2,at3,1t4	$\chi^2 = 0.879$ CMIN/DF= 0.879 CFI=1.000 SRMR= 0.001 RMSEA=0.000 Mardia's= 14.773 Bollen Stine (p)= 0.429

<b>Overall Satisfaction</b>	-	os1,os2,os3	$\chi^2 = 0.227$ CMIN/DF= 0.227 CFI=1.000 SRMR= 0.009 RMSEA=0.000 Mardia's= 11.576 Bollen Stine (p)= 0.604
<b>Behavioural Intention</b>	bi2	bi1,bi3,bi4,bi5	$\chi^2 = 4.627$ CMIN/DF= 2.313 CFI=0.997 SRMR= 0.012 RMSEA=0.070 Mardia's= 6.954 Bollen Stine (p)= 0.137

## **5.6 POINT-OF -PURCHASE: ASSESSING MEASUREMENT MODEL VALIDITY**

### **5.6.1 Parameter estimates and model fit of e-Service Quality measurement model**

Following the establishment of the one-factor congeneric model step (discussed in Section 5.5) and before performing any hypotheses testing, the reliability and validity of each underlying constructs have to be assessed (De Wulf et al. (2001).

### **5.6.2 Construct validity**

Construct validity exists when all the variables provide a good measure of fit for the model (Hsieh and Hiang 2004). In assessing construct validity, we focus on factor loading, average variance extracted (AVE) and reliability measures.

#### **5.6.2.1 Factor loadings**

According to Lin and Ding (2005) and Holmes-Smith et al. (2006), factor loadings for items can be used to assess convergent validity. According to Hair et al. (1998), a good rule of thumb for factor-loading is that the values should be 0.5 or higher. In this study, the factor loadings for all constructs are greater than 0.05 and statistically significant at 5% level. As per Table 5.15, all constructs provided a good model fit with factor loadings greater than 0.5.

#### **5.6.2.2 Average variance extracted (AVE)**

Average Variance Extracted (AVE) were calculated using the formula given by Fornell and Larcker (1981). According to Hair et al. (1998) and Bagozzi and Yi (1988) the value of AVE should be 0.5 higher. In this study, all constructs provided a good AVE (see Table 5.16 ).

#### **5.6.2.3 Item reliability & construct reliability**

According to Kline (2005), reliability provides a measure of the degree to which the scores are free from random measurement error. Table 5.15 shows the reliability of each construct and its related items. Scores of squared multiple correlation (SMC) were used to assess item reliability

in this study. Construct reliability (CR) was also calculated based on the formula given by Fornell and Larcker (1981). In this study, CR represented a good reliability on each constructs where all the values are higher than 0.7, as recommended by Hair et al.(1998). Bagozzi and Yi (1988) suggested that the value of CR should be equal to or greater than 0.60. As for item reliability, Robinson, et al. (1991) suggested that item reliability should exceed 0.50. Although the item reliability measures of item i1 in 'information quality' construct, w1 in 'website design' construct and item t1 in 'transaction capability and payment' construct are lower than 0.50, their factor loadings are above 0.50 and are statistically significant at 5%, the researcher decided to drop these items on the basis of Robinson et al. (1991) suggested reliability threshold.

Table 5.16 presents a summary of the assessment of point-of-purchase measurement model for this study. All constructs provided a good model fit with factor loading greater than 0.5, AVE greater than 0.5 and CR greater than 0.60. In summary, these measurement models provide adequate evidence that convergent validity is supported.

Table 5.16: Summary of the assessment of point-of-purchase measurement model

<b>Construct</b>	<b>Standardized Estimate Loading</b>	<b>Item Reliability</b>	<b>Construct Reliability (CR)</b>	<b>Average Variance Estimates (AVE)</b>
<b>General belief</b>				
<b>b1</b>		0.59	0.85	0.65
<b>b2</b>	0.77 to 0.96	0.92		
<b>b3</b>		0.50		
<b>Information Quality</b>				
<b>i1</b>		0.30	0.87	0.63
<b>i2</b>	0.55 to 0.94	0.76		
<b>i3</b>		0.88		
<b>i5</b>		0.56		
<b>Website design</b>				
<b>w1</b>	0.69 to 0.91	0.48	0.90	0.70
<b>w2</b>		0.72		
<b>w3</b>		0.83		
<b>w4</b>		0.76		
<b>Merchandise Attributes</b>				
<b>m1</b>		0.53	0.89	0.67
<b>m2</b>	0.73 to 0.89	0.61		
<b>m4</b>		0.74		
<b>m5</b>		0.79		
<b>Transaction Capability &amp; payment</b>				
<b>t1</b>	0.62 to 0.96	0.38	0.90	0.94
<b>t2</b>		0.76		
<b>t3</b>		0.93		
<b>t5</b>		0.76		

<b>Security and privacy</b>				
<b>s1</b>	0.88 to 0.97	0.77	0.94	0.84
<b>s2</b>		0.94		
<b>s3</b>		0.79		
<b>Expected service delivery (EDS)</b>				
<b>eds1</b>	0.89 to 0.95	0.79	0.94	0.84
<b>eds2</b>		0.90		
<b>eds3</b>		0.83		
<b>Expected customer service (ECS)</b>				
	0.88 to 0.96	0.79	0.94	0.83
<b>ecs3</b>		0.92		
<b>ecs4</b>		0.77		
<b>ecs5</b>				

Table 5.17 presents the latest summary of assessment of the point-of-purchase measurement model after dropping items which contained construct reliability below than 0.5. As a result, all constructs provided a good model fit with factor loading greater than 0.5, AVE greater than 0.5 and CR greater than 0.60 and the measurement models provide adequate evidence that convergent validity is supported.

Table 5.17 Summary of the new assessment of point-of-purchase measurement model

<b>Construct</b>	<b>Standardized Estimate Loading</b>	<b>Item Reliability</b>	<b>Construct Reliability (CR)</b>	<b>Average Variance Estimates (AVE)</b>
<b>General belief</b>				
<b>b1</b>	0.77 to 0.96	0.59	0.85	0.65
<b>b2</b>		0.92		

<b>b3</b>		0.59		
<b>Information Quality</b>				
<b>i2</b>	0.75 to 0.95	0.76	0.94	0.85
<b>i3</b>		0.90		
<b>i5</b>		0.90		
<b>Website design</b>				
	0.84 to 0.90		0.91	0.76
<b>w2</b>		0.71		
<b>w3</b>		0.81		
<b>w4</b>		0.77		
<b>Merchandise Attributes</b>				
<b>m1</b>	0.73 to 0.89	0.53		
<b>m2</b>		0.61	0.89	0.67
<b>m4</b>		0.74		
<b>m5</b>		0.79		
<b>Transaction Capability &amp; payment</b>				
	0.86 to 0.97		0.93	0.81
<b>t2</b>		0.74		
<b>t3</b>		0.94		
<b>t5</b>		0.75		
<b>Security and privacy</b>				
<b>s1</b>	0.88 to 0.97	0.77	0.94	0.84
<b>s2</b>		0.94		
<b>s3</b>		0.79		
<b>Expected service delivery (EDS)</b>				
<b>eds1</b>	0.89 to 0.95	0.79	0.94	0.84
<b>eds2</b>		0.90		
<b>eds3</b>		0.83		

Expected customer service (ECS)				
	0.88 to 0.96	0.79	0.94	0.83
<b>ecs3</b>		0.92		
<b>ecs4</b>		0.77		
<b>ecs5</b>				

### 5.6.3 Discriminant validity

After the convergent validity test was performed, another test, discriminant validity was conducted. Table 5.16 shows the results of the discriminant validity tests conducted on pairs of constructs in e-service quality constructs at point-of-purchase, using the structural equation modelling technique suggested by Bagozzi et al. (1991). Assuming the unconstrained model (in which correlation is freely estimated) is correct, the results show that the p-value for each of the pairs of constructs is zero (less than 0.05). This indicates that the constrained model (in which correlation is freely estimated) for each of these pairs of constructs has significantly worsened and discriminant validity holds for all these pairwise relationships.

Table 5.18 A summary of discriminant validity result for point-of-purchase in the measurement model

<b>Correlation between a pair of constructs:</b>	<b>p-value</b>	<b>Constrained Model</b>	<b>Results</b>
<b>‘General belief’ &amp; ‘Security &amp; privacy’</b>	0	Significantly worsen	Discriminant validity holds
<b>‘General belief’ &amp; ‘Expected delivery service’</b>	0	Significantly worsen	Discriminant validity holds

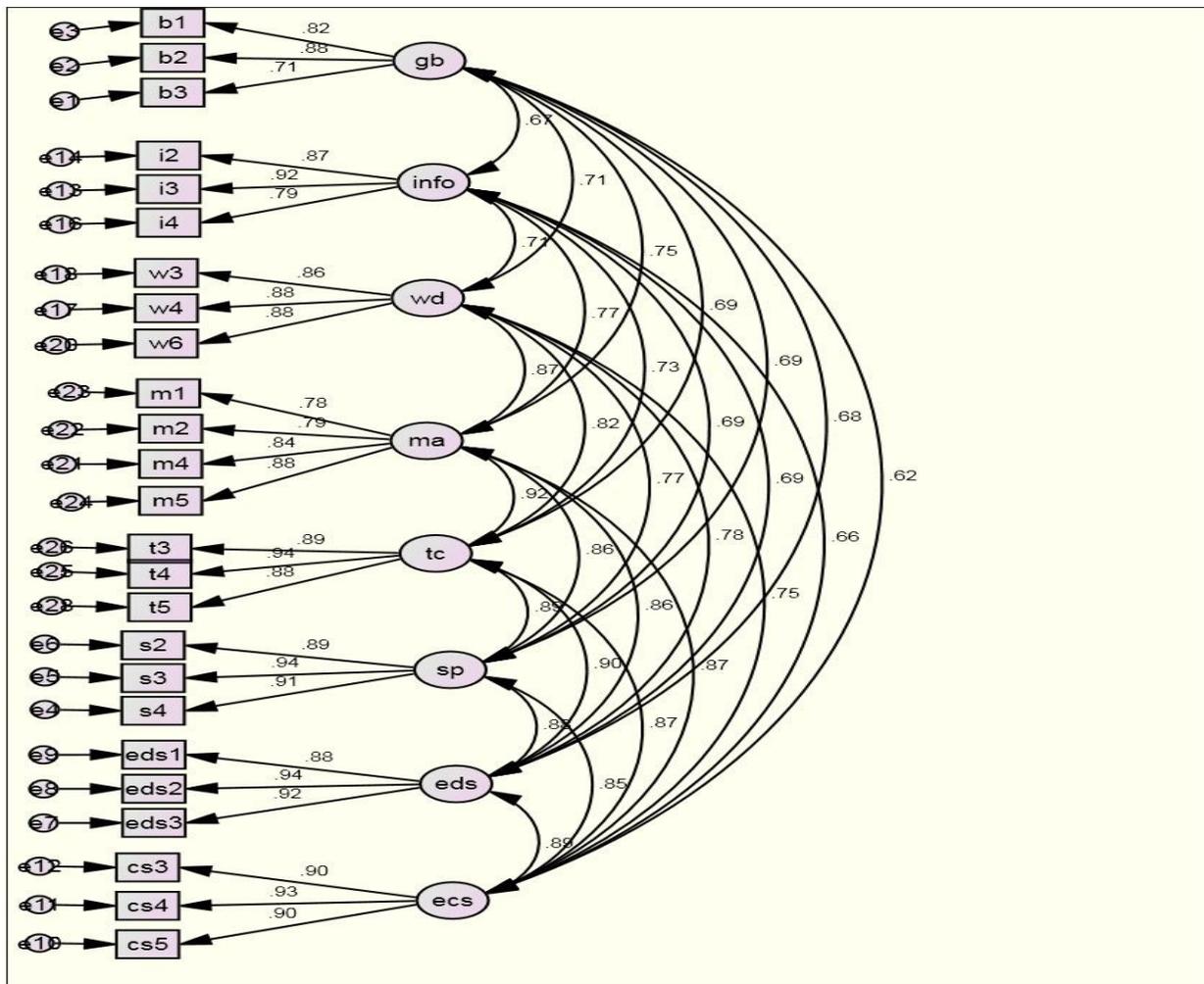
<b>‘General belief’ &amp; ‘Expected customer service’</b>	0	Significantly worsen	Discriminant validity holds
<b>‘General belief’ &amp; ‘Information quality’</b>	0	Significantly worsen	Discriminant validity holds
<b>‘General belief’ &amp; ‘Website design’</b>	0	Significantly worsen	Discriminant validity holds
<b>‘General belief’ &amp; ‘Merchandise attributes’</b>	0	Significantly worsen	Discriminant validity holds
<b>‘General belief’ &amp; ‘Transaction Capability’</b>	0	Significantly worsen	Discriminant validity holds
<b>‘Security and privacy’ &amp; ‘Expected delivery service’</b>	0	Significantly worsen	Discriminant validity holds
<b>‘Security and privacy’ &amp; ‘Expected customer service’</b>	0	Significantly worsen	Discriminant validity holds
<b>Security and privacy’ &amp; ‘Information quality’</b>	0	Significantly worsen	Discriminant validity holds
<b>‘Security and privacy’ &amp; ‘Website design’</b>	0	Significantly worsen	Discriminant validity holds
<b>‘Security and privacy’ &amp; ‘Merchandise attributes’</b>	0	Significantly worsen	Discriminant validity holds
<b>‘Security and privacy’ &amp; ‘Transaction capability and payment’</b>	0	Significantly worsen	Discriminant validity holds
<b>‘Expected delivery service’ &amp; ECS</b>	0	Significantly worsen	Discriminant validity holds
<b>‘Expected delivery service’ &amp; ‘Information quality’</b>	0	Significantly worsen	Discriminant validity holds
<b>‘Expected delivery service’ &amp; ‘Website design’</b>	0	Significantly worsen	Discriminant validity holds
<b>‘Expected delivery service’ &amp;</b>	0	Significantly worsen	Discriminant validity holds

<b>‘Merchandise attributes’</b>			
<b>‘Expected delivery service’ &amp; Transaction capability and payment’</b>	0	Significantly worsen	Discriminant validity holds
<b>‘Expected customer service’ &amp; ‘Information quality’</b>	0	Significantly worsen	Discriminant validity holds
<b>‘Expected customer service’ &amp; ‘Website design’</b>	0	Significantly worsen	Discriminant validity holds
<b>‘Expected customer service’ &amp; ‘Merchandise attributes’</b>	0	Significantly worsen	Discriminant validity holds
<b>‘Expected customer service’ &amp; Transaction capability and payment’</b>	0	Significantly worsen	Discriminant validity holds
<b>‘Information quality’ &amp; ‘Website design’</b>	0	Significantly worsen	Discriminant validity holds
<b>‘Information quality’ &amp; ‘Merchandise attributes’</b>	0	Significantly worsen	Discriminant validity holds
<b>‘Information quality’ &amp; Transaction capability and payment’</b>	0	Significantly worsen	Discriminant validity holds
<b>‘Website design’ &amp; ‘Merchandise attributes’</b>	0	Significantly worsen	Discriminant validity holds
<b>‘Website design’ &amp; Transaction capability and payment’</b>	0	Significantly worsen	Discriminant validity holds
<b>‘Merchandise attributes’ &amp; Transaction capability and payment’</b>	0	Significantly worsen	Discriminant validity holds

## 5.7 POINT-OF-PURCHASE: FIRST-ORDER CFA AND SECOND-ORDER FOR 'E-SERVICE QUALITY'

### 5.7.1 First-order CFA for 'e-Service Quality'

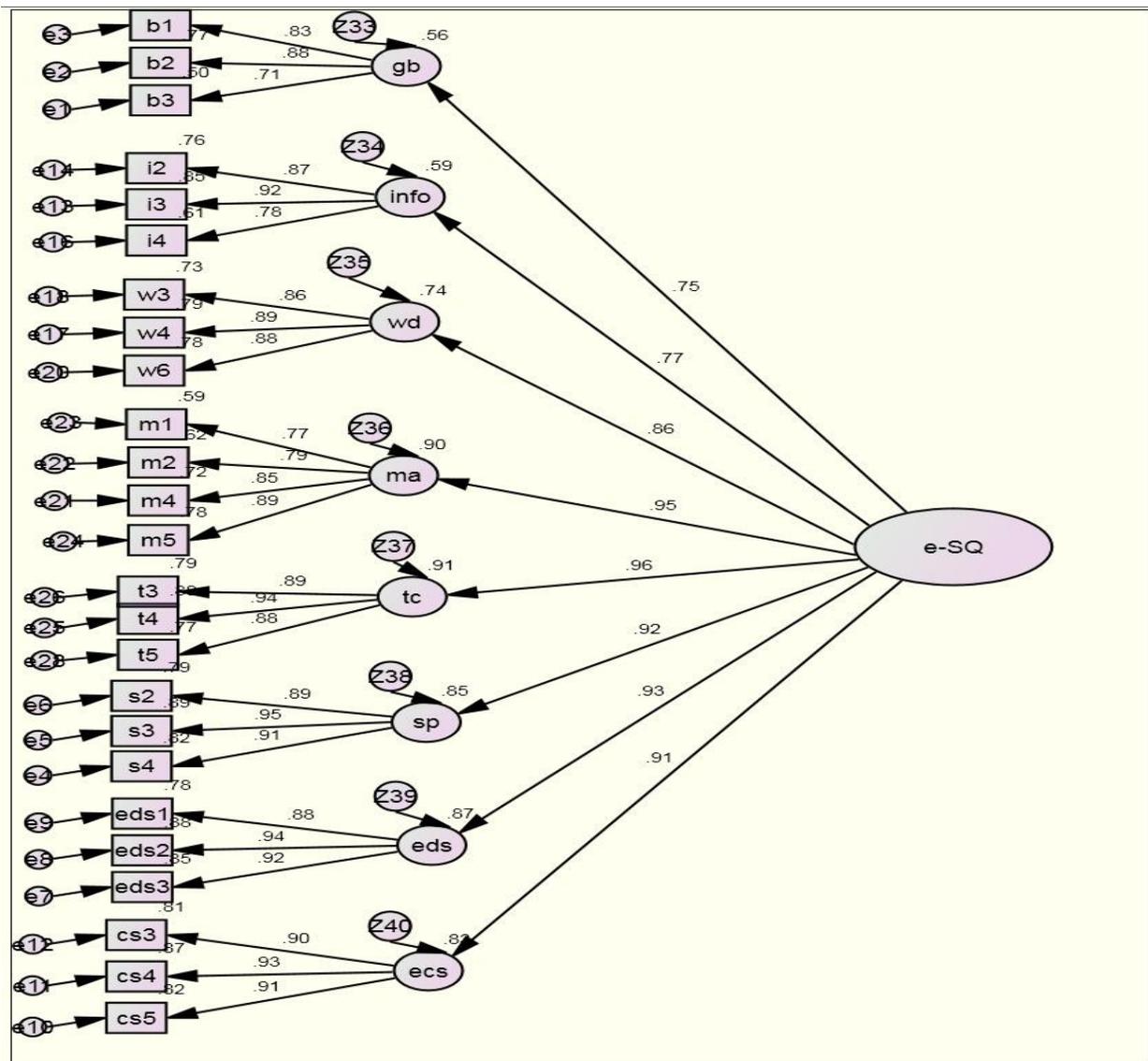
The measurement model of e-Service Quality (e-SQ) was represented using eight factors which were general belief (gb), information quality (info), website design (wd), merchandise attributes (ma), transaction capability & payment (tc), security and privacy (sp), expected delivery service (eds) and expected customer service (ecs). From the measurement model, the indices for goodness-of-fit demonstrate that this model fits the data adequately where Chi-Square = 669.735, CMIN/df= 2.711, CFI= 0.942, RMSEA= 0.080 and SRMR= 0.0433. Figure 5.12: Confirmatory Factor Analysis (First-order CFA) for e-Service Quality



### 5.7.2 Second-order of CFA for 'e-Service Quality'

Figure 5.13 shows the second-order of measurement model for e-Service Quality (e-SQ). The indices for goodness-of-fit demonstrate that this model fits the data adequately where Chi-Square = 733.495, CMIN/df= 2.747, CFI= 0.938, RMSEA= 0.081 and SRMR= 0.0511.

Figure 5.13 Confirmatory Factor Analysis (Second-order CFA) for e-Service Quality

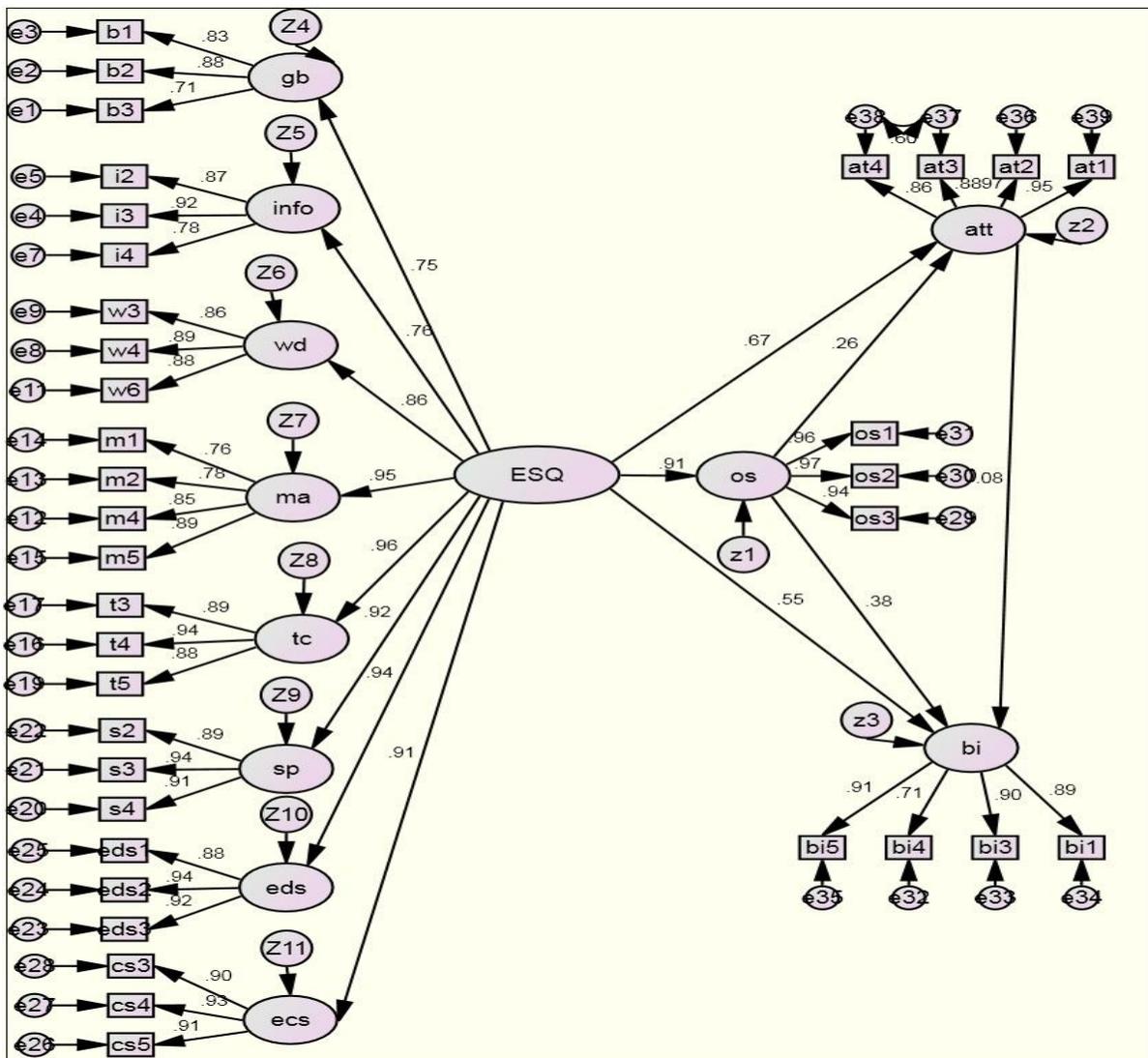


## 5.8 POINT-OF-PURCHASE: STRUCTURAL MODEL ANALYSES AND TESTS

### 5.8.1 Structural model analysis at point-of-purchase

After construct validity was assessed, a structural model was developed to test the hypotheses. As seen in Figure 5.14, the indices of goodness-of-fit demonstrate that this model at point-of-purchase fits the data adequately. Chi-square= 1324.118, CMIN/df= 2.287, CFI=0.938, RMSEA= 0.069 and SRMR=0.0461.

Figure 5.14: Structural Model at Point-of-Purchase



## 5.8.2 Structural paths and hypotheses

In the previous section, after all constructs in the measurement model (congeneric model) were validated and a satisfactory fit achieved, the next procedure is to test the structural model (Hair et al. 1995; Kline 2005; Holmes-Smith et al. 2006) and the underlying hypotheses that were outlined in Chapter Three which is ‘Development of the theoretical framework’. This point-of-purchase model has five causal paths. The alternative hypotheses (H1, H2, H3, H4 and H5) of these paths are presented in Table 5.19

Table 5.19 Summarize of hypotheses testing for SEM at point-of-purchase

<b>Proposition No</b>	<b>Paths</b>	<b>Hypothesis</b>
<i>H1</i>	$e\text{-}SQ \rightarrow OS$	<i>e-Service Quality has a significant positive effect on overall satisfaction</i>
<i>H2</i>	$e\text{-}SQ \rightarrow BI$	<i>e-Service Quality has a significant positive influence on consumers behavioural intention</i>
<i>H3</i>	$e\text{-}SQ \rightarrow ATT$	<i>e-Service Quality has a significant positive influence on consumers’ attitude towards the website</i>
<i>H4</i>	$OS \rightarrow ATT$	<i>Consumers' evaluations of satisfaction with a website have a significant positive influence on attitudes towards the website</i>
<i>H5</i>	$OS \rightarrow BI$	<i>Consumer evaluations of satisfaction have a significant positive influence on behavioural intention</i>
<i>H6</i>	$ATT \rightarrow BI$	<i>Consumer attitudes towards a web site will have a significant influence on behavioural intentions related to the web site</i>

### 5.8.3 Hypothesized and alternative model

In testing the hypothesis model, the results presented in Table 5.18 indicate that the hypotheses H1, H2, H3, H4 and H6 were statistically significant and in the hypothesized direction. The standardized estimates for these hypotheses were all significant. However, hypothesis H6 was rejected because it was not statistically significant.

Table 5.20: Testing Hypotheses Using Standardized Estimates (Hypothesized Model)

Hypothesis No.	Paths	Hypothesis	Standardise Estimate	P-value	Supported
<b>H1</b>	$e\text{-}SQ \rightarrow OS$	<i>e-Service Quality has a significant positive effect on overall satisfaction</i>	0.047	***	Yes
<b>H2</b>	$e\text{-}SQ \rightarrow BI$	<i>e-Service Quality has a significant positive influence on consumers behavioural intention</i>	0.072	***	Yes
<b>H3</b>	$e\text{-}SQ \rightarrow ATT$	<i>e-Service Quality has a significant positive influence on consumers' attitude towards the website</i>	0.073	***	Yes
<b>H4</b>	$OS \rightarrow ATT$	<i>Consumers' evaluations of satisfaction with a website have a significant positive influence on attitudes towards the website</i>	0.076	***	Yes
<b>H5</b>	$OS \rightarrow BI$	<i>Consumer evaluations of satisfaction have a significant positive</i>	0.062	***	Yes

<i>influence on behavioural intention</i>						
<b>H6</b>	<i>ATT → BI</i>	<i>Consumer attitudes towards a web site will have a significant influence on behavioural intentions related to the web site</i>	<i>0.055</i>	<i>0.237</i>	<i>No</i>	

Notes: \*\*\*significant at 1%, \*\*significant at 5%, \*significant at 10%

Accordingly, re-specification of the model, removing non-significant path would possibly provide a better fit to the data. It is important to assess the fit of a modified model by deleting the non-significant path, therefore, allowing the most parsimonious underlying model to be eventually defined.

#### 5.8.4 Structural Model Two

Taking into account the theoretical basis of the model, the results obtained from testing the original structural model indicated that one path needed to be deleted. Therefore, the non significant path between attitude (ATT) and behavioral intention (BI) which represented hypothesis H6 was deleted. Following this, the model was reanalysed. See Table 5.21.

Table 5.21 Testing Hypotheses Using Standardized Estimates for Structural Model Two

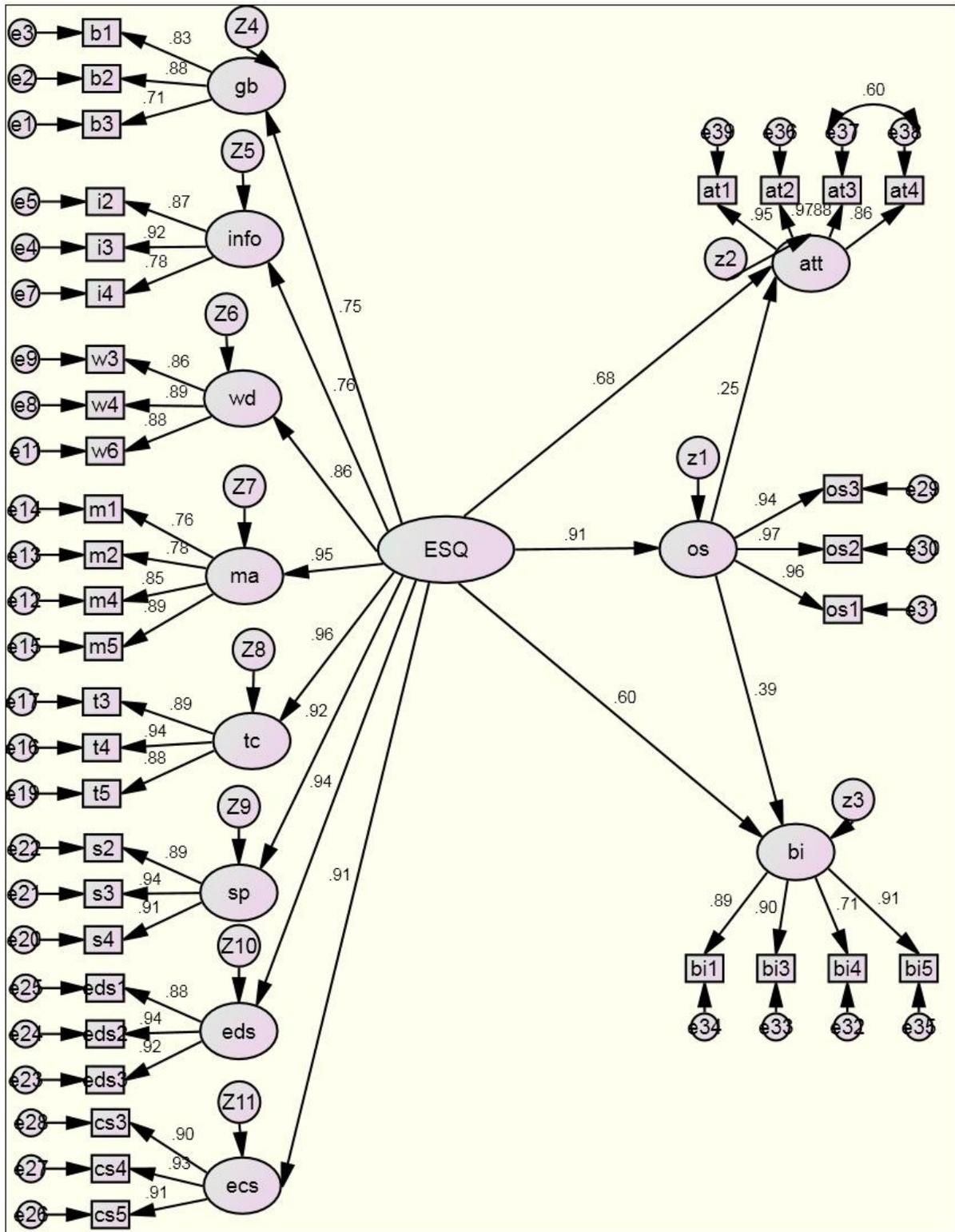
<b>Hypothesis No.</b>	<b>Paths</b>	<b>Hypothesis</b>	<b>Standardize Estimate</b>	<b>P-value</b>	<b>Supported</b>
<i>H1</i>	<i>e-SQ → OS</i>	<i>e-Service Quality has a significant positive effect on overall satisfaction</i>	<i>0.47</i>	<i>***</i>	<i>Yes</i>
<i>H2</i>	<i>e-SQ → BI</i>	<i>e-Service Quality has a significant positive</i>	<i>0.060</i>	<i>***</i>	<i>Yes</i>

*influence on consumers  
behavioural intention*

<b>H3</b>	<i>e-SQ → ATT</i>	<i>e-Service Quality has a significant positive influence on consumers' attitude towards the website</i>	0.073	***	Yes
<b>H4</b>	<i>OS → ATT</i>	<i>Consumers' evaluations of satisfaction with a website have a significant positive influence on attitudes towards the website</i>	0.076	***	Yes
<b>H5</b>	<i>OS → BI</i>	<i>Consumer evaluations of satisfaction have a significant positive influence on behavioural intention</i>	0.062	***	Yes

The analysis was conducted with the path connecting attitude with behavioral intention (H6) removed (see Figure 5.15). The results presented in Table indicate that all five hypotheses (H1,H2,H3,H4,H5 and H5) were accepted, because they were statistically significant. The indices of goodness-of-fit demonstrate that this model at point-of-purchase fits the data adequately with Chi-square= 1325.490, CMIN/df= 2.285, CFI=0.938, RMSEA= 0.069 and SRMR=0.0463.

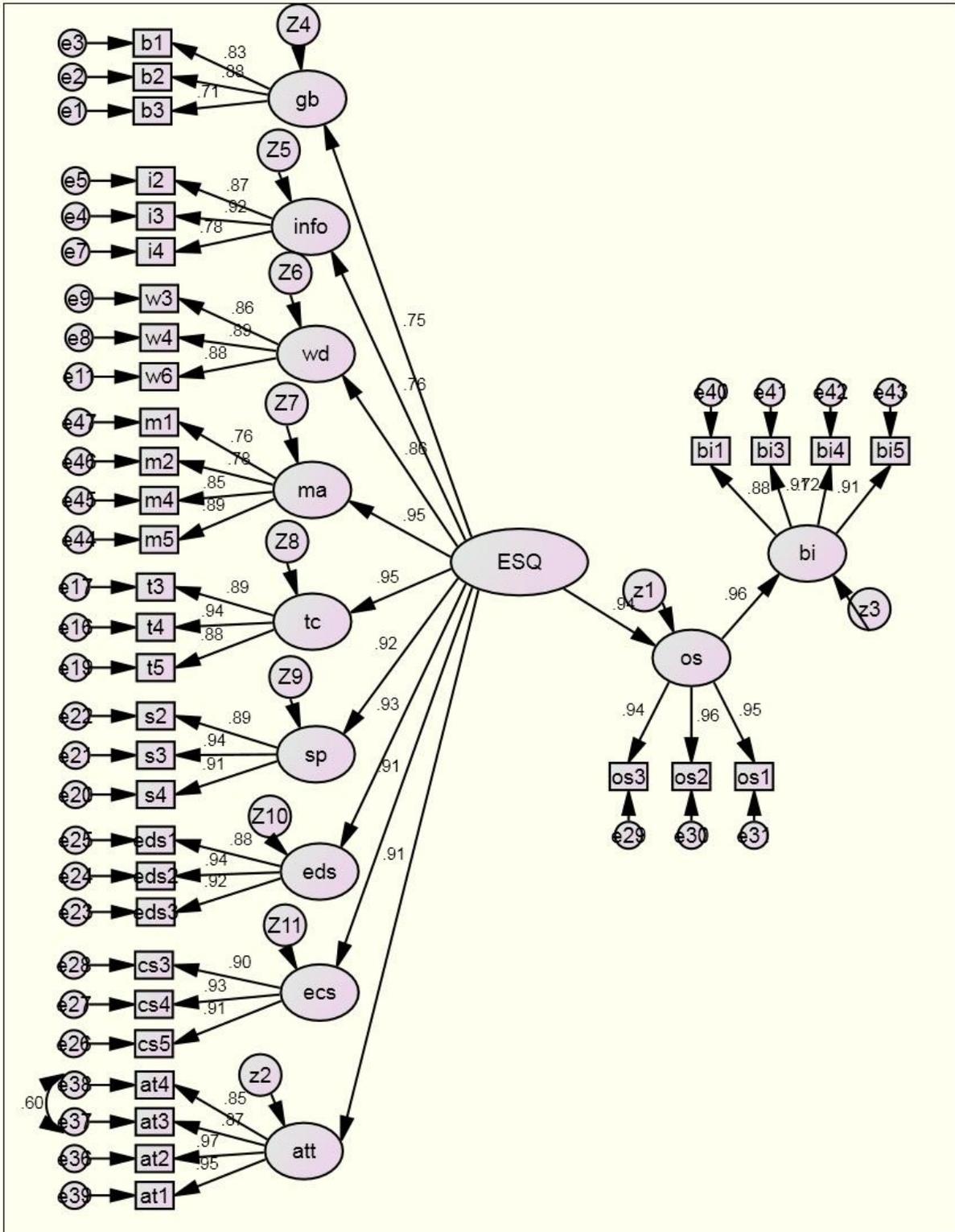
Figure 5.15 Structural Model Two



### 5.8.5 Alternate Model

Figure 5.16 demonstrates an alternate model for this study which addresses an alternative scenario of attitude 'ATT' and overall satisfaction 'OS' not being specified as mediators in the structural model. The purpose behind this specification is to determine whether this will provide a better model fit as compared to the hypothesized model. The indices goodness-of-fit for the alternate model are Chi-Square= 1406.347, CMIN/df= 2.416, RMSEA=0.073, CFI=0.932 and SRMR= 0.501. These indices suggest the hypothesized model has a better goodness-of-fit than the alternate model. Overall satisfaction and attitude have also been empirically and theoretically proven and supported as mediators in similar study conducted by Carlson and O'Cass (2011). Hence, the structural model two (as per Figure 5.15) at point-of-purchase was accepted as the final model in this study. The investigation of mediation effects from overall satisfaction and attitude is undertaken in the next section.

Figure 5.16: Alternate model



### 5.8.6 Testing mediating effects in the structural model at point-of-purchase

Figure 5.17 shows the overall relationship of mediation effects which could be decomposed into two mediation relationships. In this study a series of steps recommended by Hair et.al, (1998), which were presented in section 4.5.2.6 of Chapter 4 ‘Research Methodology’, were undertaken to evaluate mediation effects.

The mediation effects (as presented in Figure 5.17) that were investigated in this study are presented in Table 5.22.

Table 5.22 The two mediation effects at point-of-purchase

Hypothesis No.	Mediator	Independent variable	Dependent variable	Hypothesis on mediation relationship
H7	OS	e-SQ	ATT	Overall satisfaction (OS) mediates e-service quality (e-SQ) and attitude (ATT).
H8	OS	e-SQ	BI	Overall satisfaction (OS) mediates e-service quality (e-SQ) and behavioural intention (BI).

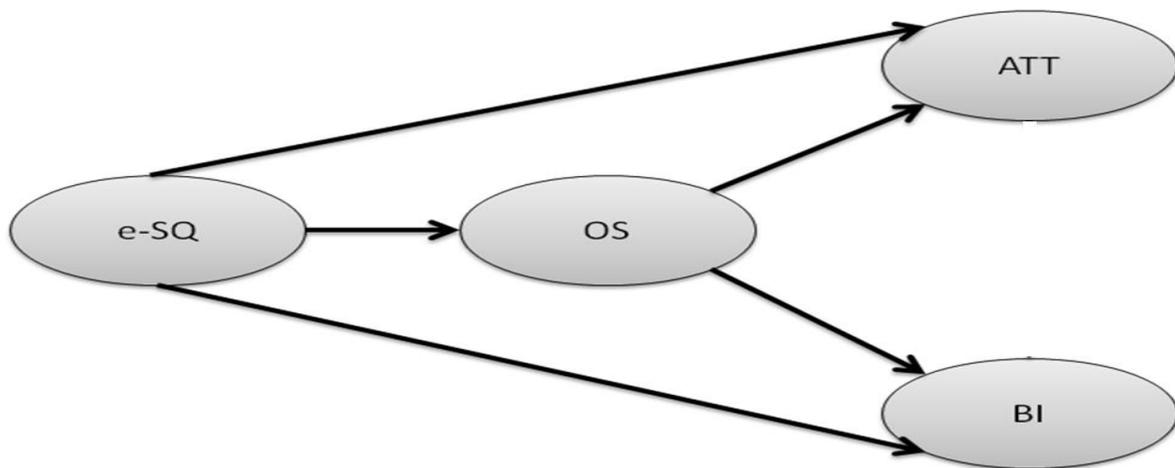


Figure 5.17 Mediation relationships in the structural model at point-of-purchase

5.8.6.1 Overall satisfaction (OS) mediates e-service quality (e-SQ) and Attitude (ATT)

Figure 5.18 Direct effect between e-SQ and ATT

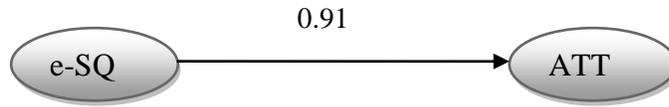


Table 5.23a Results for direct effect between e-SQ and ATT

		Standardised Estimate	S.E	C.R	P	Label
ATT	<--- e-SQ	0.91	.045	18.350	***	Significant

Notes:\*\*\*significant at 1%, \*\* significant at 5%, \* significant at 10%

The analysis for mediation begins by showing that the direct effect of e-SQ on ATT is significant. The direct effect is measured through a standardized factor loading (0.91). In this case, the relationship is significant at 5% level of significance.

Figure 5.19: Mediating Effect for Hypothesis H7

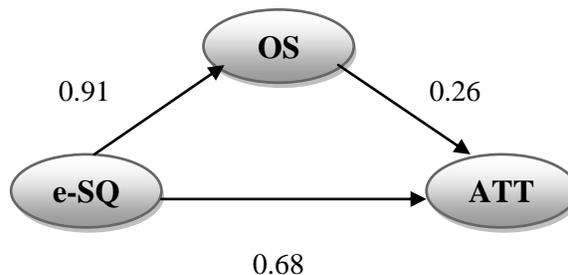


Table 5.23b: Results of Mediating Effect

		Standardized Estimate	S.E.	C.R.	P	Label
ATT	<--- e-SQ	.68	.049	7.729	***	Significant
OS	<--- e-SQ	.91	.047	17.561	***	Significant
ATT	<--- OS	.26	.079	3.051	0.001	Significant

Notes:\*\*\*significant at 1%, \*\* significant at 5%, \* significant at 10%

Table 5.23b shows the probability of getting a critical ratio as large as 7.729 in absolute value is 0.001. In other words, the regression for e-SQ in the prediction of ATT is significantly different at zero at the level 0.001 (two-tailed test). Thus, in this case, e-SQ has a significant direct effect on ATT. Meanwhile, the probability of getting a critical ratio as large as 17.561 for e-SQ → OS in absolute value is 0.001. This means that the regression for e-SQ prediction of OS is significantly different at the level 0.001 (two-tailed test) thus e-SQ has a significant direct effect on OS. The same result occurred in the relationship between OS and ATT where it showed that the regression for OS prediction of ATT is significantly different at the level 0.001 (two-tailed test). Thus, OS has a significant direct effect on ATT. Therefore, OS is a mediating variable in the relationship between e-SQ and ATT.

From the analysis, this type of mediation is called a partial mediation, since the direct effect of e-SQ on ATT is still significant after OS is entered in to the model. It is clearly seen that the standardized factor loading for direct effect (e-SQ → ATT) is reduced from 0.91 (see Figure 5.18) to 0.68 (see Figure). The indirect effect of e-SQ → OS and OS → ATT, and the direct effect of e-SQ → ATT are significant. The variance accounted by the direct effect was 74.9% whereas the indirect effect was 25.8%. Since all paths were significant, it can be concluded that the path e-SQ → ATT was mediated by overall satisfaction (OS). The following calculation shows the total, indirect, and direct effects as well as the variance accounted by indirect and direct effect.

Total effect = indirect effect (e-SQ → OS) + direct effect (e-SQ → ATT)

$$\begin{aligned}
 &= (0.91 * 0.26) + 0.68 \\
 &= 0.2366 + 0.68 \\
 &= 0.9166
 \end{aligned}$$

Variance accounted by indirect effect (e-SQ → OS → ATT)

$$\begin{aligned}
 &= 0.2366 / 0.9166 \\
 &= 0.258 @ 25.8\%
 \end{aligned}$$

Variance accounted by direct effect (e-SQ → ATT)

$$= 0.68/0.9166$$

$$= 0.742 @ 74.2\%$$

### 5.8.6.2 Overall satisfaction (OS) mediates Behavioural Intention (BI) and e-Service Quality (e-SQ)

Figure 5.20 Direct effect between e-SQ and BI

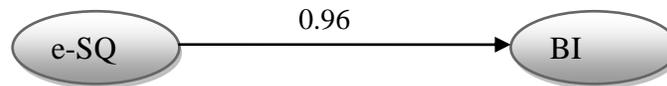


Table 5.24a Results for direct effect between e-SQ and BI

		<b>Standardised</b>	<b>S.E</b>	<b>CR</b>	<b>P</b>	<b>Label</b>
		<b>Estimate</b>				
<b>ATT</b>	<--- e-SQ	0.96	.047	17.594	***	Significant

Notes: \*\*\*significant at 1%, \*\* significant at 5%, \* significant at 10%

The analysis for mediation begins by showing that the direct effect of e-SQ on BI is significant. The direct effect is measured through standardized factor loading (0.96). In this case, the relationship is significant at 5%.

When the mediating variable OS enters into the model, the value of the standardized factor loading was decreased, meaning the direct effect of e-SQ on BI was reduced.

Figure 5.21: Mediating Effect for Hypothesis H8

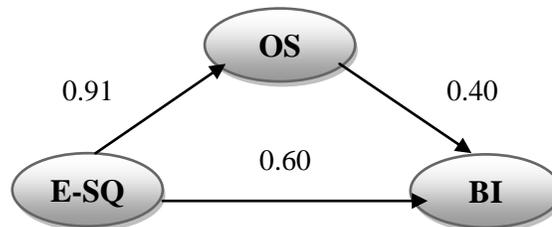


Table 5.24b: Results of Mediating Effect

			<b>Standardize Factor Loading</b>	<b>S.E.</b>	<b>C.R.</b>	<b>P</b>	<b>Label</b>
<b>OS</b>	<---	e-SQ	0.91	.047	17.680	***	Significant
<b>BI</b>	<---	OS	0.40	.065	5.912	***	Significant
<b>BI</b>	<---	e-SQ	0.60	.063	8.202	***	Significant

Notes:\*\*\*significant at 1%, \*\* significant at 5%, \* significant at 10%

As seen in Table 5.24b, e-SQ has a significant direct effect on OS at 5% level of significance. The probability of getting a critical ratio as large as 5.912 in Table 5.24b for a relationship between OS and BI in absolute value is 0.001 and shows that the regression weight for OS in the prediction of BI is significantly different from zero at the 0.001 level (two-tailed test). Thus, OS has a significant direct effect on BI at 5% level of significance. Therefore, the construct OS mediates the relationship between e-SQ and BI.

The type of mediation that has occurred here is known as partial mediation since the direct effect of e-SQ on BI is still significant after OS is introduced into the model. The value for standardized factor loading also reduces from 0.96 (see Figure 5.20) to 0.60 (see Figure 5.21). The proportion of total variance accounted by the direct effect was 62.2%. The indirect effect between e-SQ→OS and OS→BI was also significant and the proportion of total variance accounted by the indirect effect was 37.7%. Since the paths of the indirect effects, ( $p > 0.001$ ), are statistically significant at 5%, it can be concluded that overall satisfaction mediate the relationship between e-SQ and BI. The calculation for variance is as follows:

$$\begin{aligned}
 \text{Total effect} &= \text{indirect effect (e-SQ} \rightarrow \text{OS and OS} \rightarrow \text{BI)} + \text{direct effect (e-SQ} \rightarrow \text{BI)} \\
 &= (0.91 * 0.40) + 0.60 \\
 &= 0.364 + 0.60 \\
 &= 0.964
 \end{aligned}$$

$$\begin{aligned}
 \text{Variance accounted by indirect effect (e-SQ} \rightarrow \text{OS} \rightarrow \text{BI)} \\
 &= 0.364 / 0.964 \\
 &= 0.377 @ 37.7\%
 \end{aligned}$$

Variance accounted by direct effect (e-SQ→BI)

$$= 0.60/0.964$$

$$= 0.622 @ 62.2\%$$

Table 5.25: Hypothesis test results on the two mediation effects at point-of-purchase

<b>Hypothesis No.</b>	<b>Hypothesis on mediation relationship</b>	<b>Support</b>	<b>Types of mediation effect</b>
<b>H7</b>	Overall satisfaction (OS) mediates e-service quality (e-SQ) and attitude (ATT).	Yes	Partial mediation
<b>H8</b>	Overall satisfaction (OS) mediates e-service quality (e-SQ) and behavioural intention (BI).	Yes	Partial mediation

## 5.9 POST-PURCHASE: ONE-FACTOR CONGENERIC MODEL ANALYSIS

The sample size obtained from Phase 3 of the survey (post-purchase) is 154. The responses were used in the one-factor congeneric model, measurement model and structural model analyses.

### 5.9.1 Service Delivery

#### 5.9.1.1 One-factor congeneric model for 'Service Delivery'

The one-factor congeneric model of delivery service revealed that the data was a reasonable fit after item ds3: "I was notified when the items were to be delivered" had been removed from the construct. All items loaded highly on this factor (which is greater than 0.80; see Figure 5.22) and it is statistically significant at 5%. Given that this construct had only three items, further parameter constraints had to be added to define the model. The critical ratio difference (CRDIFF) method was used to determine which parameters needed to be constrained. In this case, the second and third measurement errors were constrained to assess the model fit which the indices indicated a good model fit.

Figure 5.22 One-factor Congeneric Model for Service Delivery Construct

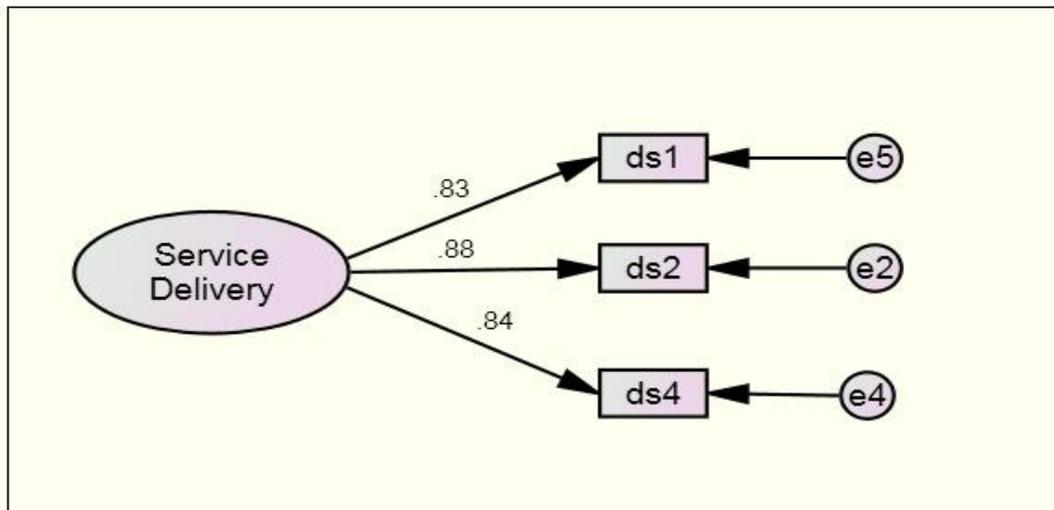


Table 5.26: Goodness-of-fit Statistics for Congeneric Model for Delivery Service Construct

			<b>Estimate</b>	<b>p-value</b>	<b>Goodness-of-fit measures</b>
<b>ds1</b>	<---	The product was delivered on time as promised by the website	0.83	***	$X^2=0.095$ CMIN/DF= 0.095
<b>ds2</b>	<---	The items went were properly packaged	0.88	***	CFI=1.000 SRMR= 0.024
<b>ds4</b>	<---	I was notified when the items were to be delivered	0.84	***	RMSEA=0.000 Mardia's= 2.760 Bollen Stine (p)= 0.776

Notes:\*\*\*significant at 1%, \*\* significant at 5%, \* significant at 10%

## 5.9.2 Customer Service

### 5.9.2.1 One-factor congeneric model for 'Customer Service'

For the construct of customer service, all four items were retained as they provided a good model fit for this construct. All indicators loaded highly on this factor (greater than 0.70; see Figure 5.25) and were statistically significant at 5%. For this construct, the Mardia's coefficient was high, 38.333. As a result, Bollen-Stine bootstrapping was performed which generated a p-value of 0.687. The new Critical Ratio (CR) for this construct was then manually calculated based on the adjusted standard error using Excel Spreadsheet and the results show that the adjusted estimates of all indicators remained statistically significant at 5% level of significance.

Figure 5.23: One-factor Congeneric Model for Customer Service Construct

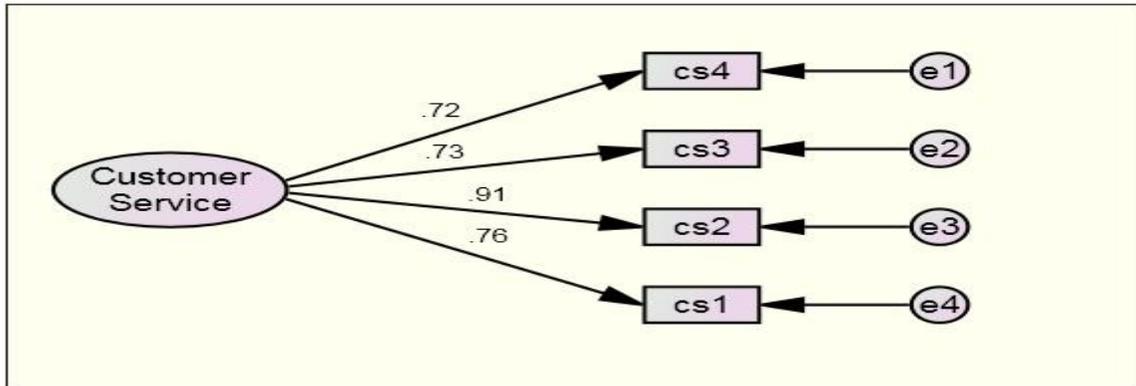


Table 5.27: Goodness-of-fit Statistics for Congeneric Model for Customer Service Construct

			Estimate	p-value	Goodness-of-fit measures
cs1	<---	Customer service personnel were always willing to help me	0.76	***	$X^2= 0.857$ CMIN/DF= 0.428
cs2	<---	Inquiries were answered promptly	0.91	***	CFI=1.000 SRMR= 0.009
cs3	<---	The online tracking line worked well	0.73	***	RMSEA=0.000
cs4	<---	The business was able to handle customer complaints directly and immediately	0.72	***	Mardia's= 38.833 Bollen Stine (p)= 0.687

Notes: \*\*\*significant at 1%, \*\* significant at 5%, \* significant at 10%

### 5.9.3 Overall Satisfaction

#### 5.9.3.1 One-factor congeneric model for 'Overall Satisfaction'

The measurement model for overall satisfaction consisted of three items. Since the model had three items, parameter constraints needed to be added to identify the model. Based on the CRDIFF output, the constraints imposed on the paths of the first measurement and third measurement errors. This constrained one-factor congeneric model provided a good model fit.

All items highly loaded on this factor (greater than 0.8; see Figure 5.24) and were statistically significant at 5%. Although the construct of overall satisfaction provided a reasonable model fit, the Mardia's coefficient was 6.228. Bollen-Stine bootstrap was activated to correct for standard error and fit statistic bias. The bootstrap p-value for overall satisfaction construct is greater than 0.05 which indicates there is insufficient evidence to reject the hypothesized model and this suggests a good model fit. Each of the three indicators in the model remained significant after corrected for standard error and fit statistic bias.

Figure 5.24: One-factor Congeneric Model for Overall Satisfaction Construct

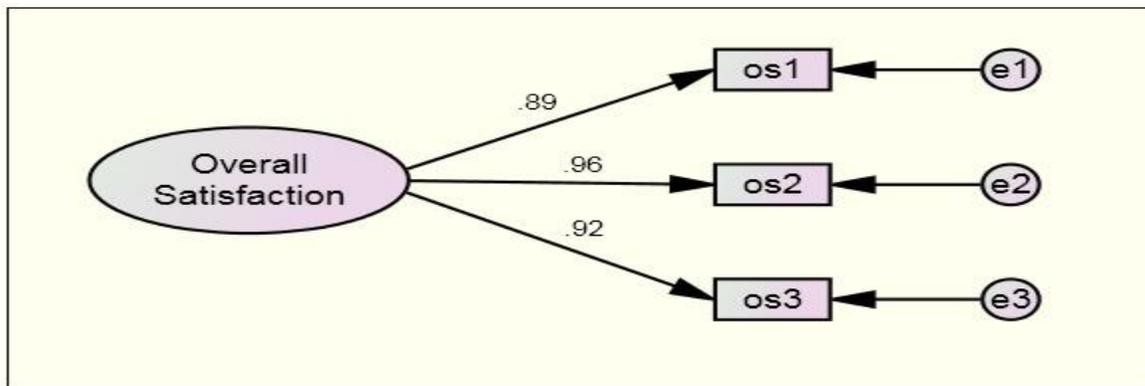


Table 5.28: Goodness-of-fit Statistics for One-factor Congeneric Model for Overall Satisfaction Construct

			<b>Estimate</b>	<b>p-value</b>	<b>Goodness-of-fit measures</b>
<b>os1</b>	<---	I enjoyed purchasing using the website	0.89	***	$X^2=0.011$ CMIN/DF=0.011
<b>os2</b>	<---	Overall, I was satisfied using the website to purchase apparel	0.96	***	CFI=1.000 SRMR= 0.003 RMSEA=0.000
<b>os3</b>	<---	In general, I was pleased with the quality of the service that the website provided	0.92	***	Mardia's= 6.228 Bollen Stine (p)= 0.918

Notes:\*\*\*significant at 1%, \*\* significant at 5%, \* significant at 10%

## 5.9.4 Behavioural Intention

### 5.9.4.1 One-factor congeneric model for 'Behavioural Intention'

The initial model of behavioural intention had five items. However, one item bi4: "I would not consider switching to another similar website" was dropped due to misspecification of the data. Hence, the construct had four items remaining and all these items were highly loaded (greater than 0.80) on the factor. Finally, the goodness-of-fit provided a good model fit for this construct as shown in Table 5.29. As with the overall satisfaction construct the, behavioural intention construct showed a problem with Mardia's coefficient where the value was bigger than 5. The Bollen-Stine was activated to address the standard error and fit statistic bias in the data distribution. The bootstrap p-value for the behavioural intention construct is greater than 0.05 which indicates there is insufficient evidence to reject the hypothesized model and this suggest a good model fit.

Figure 5.25: One-factor Congeneric Model for Behavioural Intention Construct

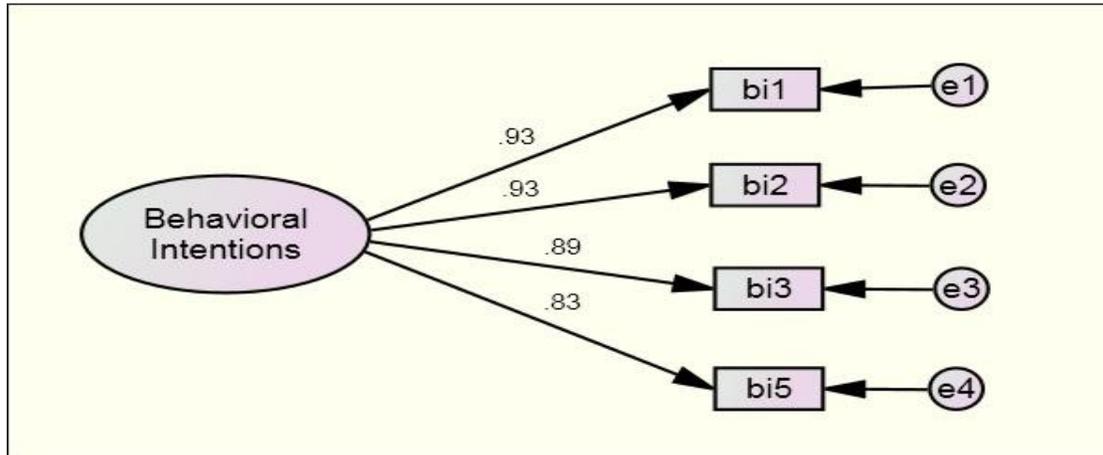


Table 5.29: Goodness-of-fit Statistics for One-factor Congeneric Model for Behavioural Intention Construct

			Estimate	p-value	Goodness-of-fit measures
<b>bi1</b>	<---	I will use this website for future online purchase of	0.95	***	$X^2 = 5.746$ CMIN/DF = 2.873

apparel items					
<b>bi2</b>	<---	I will recommend this website to friends and family for online purchase of apparel items	0.99	***	CFI=0.995 SRMR= 0.012
<b>bi3</b>	<---	I would like to become a regular customer of this website	0.86	***	RMSEA=0.098
<b>bi5</b>	<---	I will say positive things about the website	0.83	***	Mardia's= 11.835 Bollen Stine (p)= 0.236

Notes: \*\*\*significant at 1%, \*\* significant at 5%, \* significant at 10%

## 5.10 POST-PURCHASE: ASSESSING MEASUREMENT MODEL VALIDITY

### 5.10.1 Construct validity

In this study, construct validity was measured by using factor loadings, average variance extracted (AVE), item reliability and construct reliability (CR). This assessment was undertaken on service delivery (SD) construct and customer service (CS) construct in the post-purchase measurement model. Table 5.30 summarises the outcome of measurement model validity.

#### 5.10.1.1 Factor loadings

As seen in Table 5.30, standardized factor loadings for all constructs were greater than 0.70. The factor loadings (between 0.72 and 0.91) are statistically significant at 5% and considered to be reasonably strong.

#### 5.10.1.2 Average variance extracted (AVE)

As per Table 5.31, the average variance extracted (AVE) for construct delivery service was 0.61 and customer service was 0.72 which are higher than 0.5. This indicates that the two constructs provide adequate evidence that convergent validity is supported

### 5.10.1.3 Item reliability & construct reliability (CR)

As shown in Table 5.30, the item reliability of the indicators in service delivery (SD) construct and customer service (CS) construct exceed 0.50, the threshold of acceptable reliability as recommended by Robinson et al. (1991). Table 5.30 shows the construct reliability (CR) of service delivery (SD) and customer service (CS) exceeding 0.70 which represents good reliability (Hair et al. 1998). These reliability measures at post-purchase phase provide adequate evidence that convergent validity is supported.

Table 5.30 summarises the assessment of post-purchase measurement model for this study. All constructs provided a good model fit with factor loadings greater than 0.5, AVE greater than 0.5 and CR greater than 0.70. This indicates that these measurement models provide adequate evidence that convergent validity is supported.

Table 5.30: Summary of the assessment of post-purchase measurement model validity

<b>Construct</b>		<b>Standardized Estimate Loading</b>	<b>Item reliabilities</b>	<b>Construct Reliability (CR)</b>	<b>AVE</b>
<b>Delivery service</b>	ds1	0.83	0.69	0.89	0.72
	ds2	0.88	0.77		
	ds4	0.84	0.71		
<b>Customer service</b>	cs1	0.72	0.52	0.86	0.61
	cs2	0.73	0.53		
	cs3	0.91	0.83		
	cs4	0.76	0.83		

### 5.10.2 Discriminant validity

The following table shows the results of a discriminant validity test conducted on the relationship between delivery service and customer service constructs at post-purchase, using the structural

equation modelling technique suggested by Bagozzi et al. (1991). Assuming the unconstrained model (in which correlation is freely estimated) is correct, the p-value for this pair of constructs is zero (less than 0.05). This indicates that the constrained model (in which correlation is freely estimated) for this pair of constructs has significantly worsened and we conclude that the two constructs are indeed not one construct. This provides evidence for discriminant validity for these two constructs.

Table 5.31 A summary of discriminant validity result on post-purchase measurement model

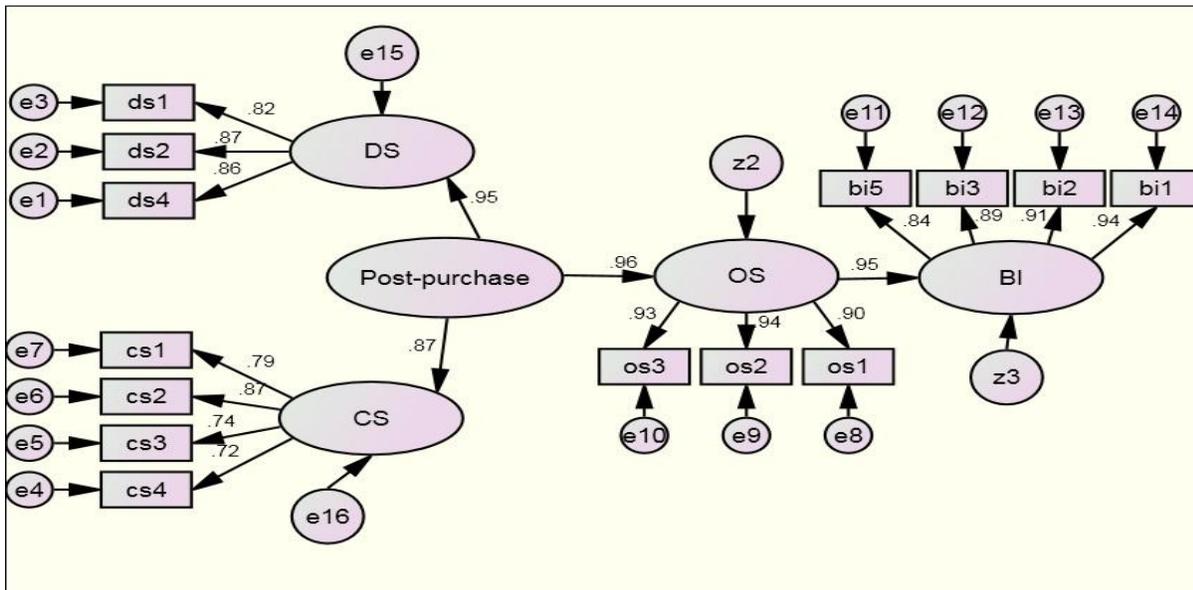
<b>Correlation between a pair of constructs:</b>	<b>p-value</b>	<b>Constrained Model</b>	<b>Results</b>
<b>‘Delivery service’ and ‘Customer service’</b>	0	Significantly worsen	Discriminant validity holds

## 5.11 POST-PURCHASE: STRUCTURAL MODEL ANALYSES AND TESTS

In this section, a structural model was established to test the hypotheses in post-purchase. Figure 5.26 demonstrates the post-purchase structural model.

### 5.11.1 Structural model analysis

Figure 5.26 Structural model for Post-purchase



### 5.11.2 Assessment of goodness-of-fit for structural model

The goodness-of-fit indices in Figure 5.26 show that this model fits the data adequately, even though the chi-square was significant. The chi-square was  $CMIN=151.053$ ,  $CMIN/df= 2.069$ ,  $CFI=0.972$ ,  $RMSEA=.074$ , and  $SRMR= 0.0335$ .

### 5.11.3 Structural paths and hypothesis tests

Table 5.32 presents the structural paths and their results from the hypothesis tests in the post-purchase structural model (as per Figure 5.27). The two hypotheses tested in this model were H9 and H10 and all were supported at the 5% level of significance. The outcome suggests that post-

purchase has a positive impact on overall satisfaction. In addition, consumer evaluations of satisfaction have a significant positive influence on behavioural intention.

Table 5.32 Testing Hypotheses Using Standardized Estimates (Post-purchase)

No	Paths	Hypothesis	Standardised Estimate	z-value	Support
<b>H9</b>	<i>Post-Purchase → OS</i>	<i>Post-purchase has a significant impact on overall satisfaction</i>	<i>0.063</i>	<i>14.877</i>	<i>Yes</i>
<b>H10</b>	<i>OS → BI</i>	<i>Consumer evaluations of satisfaction have a significant positive influence on behavioural intention</i>	<i>0.056</i>	<i>15.498</i>	<i>Yes</i>

Notes: \*\*\*significant at 1%, \*\* significant at 5%, \* significant at 10%

## **5.12 NONPARAMETRIC TESTS: WILCOXON RANKED SUM TEST AND MANN-WHITNEY U TESTS**

Responses from respondents who participated in both Phase 2 (point-of-purchase) and Phase 3 (post-purchase) were manually identified and matched by the researcher based on their email addresses given voluntarily in both these phases. As mentioned in Chapter 4, there were 197 online apparel respondents who participated in both Phases Two and Three of this study. However, after deleting incomplete responses, missing data and outliers, the post-purchase sample consists of 154 respondents. Of the 154 respondents, 64 of them answered the surveys in Bahasa Melayu (the national language in Malaysia) while the remaining 90 answered in the English language. In this section 5.12, the study employs Wilcoxon Ranked Sum Test and Mann-Whitney U test for its non-parametric statistical analyses for investigating whether there are statistically significant differences in overall satisfaction (OS) items. As per analysis in section 5.8.6.1, OS is a significant mediation variable in the relationships between e-service (e-SQ) and attitude (ATT), and also e-service quality (e-SQ) and behavioural intention (BI) at point-of-purchase. These non-parametric tests will help to further understand this mediation variable between point-of-purchase and post-purchase.

The Wilcoxon Ranked Sum test is a distribution-free test because it does not require the assumption that the population is normally distributed. It is designed to match data pairs and used in this study to determine whether there are statistically significant differences in overall satisfaction (OS) items between point-of-purchase and post-purchase for all respondents (sections 5.12.1.1), and within a group (respondents who answered the surveys in English or Bahasa Melayu).

Mann-Whitney U test is a nonparametric test for comparing differences between two independent groups. In section 5.12.1.4, this test was used to determine whether there are statistically significant differences in overall satisfaction (OS) items between respondents who answered the surveys in English and Bahasa Melayu at point-of purchase and post-purchase.

### 5.12.1 Overall Satisfaction

The hypotheses on overall satisfaction are presented in Table 5.33. Hypotheses H13, H14 and H15 involves investigating whether there are statistically significant differences in overall satisfaction items between point-of-purchase and post-purchase for all respondents, and within a group (respondents who answered the surveys in English or Bahasa Melayu). H16 and H17, on the other hand, investigate whether there are statistically significant differences in overall satisfaction among two independent groups (English and Bahasa Melayu respondents) at point-of-purchase and post-purchase in this study. Wilcoxon Rank Sum Test was used on hypotheses H12, H13 and H14 whilst Mann-Whitney U test was used on hypotheses H15 and H16 for comparison of overall satisfaction among two independent groups. The Wilcoxon Rank Sum Test and Mann-Whitney U test were conducted on all items in overall satisfaction (OS) construct at point-of-purchase and post purchase because both measurement models retained the same items (os1, os2 and os3). These items were also specified in the structural models at point-of-purchase and post-purchase. Suffixes ‘(point-of-purchase)’ and ‘(post-purchase)’ were used in the variable names to differentiate items from point-of-purchase and post-purchase for data comparison in non-parametric tests, for example: os1 (point-of-purchase) and os1 (post-purchase). The above explanation has been summarized in Table 5.34.

Table 5.33 Hypotheses for comparing overall satisfaction using non-parametric tests.

<b>Hypothesis No.</b>	<b>Construct</b>	<b>Hypothesis</b>
<b>H11</b>	Overall satisfaction (OS)	There is a significant difference in overall satisfaction items between point-of-purchase and post-purchase for all respondents.
<b>H12</b>	Overall satisfaction (OS)	There is a significant difference in overall satisfaction items between point-of-purchase and post-purchase for respondents who answered the survey in Bahasa Melayu.
<b>H13</b>	Overall	There is a significant difference in overall satisfaction items

	satisfaction (OS)	between point-of-purchase and post-purchase for respondents who answered the survey in English.
<b>H14</b>	Overall satisfaction (OS)	There is a significant difference in overall satisfaction items between respondents who answered the survey in English and Bahasa Melayu at point-of-purchase.
<b>H15</b>	Overall satisfaction (OS)	There is a significant difference in overall satisfaction items between respondents who answered the survey in English and Bahasa Melayu at post-purchase.

Table 5.34 Overall satisfaction items for Wilcoxon Ranked Sum Test and Mann-Whitney U test.

<b>Construct</b>	<b>Point-of-purchase items specified in the structural model</b>	<b>Post-purchase items specified in the structural model</b>	<b>Items selected for Wilcoxon Ranked Sum Test &amp; Mann-Whitney U test</b>	<b>Suffix used in variable names in the tests</b>
<b>Overall satisfaction (OS)</b>	os1, os2, os3	os1, os2, os3	All (os1, os2 & os3) from point-of-purchase and post-purchase structural models	‘(point-of-purchase)’ for point-of-purchase indicators and ‘(post-purchase)’ for post-purchase indicators.

5.12.1.1 H11: There is a significant difference in overall satisfaction items between point-of-purchase and post-purchase for all respondents

Table 5.35a shows the ranks of differences in overall satisfaction (OS) items for all respondents between point-of-purchase and post-purchase using Wilcoxon Ranked Sum Test. Table 5.35b shows the test statistics for this comparison.

Table 5.35a: Results obtained from Wilcoxon Ranked Sum Test on overall satisfaction for all respondents between point-of-purchase and post-purchase

	Rank	N	Mean Rank	Sum of Ranks
os1(post-purchase) – os1(point-of-purchase)	Negative Ranks	76 <sup>a</sup>	61.80	4696.50
	Positive Ranks	39 <sup>b</sup>	50.60	1973.50
	Ties	39 <sup>c</sup>		
	Total	154		
os2(post-purchase) – os2(point-of-purchase)	Negative Ranks	73 <sup>d</sup>	61.77	4509.00
	Positive Ranks	40 <sup>e</sup>	48.30	1932.00
	Ties	41 <sup>f</sup>		
	Total	154		
os3(post-purchase) – os3(point-of-purchase)	Negative Ranks	76 <sup>g</sup>	60.88	4627.00
	Positive Ranks	40 <sup>h</sup>	53.98	2159.00
	Ties	38 <sup>i</sup>		
	Total	154		

- a. os1(post-purchase)<os1(point-of-purchase)
- b. os1(post-purchase)>os1(point-of-purchase)
- c. os1(post-purchase)=os1(point-of-purchase)
- d.os2(post-purchase)<os2(point-of-purchase)
- e. os2(post-purchase)>os2(point-of-purchase)
- f. os2(post-purchase)=os2(point-of-purchase)
- g. os3(post-purchase)<os3(point-of-purchase)
- h. os3(post-purchase)>os3(point-of-purchase)
- os3(post-purchase)=os3(point-of-purchase)

Table 5.35b: Test statistics for overall satisfaction (two-tailed test) between point-of-purchase and post-purchase for all respondents

<b>Test Statistics<sup>a</sup></b>			
	os1(post-purchase)- os1(point-of-purchase)	os2(post-purchase)- os2(point-of-purchase)	os3(post-purchase)- os3(point-of-purchase)
Z	-3.880 <sup>b</sup>	-3.783 <sup>b</sup>	-3.474 <sup>b</sup>
Asymp. Sig. (2-tailed)	.000	.000	.001

a. Wilcoxon Signed Ranks Test

b. Based on positive ranks.

Wilcoxon Signed Ranks Test results in Table 5.36b show there are statistically significant differences in overall satisfaction items between point-of-purchase and post-purchase at 5% level of significance. Table 5.35a also reveals that customers were less satisfied at post-purchase for all these items as compared to point-of-purchase, which is indicated by the higher number of negative ranks as compared to positive ranks and rank ties.

5.12.1.2 H12: There is a significant difference in overall satisfaction items between point-of-purchase and post-purchase for respondents who answered the survey in Bahasa Melayu

Table 5.36a shows the ranks of differences in overall satisfaction (OS) items between point-of-purchase and post-purchase for 64 respondents, who answered the surveys in Bahasa Melayu, from Wilcoxon Ranked Sum Test. Table 5.36b shows the test statistics for this comparison

Table 5.36a: Results obtained from Wilcoxon Ranked Sum Test on overall satisfaction for Bahasa Melayu respondents between point-of-purchase and post-purchase

	Ranks	N	Mean Rank	Sum of Ranks
os1(post-purchase) – os1(point-of-purchase)	Negative Ranks	37 <sup>a</sup>	24.76	916.00
	Positive Ranks	10 <sup>b</sup>	21.20	212.00
	Ties	17 <sup>c</sup>		
	Total	64		
os2(post-purchase) – os2(point-of-purchase)	Negative Ranks	34 <sup>d</sup>	22.68	771.00
	Positive Ranks	9 <sup>e</sup>	19.44	175.00
	Ties	21 <sup>f</sup>		
	Total	64		
os3(post-purchase) – os3(point-of-purchase)	Negative Ranks	37 <sup>g</sup>	21.99	813.50
	Positive Ranks	7 <sup>h</sup>	25.21	176.50
	Ties	20 <sup>i</sup>		
	Total	64		

- a. os1(post-purchase)<os1(point-of-purchase)
- b. os1(post-purchase)>os1(point-of-purchase)
- c. os1(post-purchase)=os1(point-of-purchase)
- d. os2(post-purchase)<os2(point-of-purchase)
- e. os2(post-purchase)>os2(point-of-purchase)
- f. os2(post-purchase)=os2(point-of-purchase)
- g. os3(post-purchase)<os3(point-of-purchase)
- h. os3(post-purchase)>os3(point-of-purchase)

Table 5.36b: Test statistics for Bahasa Melayu respondents in overall satisfaction (two-tailed test) between point-of-purchase and post-purchase

<b>Test Statistics<sup>a</sup></b>			
	os1(post-purchase)- os1(point-of- purchase)	os2(post-purchase)- os2(point-of- purchase)	os3(post-purchase)- os3(point-of-purchase)
Z	-3.798 <sup>b</sup>	-3.671 <sup>b</sup>	-3.795 <sup>b</sup>
Asymp. Sig. (2-tailed)	.000	.000	.000

- a. Wilcoxon Signed Ranks Test
- b. Based on negative ranks.

Wilcoxon Signed Ranks Test results in Table 5.36b show there are statistically significant differences in overall satisfaction items between point-of-purchase and post-purchase for respondents who answered the surveys in Bahasa Melayu at significance level of 5%. Table 5.36a also reveals that customers were less satisfied at post-purchase for all these items as compared to point-of-purchase, which is indicated by the higher number of negative ranks as compared to positive ranks and rank ties.

5.12.1.3 H13: There is a significant difference in overall satisfaction items between point-of-purchase and post-purchase for respondents who answered the survey in English

Table 5.37a shows the ranks of differences in overall satisfaction (OS) items between point-of-purchase and post-purchase, for 90 respondents who answered the survey in English, from Wilcoxon Ranked Sum Test. Table 5.37b shows the test statistics for this comparison.

Table 5.37a: Results obtained from Wilcoxon Ranked Sum Test on Overall Satisfaction for English respondents between point-of-purchase and post-purchase

	Ranks	N	Mean Rank	Sum of Ranks
os1(post-purchase) – os1(point-of-purchase)	Negative Ranks	39 <sup>a</sup>	37.46	1461.00
	Positive Ranks	29 <sup>b</sup>	30.52	885.00
	Ties	22 <sup>c</sup>		
	Total	90		
os2(post-purchase) – os2(point-of-purchase)	Negative Ranks	39 <sup>d</sup>	39.33	1534.00
	Positive Ranks	31 <sup>e</sup>	30.68	951.00
	Ties	20 <sup>f</sup>		
	Total	90		
os3(post-purchase) – os3(point-of-purchase)	Negative Ranks	39 <sup>g</sup>	40.13	1565.00
	Positive Ranks	33 <sup>h</sup>	32.21	1063.00

Ties	18 <sup>i</sup>
Total	90

- a. os1(post-purchase)<os1(point-of-purchase)
- b. os1(post-purchase)>os1(point-of-purchase)
- c. os1(post-purchase)=os1(point-of-purchase)
- d. os2(post-purchase)<os2(point-of-purchase)
- e. os2(post-purchase)>os2(point-of-purchase)
- f. os2(post-purchase)=os2(point-of-purchase)
- g. os3(post-purchase)<os3(point-of-purchase)
- h. os3(post-purchase)>os3(point-of-purchase)
- i. os3(post-purchase)=os3(point-of-purchase)

Table 5.37b: Test statistics for English respondents in overall Satisfaction (two-tailed test) between point-of-purchase and post-purchase

<b>Test Statistics<sup>a</sup></b>			
	os1(post-purchase)- os1(point-of-purchase)	os2(post-purchase)- os2(point-of-purchase)	os3(post-purchase)- os3(point-of-purchase)
Z	-1.799 <sup>b</sup>	-1.754 <sup>b</sup>	-1.439 <sup>b</sup>
Asymp. Sig. (2-tailed)	.072	.079	.150

a. Wilcoxon Signed Ranks Test

b. Based on positive ranks.

Table 5.37b shows there is no statistically significant difference in overall satisfaction between point-of-purchase and post-purchase for respondents who answered the surveys in English at significance level of 5%

5.12.1.4 H14: There is a significant difference in overall satisfaction items between respondents who answered the survey in English and Bahasa Melayu at point-of-purchase.

H15: There is a significant difference in overall satisfaction items between respondents who answered the survey in English and Bahasa Melayu at post-purchase

As shown in Table 5.38a, there are significant differences in responses towards os1 (point-of-purchase), os2(point-of-purchase) and os3(point-of-purchase) between English and Bahasa Melayu respondents at point-of-purchase at significance level of 5%. Based on the mean rank in Table 5.38a, Bahasa Melayu respondents have relatively higher overall satisfaction than English respondents at point-of-purchase. However, there are no significant differences in responses on os1 (post-purchase), os2(post-purchase) and os3(post-purchase) between the same groups of respondents at post-purchase.

Table 5.38a: Results obtained from comparison on overall satisfaction between English and Bahasa Melayu respondents at point-of-purchase and post-purchase using Mann-Whitney U test

<b>Ranks</b>				
	Language used	N	Mean Rank	Sum of Ranks
os1(point-of-purchase)	English	90	67.19	6047.00
	Bahasa Melayu	64	92.00	5888.00
	Total	154		
os1(post-purchase)	English	90	77.38	6964.50
	Bahasa Melayu	64	77.66	4970.50
	Total	154		
os2(point-of-purchase)	English	90	68.79	6191.00
	Bahasa Melayu	64	89.75	5744.00
	Total	154		
os2(post-purchase)	English	90	76.94	6925.00
	Bahasa Melayu	64	78.28	5010.00
	Total	154		
os3(point-of-purchase)	English	90	67.87	6108.50

	Bahasa Melayu	64	91.04	5826.50
	Total	154		
os3(post-purchase)	English	90	77.76	6998.00
	Bahasa Melayu	64	77.14	4937.00
	Total	154		

Table 5.38b: Test statistics for overall satisfaction between English and Bahasa Melayu respondents (two-tailed test) at point-of-purchase and post-purchase

Test Statistics <sup>a</sup>						
	os1(point-of-purchase)	os1(post-purchase)	os2(point-of-purchase)	os2(post-purchase)	os3(point-of-purchase)	os3(post-purchase)
Mann-Whitney U	1952.00	2869.50	2096.00	2830.00	2013.50	2857.00
Wilcoxon W	6047.00	6964.50	6191.00	6925.00	6108.50	4937.00
Z	-3.575	-.040	-3.03	-.192	-3.32	-.088
Asymp. Sig. (2-tailed)	.000	.968	.002	.848	.001	.930

a. Grouping Variable: Language used in answering surveys at point-of-purchase and post-purchase.

### 5.12.2 Summary of hypotheses tests on overall satisfaction (OS) using non-parametric tests.

In summary (as per Table 5.39), there are significant differences in all overall satisfaction items between point-of-purchase (Phase 2) and post-purchase (Phase 3) for all 154 respondents.

However, the results are different in these items when respondents were differentiated based on the language they used in answering the surveys. The levels of overall satisfaction (as measured by os1\_point-of-purchase versus os1\_post-purchase; os2\_point-of-purchase versus os2\_post-purchase; os3\_point-of-purchase versus os3\_post-purchase) decreased at post-purchase for those 64 respondents who answered the surveys in Bahasa Melayu. On the other hand, there were no significant differences in the levels of overall satisfaction between point-of-purchase and post-purchase for 90 respondents who answered the surveys in English. When the overall satisfaction items were examined between English and Bahasa Melayu respondents at point-of-purchase and post-purchase, this study found that the Bahasa Melayu respondents held significantly higher level of overall satisfaction than the English respondents at point-of-purchase. However, there were no significant differences in the levels of overall satisfaction between these two groups at post-purchase.

Table 5.39: Hypothesis test results on overall satisfaction items between point-of-purchase and post-purchase using Wilcoxon Ranked Sum Test.

<b>Hypothesis No.</b>	<b>Construct</b>	<b>Hypothesis</b>	<b>Support</b>	<b>Direction</b>
<b>H11</b>	Overall satisfaction (OS)	There is a significant difference in overall satisfaction items (os1, os2 & os3) between point-of-purchase and post-purchase for all respondents.	Yes	Overall satisfaction decreased at post-purchase as compared to point-of-purchase.
<b>H12</b>	Overall satisfaction (OS)	There is a significant difference in overall satisfaction items (os1, os2 & os3) between point-of-purchase and post-purchase for respondents who answered the survey in Bahasa Melayu.	Yes	Overall satisfaction decreased at post-purchase as compared to point-of purchase for respondents who answered the survey in Bahasa Melayu.

<b>H13</b>	Overall satisfaction (OS)	There is a significant difference in overall satisfaction items (os1, os2 & os3) between point-of-purchase and post-purchase for respondents who answered the survey in English.	No	There is no significant difference in overall satisfaction items between point-of-purchase and post-purchase for respondents who answered the survey in English.
<b>H14</b>	Overall satisfaction (OS)	There is a significant difference in overall satisfaction items between respondents who answered the survey in English and Bahasa Melayu at point-of-purchase.	Yes	Bahasa Melayu respondents tend to have a higher level of overall satisfaction as compared to English respondents at point-of-purchase.
<b>H15</b>	Overall satisfaction (OS)	There is a significant difference in overall satisfaction items between respondents who answered the survey in English and Bahasa Melayu at post-purchase.	No	There is no significant difference in overall satisfaction items between the two groups of respondents at post-purchase.

This study did not investigate overall satisfaction based on other demographic factors such as gender, race and education due to huge imbalance in sample size among groups and small sample sizes as a result of multiple groups, which may produce bias results. It also did not employ Wilcoxon Ranked Sum Test and Mann-Whitney U test to investigate whether there are statistically significant differences in behavioural intention (BI) items. This was because the measurement model for behavioural intention (BI) resulted in the retention of different items between point-of-purchase and post-purchase. Items bi1, bi3, bi4 and bi5 were retained in the point-of-purchase measurement model whereas items bi1, bi2, bi3 and bi5 were retained in the post-purchase measurement model. There are only three common items between these models

and it is of little value to investigate behavioural intention based on an incomplete set of items from each phase

### 5.13 SUMMARY OF PROPOSITION AND TESTED HYPOTHESES

Table 5.40 presented the summary of the proposition and tested hypotheses. As seen below, hypotheses (H1, H2.H3, H4, H5, H7, H8, H9, H10, H11, H12 and H14) are supported and two hypotheses (H6, H13 and H15) are rejected.

Table 40: Summary of proposition and tested hypotheses

Propositions	Hypotheses	Support
P1: e-Service Quality (e-SQ) has a significant positive effect on overall satisfaction	H1: e-Service Quality has a significant positive effect on overall satisfaction	Yes
P2: Perceived e-service quality has a significant positive on consumer behavioural intentions	H2: e-Service Quality (e-SQ) has a significant positive influence on consumers behavioral intention	Yes
P3: Perceived e-Service Quality (e-SQ) has a significant positive influence on attitude among customers towards the website	H3: e-Service Quality (e-SQ) has a significant positive influence on consumers' attitude towards the website	Yes
P4: Consumers' evaluations of satisfaction with a website have a significant positive influence on attitudes towards the website	H4: Consumers' evaluations of satisfaction with a website have a significant positive influence on attitudes towards	Yes

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the website

P5: Consumer evaluations of satisfaction have a significant positive influence on behavioural intention	H5: Consumer evaluations of satisfaction have a significant positive influence on behavioral intention	Yes
P6: Consumer attitudes towards a web site will have a significant influence on behavioural intentions related to the web site.	H6: Consumer attitudes towards the website will have a significant influence on behavioral intentions related to the website	No
P7: Overall satisfaction (OS) mediates e-Service Quality (e-SQ) and attitude (ATT)	H7: Overall satisfaction (OS) mediates e-Service Quality (e-SQ) and attitude (ATT)	Yes
P8: Overall satisfaction (OS) mediates e-Service Quality (e-SQ) and behavioural intention	H8: Overall satisfaction (OS) mediates e-Service Quality (e-SQ) and behavioral intention (BI)	Yes
P9: Post-purchase has a positive impact on overall satisfaction	H9: Post-purchase has a positive impact on overall satisfaction	Yes
P10: Consumer evaluations of satisfaction have a significant positive influence on behavioral intention	H10: Consumer evaluations of satisfaction have a significant positive influence on behavioral intention	Yes

P11: There is a significant difference between point-of-purchase and post-purchase on satisfaction	H11: There is a significant difference in overall satisfaction items between point-of-purchase and post-purchase for all respondents	Yes
P12: Demographic influences satisfaction	H12: There is a significant difference in overall satisfaction items between point-of-purchase and post-purchase for respondents who answered the survey in Bahasa Melayu	Yes
P13: Demographic influences satisfaction	H13: There is a significant difference in overall satisfaction items between point-of-purchase and post-purchase for respondents who answered the survey in English	No
P14: Demographic influences satisfaction	H14: There is a significant difference in overall satisfaction items between respondents who answered the survey in English and Bahasa Melayu at point-of-purchase	Yes

P15: Demographic influences satisfacton	H15: There is a significant difference in overall satisfaction items between respondents who answered the survey in English and Bahasa Melayu at post-purchase	No
P16: There is a significant difference between point-of-purchase and post-purchase on behavioral intention	H16: There is a significant difference in behavioral intention items between point-of-purchase and post-purchase for respondents who answered the survey in English	Hypothesis test was not tenable due to different items retained in models between point-of-purchase and post-purchase for behavioural intention
P17: Demographic influences behavioral intention	H17: There is a significant difference behavioral intention items between point-of-purchase and post-purchase for respondents who answered the survey in Bahasa Melayu	Hypothesis test was not tenable due to different items retained in models between point-of-purchase and post-purchase for behavioural intention
P18: Demographic influences behavioral intention	H18: There is a significant difference in behavioral intention items between point-of-purchase and post-purchase for respondents who answered the survey in English	Hypothesis test was not tenable due to different items retained in models between point-of-purchase and post-purchase for

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			behavioural intention
P19: Demographic influences behavioral intention	H19: There is a significant difference in behavioral intention items between respondents who answered the survey in English and Bahasa Melayu at point-of-purchase		Hypothesis test was not tenable due to different items retained in models between point-of-purchase and post-purchase for behavioural intention
P20: Demographic influences behavioral intention	H20: There is a significant difference in behavioral intention items between respondents who answered the survey in English and Bahasa Melayu at post-purchase		Hypothesis test was not tenable due to different items retained in models between point-of-purchase and post-purchase for behavioural intention

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## 5.14 SUMMARY

This chapter presented and described the demographic profile of respondents who participated in Phase 2 (point-of-purchase) and Phase 3 (post-purchase) of this study. This chapter also discussed the use of SEM for specifying the hypothesised models in these phases as well as testing them in two stages, including measurement model and structural model, for each phase. Items retained in each factor construct in the one-factor congeneric model met minimum requirements such as standardised factor loading greater than 0.5 and acceptable goodness-of-fit indices. Issues with multivariate non-normality were also addressed through activating Bollen-Stine bootstrapping on the relevant data for ensuring the hypothesized model is supported and its variables remained significant after being corrected for standard error and fit statistic bias. In

the measurement model, each factor construct was tested for construct validity and discriminant validity. In the main, the results demonstrated both models (at point-of-purchase and post-purchase) have reasonable model fit. The underlying hypotheses in the structural model were subsequently tested and hypotheses H1, H2, H3, H4, H5, H7, H8, H9 and H10 were supported. The mediating effects of overall satisfaction and attitude were also investigated for three paths in the structural model and there is partial mediation in all these paths. Lastly, non-parametric tests were performed to examine the differences in overall satisfaction items at point-of-purchase and post-purchase, and within a group (based on the language respondents used in answering surveys) using Wilcoxon Ranked Sum Test and Mann-Whitney U test for H11, H12 and H14. The results found that there were statistically significant differences in overall satisfaction items between point-of-purchase and post-purchase among respondents who answered the survey in Bahasa Melayu. This result does not apply to English respondents whose overall satisfaction level in these items did not differ significantly between the two phases.

The next chapter discusses the above results in detail and addresses the research questions highlighted in Chapter One. Additionally, it draws implications from both practice and theory, discusses the limitations of this study, describes the directions for further research and identifies the final conclusions.

# **CHAPTER SIX**

## **DISCUSSION AND CONCLUSIONS**

### **6.1 INTRODUCTION**

In Chapter Five, the results were presented according to the propositions stated in Chapter Three. This chapter presents comparisons between the suggested model and the final model. Details about the findings and results are also discussed here. The research goals are set out in the following:

- 1) To develop a framework that represents the factors that contribute to customer satisfaction and behavioural intentions with small online apparel businesses in Malaysia.
- 2) To assess the degree of customer satisfaction and behavioural intentions in small online apparel businesses in Malaysia at point-of-purchase and post-purchase.
- 3) To investigate whether consumer behavioural (OS and BI) and Internet shoppers' profiles affect satisfaction in online apparel purchases, and
- 4) To make recommendations for improving customer satisfaction in the context of small online apparel businesses for Malaysia.

Discussion on mediating is briefly made and followed by discussion of a comparison of the final model with the previous models. The following three sections then provide an overall discussion on managerial implication, limitations and future research.

## 6.2 RESEARCH FRAMEWORK

The Suggested Model in Figure 6.1 shows the original proposed model for measuring customers' satisfaction and behavioural intention in small online apparel business in Malaysia. As previously discussed in chapter four, this model has two phases. The first phase is the point-of-purchase phase and the second is post-purchase phase. In the point-of-phase-model, the results indicate that there are six hypotheses (H1, H2, H3, H4 and H5), which are supported. However one hypothesis H6 "Consumer attitudes towards the website will have a significant influence on behavioural intentions related to the website" was rejected and needed to be deleted from the proposed model. The final model in can be seen in Figure 6.2 which demonstrates the model with all significant paths. The indices for goodness-of-fit demonstrate that the model of the point-of-purchase phase (see Figure 6.2) fits the data adequately with Chi-square= 1325.490, CMIN/df= 2.285, CFI= 0.938, RMSEA= 0.069 and SRMR= 0.046. By testing both hypotheses on mediating variables such as "H7= Overall satisfaction (OS) mediates e-service quality (e-SQ) and attitude (ATT)" and "H8= Overall satisfaction (OS) mediates e-service quality (e-SQ) and behavioural intention", this shows that there is partial mediation. On the other hand, all hypotheses in H9 and H10, which are in the post-purchase phase model are supported. The final model of the post-purchase in Figure 6.2, provides a good model fit with Chi-square=151.053, CMIN/df=2.069, CFI=0.972, RMSEA=0.074 and SRMR= 0.0335

Figure 6.1 Suggested model

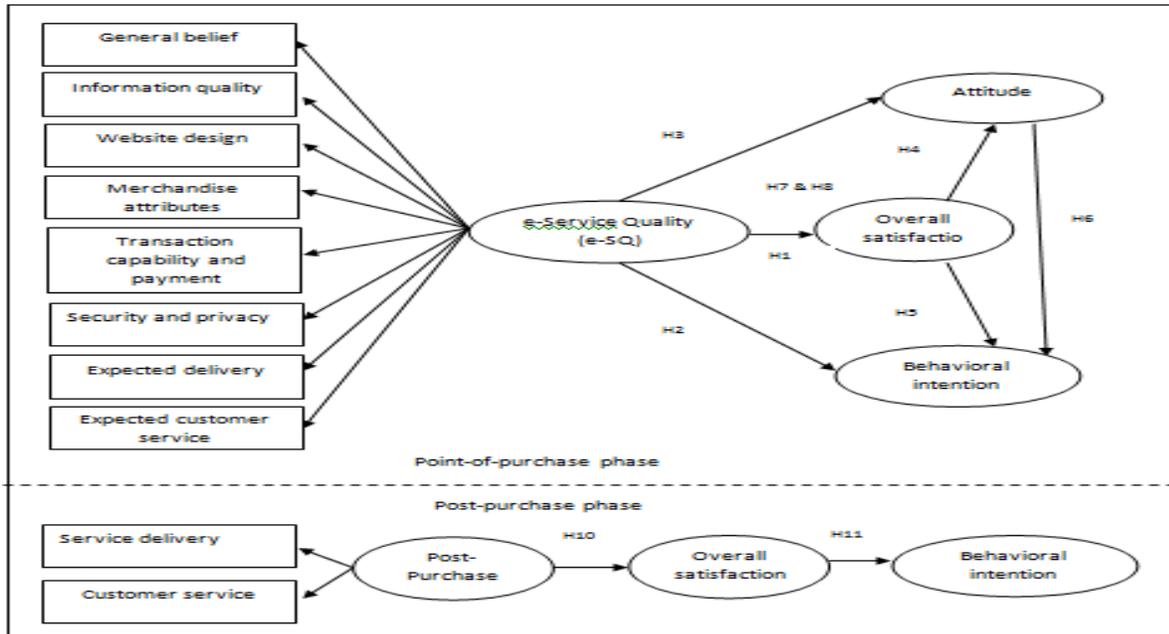
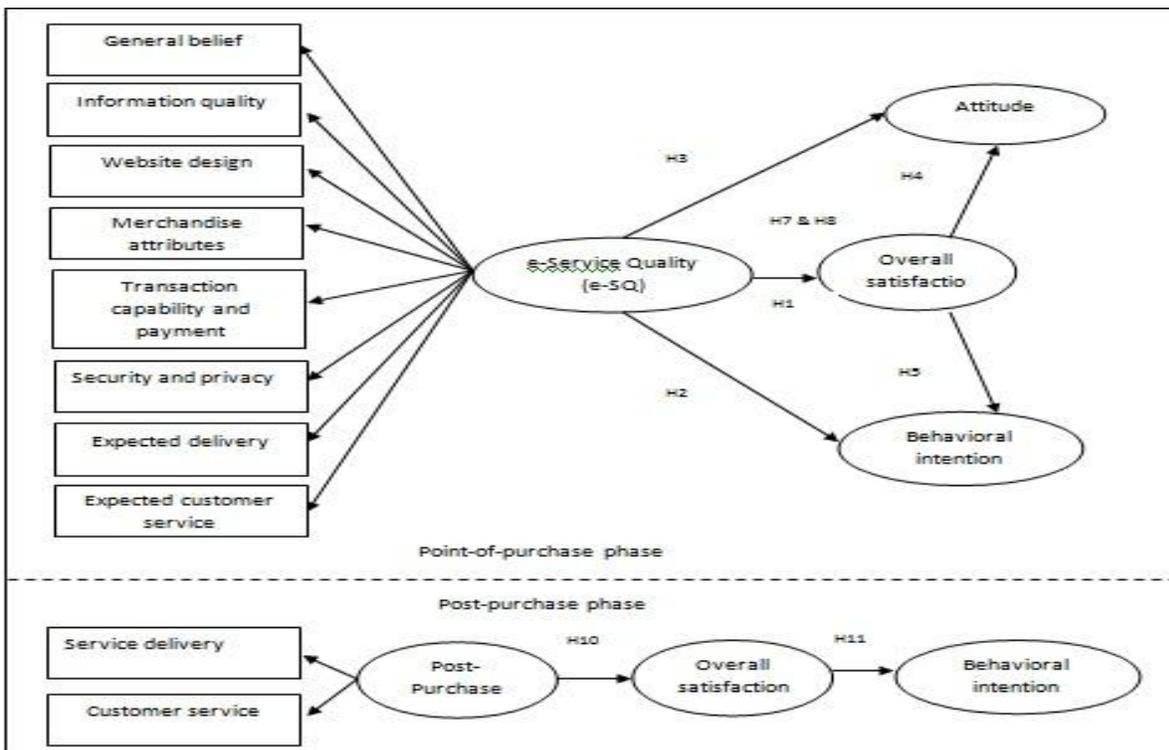


Figure 6.2 Final model



## 6.3 CUSTOMER SATISFACTION AND BEHAVIOURAL INTENTION

### 6.3.1 At point-of-purchase

This section discusses the finding of this study at point-of-purchase. This section starts with a discussion of the results of the development e-service quality construct then this is followed by a discussion of the hypotheses finding. Details are discussed below.

#### 6.3.1.1 The construction of reflective e-Service Quality (e-SQ) constructs

In this thesis, the researcher was able to determine eight factors of e-service quality as measured by eight indicators: information quality (info), website design (wd), merchandise attributes (ma), transaction capability & payment (tc) and security and privacy (sp). The novelty of this thesis rests on three new factors which can be assumed as part of an e-service quality construct. They are general belief (gb), expected delivery service (eds) and expected customer service (ecs). Details are listed below:

1. General Belief (gb)

Table 6.1 Factor loading for items in general belief construct

Items	Factor loading
1. I believe that shopping over the Internet would be easy	0.82
2. I believe shopping online is compatible with my lifestyle	0.88
3. I believe shopping online allows me to get a better price	0.77

General belief is included in the e-service quality construct because customers normally have their own perceptions or evaluations of online shopping. The research study that was conducted shows 'I believe shopping online is compatible with my lifestyle (0.88) in which 0.88 is the statistical value has the highest factor loadings among relevant indicators in general belief. In addition, customers who engaged in online shopping were seen to believe that shopping online over the Internet would be easy and allow them to get a better price. This supports research by Edwards (2007) and Wong (2010a) who argued that shopping over the Internet should be easy,

time-saving and provide convenience, surprise and excitement. As Malaysian Internet users have increased in number from 16 million in 2008 to 18.9 million in 2012 (Kent 2010), this provides a strong indication that Malaysian people are pleased with the advantages of online shopping. For instance, Yee and Seong (2009) indicated that online Malaysian shoppers believe that the online medium can offer convenient purchases, affordable alternatives and discounts rather than shopping at traditional stores. This finding of my study seems to support a prior report by Nielson (1999) stating that the attraction of low prices is not the main factor in influencing people to purchase online as the indicator of getting lower prices recorded the lowest factor loading among other indicators. Li and Zhang (2006) and Xia et al. (2008) conducted research among online shoppers in China confirms that websites with lower prices are the main motivator for customers to perform specific behaviours towards using the website. Anderson and Srinivasan (2003) share the same finding that the attraction to win customers in United States to perform online shopping is the lowest price. While low price may be the main motivator in other countries, this is not the case for Malaysian online apparel shoppers who tend to be influenced by lifestyle compatibility

2. Information Quality (info)

Table 6.2 Factor loading for items in information quality construct

<b>Items</b>	<b>Factor loadings</b>
1. The information provided in the website is reliable	0.87
2. The information provided in the website can be easily understood	0.92
3. The website contained all the information that I needed for the purpose of my purchase decision	0.79

Throughout this research, it is indicated that customers stressed the importance of having the correct information that can be easily understood. This is shown by the highest factor loading of (0.92) in which 0.92 is the statistical value among other indicators in the information quality construct. The indicator on information accuracy was found insignificant and deleted from the congeneric model in this study. However, a study done by Moliner (2006) found that accuracy of the information was the most important element of delivering information in online business.

Furthermore, the results shown in my research indicate that the website should have complete information which customers needed for their purchase decision. This is true where online shoppers largely depend on the information on the website, due to a need for adequate product information to complete their purchase decision (Kim et al. 2006; Burke 2002; McKinney et al. 2002).

### 3. Website design (wd)

Table 6.3 Factor loading for items in website design construct

<b>Items</b>	<b>Factor loadings</b>
1. The display pages within the website are easy to read	0.86
2. The start page leads me to the information I need	0.88
3. The website uses a good colour combination	0.88

In addition, customers prefer to use websites or BlogSpots where home pages lead to the information they need and the display pages are easy to read and use a good colour combination. These two indicators shared the highest factor loading, 0.88 in statistical value. According to Zeithaml et al. (2002) and D'Angelo and Little (1998), customers will be attracted to visit a website which has good graphics such as good colour combinations. Indeed, Rice (1997) found that one of the factors made that made a person want to revisit was the ease of finding information on the website.

### 4. Merchandise attributes (ma)

Table 6.4 Factor loading for items in merchandise attributes construct

<b>Items</b>	<b>Factor loadings</b>
1. The website offers comparative low prices for their merchandise compared to other websites.	0.78
2. This website provides extra incentives to purchasing such as discount offering and collecting bonus points.	0.79
3. The range of products in this website is comprehensive.	0.84
4. There are many choices for merchandise of a particular type at all websites.	0.88

The results indicate that customers like to shop most at the websites or BlogSpots which offer many choices for merchandise of a particular type (factor loading=0.88). In addition, the websites or BlogSpots should offer a wide range of products to attract more customers to visit their online shop as well as offering extra incentives such as discounts and collecting bonus points. This is supported by Chae et al.(2006) who listed incentive programs like cumulative discounts or rebates based on purchase amount, saved shopping lists, point-and incentive- based premiums and gift programmes to enhance the experience of the online shopper. It has been shown that the lowest factor loading is 0.79 and it was recorded for item “This website offers comparatively low prices for their merchandise compared to other website”. This demonstrates that customers are not really interested for the price, in which they are happy to pay at any cost. This reinforces results the general belief (gb) construct which show item 1 ‘I believe shopping online allows me to get a better price’ has the lowest factor loadings.

5. Transaction capability and payment (tc)

Table 6.5 Factor loading for items in transaction capability and payment construct

<b>Items</b>	<b>Factor loadings</b>
1. I feel comfortable using the payment options provided by the website	0.89
2. I have many options to provide proof of my payment to the website (such as email, SMS, etc.)	0.94
3. When I use the website, the waiting time between my actions and the website response was very fast	0.88

There are three items in the transaction capability and payment construct, in which the item ‘I have many options to provide proof of my payment to the website (such as email, SMS, etc.)’ has the highest factor loading which is 0.94 in the statistical value. This result also shows that customers feel comfortable with the websites which provide many options of payment method. This is consistent with a previous study by Xia et al. (2008) who found that convenient payment mechanisms raised the degree of satisfaction among customers. Meanwhile, customers like to shop at those websites which provide many payment options (such as through email, SMS etc.).

According to Dellaert and Kahn (1999) online customers are low-tolerant hence the website should be designed in good loading time (Weinberg 2000; Xia et al. 2008).

6. Security and privacy (sp)

Table 6.6 Factor loading for items in security and privacy construct

<b>Items</b>	<b>Factor loadings</b>
1. The website has adequate security features.	0.89
2. This websites provides clear and understandable terms and conditions.	0.94
3. I feel my personal information is secure on this website.	0.91

Throughout the research that was conducted, it was commonly found that websites should provide clearer and understandable terms and conditions in which the factor loading indicates for this item is highest (0.94) compared to other indicators. (Kim et al. 2006; Xia et al. 2008; Carlson and O’Cass 2010). This is a common issue among many customers that shop online. This is another important point for customers but they don’t stress enough the security of their personal information on websites or BlopSpots. The security of personal information was recorded as the second highest factors loading among the other three factors. This research is consistent with a prior study by Wolfinbarger and Gilly (2003) in which they argued that privacy and security have a strong impact on response to the overall quality of the website.

7. Expected service delivery (eds)

Table 6.7 Factor loading for items in expected service delivery construct

<b>Items</b>	<b>Factor loadings</b>
1. The website offers many options for delivery service for delivery service such as standard post, express delivery and home delivery.	0.88
2. The website offers a standard price for the delivery service.	0.94
3. The website provides clear terms and conditions for the delivery service.	0.92

‘The website offers a standard price for the delivery service (0.94)’ in which 0.94 is the statistical value as recorded and the highest factor loading compared to other indicators in the expected service delivery construct. It is consistent with the finding of Wang and Huarng (2002) who stated that customers will look out for the websites or Blogspots which offers a standard price for the delivery service. Similarly, online customers in China consider shopping at the websites which offer low delivery cost (Fu et al. 2007). The second highest factor loading was recorded for item ‘The websites provide clear terms and conditions for the delivery service. According to Loebbecke (2003), the website should include clear ‘guarantee to the delivery’ to customers for instance for return of goods in accordance with the shop’s return policy. By having this, the online marketer gains reputation (e.g being a safe website) and will increase online sales turnover (Loebbecke 2003).

#### 8. Expected customer service (ecs)

Table 6.8 Factor loading for items in expected customer service construct

<b>Items</b>	<b>Factor loadings</b>
1. The business provides online tracking for products	0.90
2. The business seems ready and willing to respond to customer needs	0.93
3. There are many options on how to contact customer service such as chat room, email and phone	0.90

As expected, customers want their questions to be answered immediately and this has been proven by the highest factor loading of 0.93 in statistical value recorded for the item ‘The business seems ready and willing to respond to customer needs’. Likewise, online shoppers may be intolerant and, if there is no good response to their questions, this will lead to dissatisfaction with the website and they will turn to other competing websites (Flavian and Guinaliu (2006). The next most important thing for customers is the importance of having options in contacting customer service, such as chatrooms, email, phones. This helps customers to track their online purchases and any other concerns that they have.

### **6.3.1.2 The relationship between e-Service Quality (e-SQ) and overall satisfaction**

The model in this thesis hypothesized that e-service quality would have a positive effect on overall satisfaction and this hypothesis was proven. In other words, e-service quality directly influences customer satisfaction within the specific service context (i.e. of apparel). This finding is consistent with previous studies which confirmed the impact of e-service quality on satisfaction (Lee and Lin 2005; Collier and Bienstock 2006; Fassnacht and Kose 2007; Shamdasani et al. 2008; Kim et al. 2006). This suggests that if e-service is delivered and evaluated as being of good quality, it will lead to customer satisfaction (Carlson and O’Cass, 2010). For instance, this study found websites that provided customers with varieties of selection as well as offering them extra incentives like discounts and bonus points were important factors in evaluating them positively. This is consistent with Moutinho et al.(2012), that online retailers can convert browsers to buyers online by offering incentives like free postage, “buy one get one free”, points/miles rewards, sweepstakes and contests.

### **6.3.1.3 The relationship between consumer evaluations of satisfaction and attitude towards the website.**

The findings also indicate that satisfaction among online shoppers is influenced by their attitude towards the (apparel) websites or Blogspots. The survey shows that customers who purchased apparel through a website or Blogspots display positive attitudes when they are satisfied with the e-service quality attribute (e.g. transaction capability and payment, merchandise attributes, information quality). This result is consistent with the findings of research conducted in a traditional setting to investigate satisfaction and its influence on customer attitude (Grace and O’Cass, 2004; Grace and O’Cass, 2005; Carlson and O’Cass, 2010). As illustrated in a literature review by Dick and Basu (1994), a key determinant for true loyalty is satisfaction and this can lead to the attitude-behaviour relationship. Similarly, Castaneda et al.(2008) demonstrated that satisfaction is a more important antecedent of attitude towards the website rather than towards the Internet. In addition, Lee et al. (2004) believed that if the website fulfils a customer’s expectation, customers automatically build a positive or affective feeling towards the website. Likewise, Roy (2010) believed that customers will develop a sense of belonging to a certain

website if it has satisfied their needs. The higher the level of satisfaction, the more positive feeling customers will develop to the website.

#### **6.3.1.4 The relationship between consumer attitudes towards a website does not influence behavioural intention related to the website.**

Based on Chapter Five, the result showed that consumer attitude towards the website did not influence behavioural intention related to the website. This finding was not consistent with the prior study conducted by Carlson and O’Cass (2010) who found that online shopper behavioural intentions towards the website are influenced by their attitudes towards the website. The findings of this study showed that attitude is formed through personal experiences through the attributes of the e-service. In other words, a consumer develops a positive attitude to a sport website which leads to their intention to use the website. However, in the context of the research, online apparel shoppers did not build their favourable predisposition towards the apparel website or Blogspots based on their experiences of the service which in turn influences their intentions.

#### **6.3.1.5 The relationship between consumer evaluations of satisfaction and behavioural intention**

The findings suggest that customer satisfaction influences behavioural intention of apparel customers. Accordingly, this study indicates that customer satisfaction with the quality of the service will influence their intentions (e.g. revisit the website in the future, spread positive and negative about the website to others). The results also reflect the earlier findings that customer satisfaction with the website will in turn influence their behavioural intention such as future use of the website, whether they become regular customers or switch to another similar website (Carlson and O’Cass2010; Kinard and Capella 2006; Wolfinbarger and Gilly2003; Collier and Bienstock 2006; Loiacono et al. 2007; Lee and Lin 2005; Balabanis et al. 2006). Consequently, this finding is consistent with the studies conducted in traditional literature by examining how customer satisfaction influences behavioural intention (Cronin et al. 2000; Anderson and Sullivan 1993).

#### **6.3.1.6 The relationship between e-Service Quality (e-SQ) and consumers' attitudes towards the website**

The results also reveal that there is a positive impact on e-service quality and attitude. In the context of this study, online apparel shoppers experiences in using service attributes will lead to an evaluation of like or dislike of the website or Blogspots. This finding is supported by previous research conducted by (Carlson and O' Cass 2010) who found that the experience of a sports customer towards the element provided by the sport website will then formulate the feeling of like and dislike to the website. In this case, to make sure customers evaluate the like feeling or good experience towards the website or BlogSpots, a business owner should provide them with better service elements. The results show that the influence of satisfaction on apparel shoppers' attitudes to the websites and BlogSpots is consistent with the finding in the context of traditional frames. Namely, by substituting brand communication, Patton (2002) found there was a significant influence on the formation of positive brand attitudes. Logically, if customers are satisfied with a brand, they develop positive brand attitudes (Oliver 1980; Patton 2002; Carlson and O' Cass 2011). This thesis shows that apparel online shoppers will experience positive attitudes to the website and BlogSpots when they are satisfied with the service the website provided.

#### **6.3.1.7 The relationship between e-Service Quality (e-SQ) and customer behavioural intention**

Studies of customer behavioural intentions use a variety of setting focuses and for this thesis, the investigation was in the context of apparel online shoppers. The result indicates that those shoppers' perceptions of e-service quality (point-of-purchase) have a positive influence on behavioural intentions. The more positive the customers' experience, the more likely they are going to be to re-use the service (Bhattacharjee 2001; Udo et al. 2010). The findings in this thesis shows that online shoppers have a high level of expectation of e-service quality and will potentially increase the likelihood that they will revisit the website or BlogSpots, becoming a regular customer, will not consider switching to a similar website and will say positive things

about it. Similarly, Collier and Bienstock (2006), Strauss and Corbin (1990) and Hoepfl (1997) found that customers developed various perceptions towards the e-service quality attributes and this contributes to the development of various behavioural intentions.

### 6.3.2 Post-purchase

The novelty of this thesis is in examining satisfaction and behavioural intention at different stages, which are at point-of-purchase and post-purchase. According to Cao and Gruca (2004), activities occurring at the post-purchase stage are delivery and customer support. At the post-purchase stage, this researcher considers that service delivery and customer service are the two elements that occur after the customer has purchased the product.

#### 1. Service delivery

Table 6.9 Factor loading for items in service delivery construct

Items	Factor loadings
1. The product was delivered on time as promised by the website	0.83
2. The items were well properly packaged	0.88
3. I was notified when the items were to be delivered	0.84

After the purchase of the product, that customer really hopes that the items have been sent properly packaged. As pointed out in ‘The items were properly packed’ has recorded the highest factor loading, 0.88 in statistical value, which compared to other indicators in the service delivery construct. This finding is consistent with Parasuraman et al. (2005) who stated that the product should be delivered in well-packaged form. This is because the merchandise needs to be well packaged and if it is not, the texture of the fabric will be damaged. Customer’s stresses the importance of being notified when their items are to be delivered, In this instance this has the second highest factor loading, 0.84 in statistical value. In the table above regarding ‘The product was delivered on time as promised by the website’ is less importance for customers as it was recorded as the lowest factor loading compared to other indicators in the table. On the other

hand, Huang and Adam (2004) stated that the primary determinant in customers' positive reviews was on-time delivery and a similar statement was made in Posselt and Gerstner (2005).

## 2. Customer service

Table 6.10 Factor loading for items in customer service construct

Items	Factor loadings
1. Customer service personnel were always willing to help me	0.76
2. Inquiries were answered promptly	0.91
3. The online tracking line worked well	0.73
4. The business was able to handle customer complaints directly and immediately	0.72

In the above table, 'Inquiries were answered promptly' was recorded the highest factor loading of 0.91 in statistical value. In regards to this, customers stressed the importance of having good customer service in having personnel to answer all inquiries (Liao and Cheung 2002 and Parasuraman et al. 2005). In addition, the tracking items should work well so that customers can track their parcels. This is supported by Bauer et al. (2006) who stated that in the fulfilment phase, online retailers should provide reliable service delivery such as delivery tracking. They also will disseminate positive things about the website and will recommend it to family and friends. Although customers may have good intentions towards using the website, it does not mean they will not change to another. This finding contrasts with the point-of-purchase survey. Even if customers say positive things about the website, they do not recommend it to their family and friends because they do not want to risk recommending the website before first completing the post-purchase stage.

### 6.3.2.1 The relationship between post-purchase and overall satisfaction

The finding shows that post-purchase has a positive impact on overall satisfaction. This result is consistent with prior studies conducted by Posselt and Gerstner (2005) and Chae et al.,(2006) who found that post-purchase has an impact on customer satisfaction. Indeed, a study conducted by Wang et al. (2002) to examine satisfaction/dissatisfaction among customer during the post-

purchase stage found that customer satisfaction customers occurred on service delivery with no hidden charges. Further, Bui et al. (2011) emphasized the importance of having post-purchase consumer satisfaction. They added that the dissatisfied customer may create regret and negative emotion toward the purchase decision.

### **6.3.2.2 The relationship between consumer evaluations of satisfaction and behavioural intention at post-purchase phase**

In addition, this study also concludes that customer evaluation of satisfaction has a significant positive influence on behavioural intention. This finding shares the same result as Posselt and Gerstner (2005), Holloway and Beatty (2008), Collier and Bienstock (2006) who found that satisfied customers will probably intend to use the website or Blogspots again. In addition, a study conducted by Maditinos and Theodoridis (2010) indicated that customer satisfaction strongly affect post-purchase behaviour.

## **6.4 Effect of customer satisfaction on e-service quality, behavioural intention and attitude**

This section discusses the finding of mediating variables. This section starts with a discussion of the results of how overall satisfaction mediates e-service quality and attitude then this is followed by a discussion of how overall satisfaction mediates e-service quality and behavioural intention. Details are discussed below.

### **6.4.1 Overall satisfaction (OS) mediates e-Service Quality (e-SQ) and attitude (ATT)**

Much of the marketing literature in a variety of settings focuses on overall satisfaction and, as shown in Chapter Five, the results indicate that overall satisfaction mediates e-Service Quality and attitude. Satisfaction of online apparel shoppers (with an apparel website or Blogspot) will influence attitude to that website or Blogspot. This finding supports Oliver's (1981) research suggesting that satisfaction mediates the effect of prior-period perceptions of service quality

perception causing a revised service quality perception to be formed (attitude). A similar study done by Llusar et al. (2001) found that customer satisfaction can be a potential mediating variable.

#### **6.4.2 Overall satisfaction (OS) mediates e-Service Quality (e-SQ) and Behavioural Intention (BI)**

Many previous studies show that customer satisfaction mediates the relationship between e-service quality and behavioural intention (Soutar 2001; Carlson and O' Cass 2010; Carlson and O' Cass 2011). This research showed satisfaction partially supports the relationship between e-service quality and behavioural intention. It also suggested that customer satisfaction is a better predictor of behavioural intentions, whereas e-service quality relates more to the evaluation about the service (Carlson and O' Cass 2011). This is similar in my study where satisfaction in apparel online shoppers towards the websites leads them to perform certain behaviours (e.g. intention to use the website, recommend to others). Additionally, Rust and Zahorik (1993) found that overall satisfaction significantly influences customer retention, market share and profitability. This is consistent with Llusar et al. (2001), who stated that customer satisfaction is known to be a mediator for the relationship between firm perceived quality and customer purchase intentions. However, Cronin and Taylor (1992) (1992) stated that the literature is not consistent about what is the best causal ordering for behavioural intentions. Some say that e-service quality is a predictor of behavioural intentions, others say that customer satisfaction is a predictor of behavioural intentions and a third group says that positive evaluation of e-service quality can lead to satisfaction which in turn leads to behavioural intentions (Brady and Rovertson 2001).

#### **6.4.3 Discussion of non-parametric test on demographic profile (language)**

The results indicate that there is a significant difference in overall satisfaction between items at point-of-purchase and post-purchase for all respondents. There are also differences in these items

according to the language the respondents used in answering the survey. Grunet et al. (2004) conducted research on consumer perception of meat quality at the point-of-purchase and found that satisfaction occurred differently after customers experienced the meat (e.g. cooked the meat). There is a significant difference in the levels of overall satisfaction between point-of-purchase and post-purchase for respondents who answered the survey in Bahasa Melayu (6.4.3.2) but there are no significant differences at the same levels for English-language respondents (6.4.3.3). Further investigation is needed to investigate the factors or causes of lower levels of satisfaction when responses differ according to the language used.

Bahasa Melayu respondents showed a significantly higher level of overall satisfaction compared to the English respondents at point-of-purchase. Equally, the result shows that there were no significant differences in level of overall satisfaction between these two groups at the post-purchase stage. These results suggest that there was a bigger drop in the levels of overall satisfaction at post-purchase among the Bahasa Melayu respondents compared to the same satisfaction levels at point-of-purchase of the English respondents. This suggests further investigation should be undertaken in a future study on this decrease in the levels of overall satisfaction at post-purchase of the Bahasa Melayu respondents. It is important to determine the causes or factors behind this significant drop in overall satisfaction in this group as the Malay race (who tends to speak Bahasa Melayu) constitutes 55% of the population in Malaysia and represents a huge potential market to owners of apparel BlogSpots and websites. According to Haque and Khatibi (2006), language has an impact on online shopping in Malaysia whereas Malaysian people mostly prefer to surf the website written in Bahasa Melayu. The same argument shared by Chai et al. (2001) who stated that people less experienced with e-commerce preferred to browse an e-commerce website which used their natural language dialog.

## **6.5 RECOMMENDATIONS**

Many previous studies like that of Xia et al. (2008) divided the purchasing process into three stages: information search and alternatives evaluation stage, purchase stage and post-purchase. They believed that all these three phases affected overall satisfaction. However, in their study,

they did not measure satisfaction separately but combine all three stages (see Figure 3.1) and linked them with satisfaction. As has previously been discussed, the post-purchase stage which includes service delivery and customer satisfaction can be measured after the customer has received the product. In other words, satisfaction can be evaluated after they have experienced the service. Satisfaction at the other two stages, information search and purchase are supposedly measured at the time the customer makes their purchase. This can capture the ‘true satisfaction’ because customers experience these two stages at the time they make their purchase and not measure them after they have received the product. Bauer et al. (2006) generated an item pool recovering four phases (see Figure 3.2) to come out with the eTransQual model. However, their studies did not investigate how these four phases affected satisfaction and they do not indicate how each dimension fits into the phases. Wolfenbarger and Gilly (2003) proposed four dimension in eTailQ (see Figure 3.3, row 1). Their study proposed that customer service and security/privacy are relevant at any stages which are before, during and after the sale whereas in my study, I believe that customer service and security/privacy should not be placed in the same phase. As seen in Figure 6.2, security and privacy are experienced by customers at the point-of-purchase phase and customer service occurred at the post-purchase phase. Conversely, a study conducted by Carlson and O’Cass 2010), did not differentiate the process of buying but linked the e-service quality, customer satisfaction, attitude and behavioural intention in the context of content-driven website (see Figure 3.3).

In this study, the researcher successful comes out with a better model for measuring customer satisfaction especially in the context of online apparel businesses in Malaysia. The researcher believes that there are two phases involved in the process of buying which are at point-of-purchase where it is the process at the time customers make their purchase while post-purchase is after the customer has received the product they bought. In those two phases, the satisfaction among customers is different. This is supported from work by Kotler (1991) where satisfaction is the consequence of the customer’s experiences during various purchasing processes. In addition, Xia et al. (2008) added that satisfaction of the customer who purchases or uses the product online can be affected at every stage. Taking this into consideration, the researcher proposes that satisfaction should be measured at difference stages, at the time they make the purchase (at point-of-purchase) and after they have received the product they brought (post-purchase). Figure

6.2 provide a better model in capturing and measuring customer satisfaction in the context of an online setting especially in small online apparel businesses in Malaysia. The uniqueness of this model lies in how the researcher differentiates the phases in buying and when the data has been collected. None of the prior studies focus on point-of-purchase and post-purchase to measure customer satisfaction but many studies investigate customer satisfaction at pre-purchase and post-purchase (e.g. Mokhtarian and Tang 2011; Mavlanova et al. 2012; Robinson and Doss 2011) and some studies even measure satisfaction without considering the real customers experience. For instance, Xia et al. (2008) and Carlson and O’Cass (2010) link all the items to satisfaction although some relate to items customers had/before/during/after they experienced (see Figure 3.4 by Carlson and O’Cass (2010)). That is why satisfaction should be measured separately and comparison done to know whether their level of satisfaction and intention will decrease or increase or remain the same at both stages.

At first, the data was collected at the point-of-purchase or in other words at the time customers purchased the apparel. During this period, customers did experience the quality of the information, the design of the website, the variety of merchandise, how good the security and privacy were and were they comfortable with the payment method, their expectation of service delivery and expectation of customer service. In some previous studies (e.g Xia et al. 2008; Carlson and O’Cass 2010; Lin et al. 2012), the authors always misplace the dimension of customer service and service delivery into the wrong phases and measure them together with other phases (e.g. Figure 3.2). As has been previously noted, these two dimensions are experienced by the customers after they have received the product and should be measured separately. What customers experience before post-purchase are expected service delivery and expected customer service as they haven’t experienced the real service delivery and the real customer service yet (see Figure 6.1). At point-of-purchase, the results indicate that in the context of small apparel online in Malaysia, attitude towards the website did not influence behavioural intention and this finding contradicts the study conducted by Carlson and O’Cass (2010).

Another point of uniqueness of the research conducted was on how the researcher measured satisfaction at post-purchase separately from satisfaction at the point-of-purchase phase. The

researcher believes that there are only two dimensions experienced by customers during the post-purchase phase which are service delivery and customer service. Putting this in simple words, these two dimensions reflected satisfaction and also customer intention after they have received the product they have bought. Respondents in the post-purchase phase (Phase three) were invited to join the survey via the email address they provided at the end of the point-of-purchase survey (Phase two). Customer satisfaction and their intention at both phases were been measured. Details can be read in Chapter Four. From this comparison, the researcher can know whether satisfaction and intention will increase or decrease or remain the same at both phases. This could be done by comparing the same remaining indicators of satisfaction construct and behavioural intention construct at both phases. By doing the comparison between two phases, the researcher could know if the differences occurred in post-purchase overall satisfaction as compared to point-of-purchase for Bahasa Melayu and English respondents. However, in this study only satisfaction could be measured as its indicator remained the same in both stages.

## **6.6 DISCUSSION**

The researcher is interested in consumer attitudes at point-of-purchase, instead of the pre-sale stage, to capture respondents' true evaluation of e-service quality factors influencing the close of an on-line apparel transaction. Responses obtained at pre-sale stage tend to reflect attitudes of respondents prior to their purchase actions and the value judgements provided by these respondents may be provisional and differed from their evaluation at point-of-purchase. Therefore, to minimise potential deviation and ensure an appropriate representation of actual experience, this study focuses on the point-of-purchase stage. As an overall outcome, Figure 6.2 is a better outcome model for small online apparel businesses especially in the Malaysian context, by identifying the dimensions that fit well with the e-Services Quality construct. In addition, the model also deals with customers' satisfaction and their intention distinctly at a point-of-purchase phase and the post-purchase phase. In the point-of-purchase model, the indices goodness-of-fit provides a good model fit with Chi-square= 1325.490, CMIN/df=2.285, CFI= 0.938, RMSEA= 0.069 and SRMR= 0.046 after one non-significant path (H6) was deleted from the proposed model. Two indicators such as service delivery and customer service should be placed in the

correct phase, which is at the post-purchase phase, as customers experienced these dimensions after they received the product. The goodness-of-fit for this model indicate the model was good fit with Chi-square=151.053, CMIN/df=2.069, CFI=0.972, RMSEA=0.074 and SRMR= 0.0335. Customers’ overall satisfaction and their intention at the post-purchase phase can be seen by comparing them with the same remaining constructs of satisfaction and behavioural intention at the point-of-purchase phase and post-purchase phase. As a result, the level of satisfaction and their intention can be obtained to see whether it will increase, decrease or remain same at both phases. Furthermore, comparing demographic factors such as language can help marketers to deliver their information in the right language so that customers feel comfortable and satisfied with the websites and Blogspots. The investigation of overall satisfaction and behavioural intention as mediating variables can give more understanding of how well these mediating variables affect satisfaction and intention among customers.

Based on the eight factors (gb, info, wd, ma, tc, sp, eds and ecs) in the Malaysian context, transaction capability and payment (tc) need to be well maintained as this is the main factor that customers really look for. This is due to the high  $R^{27}$  which is 0.96 in statistical value among other construct (see Appendix 7). There should be more effort made on providing many options for customers as to proof of their payments on to the websites, such as email, SMS, etc. The website should also provide for customers a payment system that they are comfortable with. A long waiting time before delivery should be avoided. A business owner should have not only a good transaction capability and payment, but should also offer customers varieties of choices with affordable prices and should provide extra incentives to purchase, such as discount offering and collecting bonus points.

Table 6.11 Differences in strength of relationships

<b>Relationships</b>	<b>Factor loadings</b>
E-service quality – overall satisfaction	0.91

<sup>7</sup>  $R^2$  is also known as multiple square correlations. This shows the r-squared for each directional arrow coming to it.

E-service quality –behavioural intention	0.60
E-service quality – attitude towards the website	0.60
Overall satisfaction – attitude towards the website	0.25
Overall satisfaction – behavioural intention	0.39

Concerning the direct effect of e-service quality, the study identified eight drivers of e-service quality that impact significantly on overall satisfaction. As previously stated, transaction capability and payment appeared to be most important indicators among other indicators in e-service quality construct (e.g. gb, wd, ma and etc.) More specifically, e-service quality with transaction capability and payment appeared to be more strongly linked to overall satisfaction compared to attitude towards the website and behavioural intention. This can be seen from Table 6.11 where the strength of relationship between e-service quality and overall satisfaction was recorded with the highest factor loading (0.91 in statistical value) compared to other e-service quality relationships (e-service quality – attitude towards the website and e-service quality – behavioural intention). This is consistent with consumer behaviour literature suggesting that cognitive evaluations precede emotional responses and that quality is a strong antecedent of satisfaction (Carlson and O’Cass 2010, Gounaris et al. 2008; Kassim and Nor 2011; Bai et al. 2008). Nevertheless, Wu (2011) believed that e-service quality did not affect customer satisfaction directly but had an indirect effect, or in other words, customer satisfaction plays a mediating role in the relationships among e-service quality.

Furthermore, there has been a direct link between the overall satisfaction and behavioural intention showed to be stronger compared to the overall satisfaction and attitude towards the website (see Table 6.11). In the findings of Teimouri et al. (2012), Carlson, O’ Class (2010) and many other authors (e.g. Collier and Biestock 2006; Loiacono et al. 2007; Bansal et al. 2004), they confirm the existing studies that there is a strong relationship between overall satisfaction and behavioural intention. In regards to this, my study found that satisfied customers lead to intention to use the websites (e.g. to revisit the website, spread positive things about the website).

Regarding the direct effects, there are findings that indicate that there are indirect effects of e-services quality on behavioural intention, through overall satisfaction. These results have showed partial support for a mediating role. It has been suggested that the measurement of overall satisfaction should be done separately from e-service when determining the evaluation of customers e-service delivery (Carlson and O'Class 2011). According to Carlson & O'Class (2011 & 2010) and Olorunniwo et al. (2006), it was added that the satisfaction is more of a predictor for behavioural intention while e-service quality is closely related to specific evaluation about the services. In other words, online retailers are recommended to devise operations and marketing strategies that focus on the dominant e-service quality dimensions in order to enhance satisfaction among customers and, in turn, foster positive behavioural intention.

The results shown from statistical procedures that testing the mediating effect clearly indicate that the mediating role of overall satisfaction on relationships between e-service quality and attitude towards the website are significant. This suggests that customer satisfaction is a partial mediating variable when explaining the relationship between e-service quality and attitude towards the website. This approach is also important in predicting online apparel shoppers attitude as supported by Hur et al. (2011) who believe that cognitive evaluations precede emotional responses. For instance, a recent study by Hur et al. (2011) found that satisfaction plays a role as a mediating variable between sport website quality and perceived value.

Based on service delivery and customer service in the post-purchase phase, online marketers should focus more on providing a good service delivery for customers and this can be proven from the highest value of  $R^{28}$  which was recorded for service delivery, 0.95 in statistical value (see Appendix 6). On the other hand, customers do really stress the importance of having good quality service delivery especially in packaging the item. A prior study was conducted by Parasuraman et al. (2005) who stated that the product should be delivered well packaged. In reality customers have the best intentions on their packaged items they brought because they are afraid the texture of the fabric will be damaged especially scarfs which need to be a well handled and well packaged. According to Meuter et al. (2000), it's just not about keeping promising about delivery orders but the efficiency of service delivery has also been affected by the proper

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<sup>8</sup>  $R^2$  is also known as multiple square correlations. This shows the r-squared for each directional arrow coming to it.

condition of the product. Also, customers should be notified when the item is ready or has been delivered and businesses should keep their promises.

Lastly, this thesis has investigated the impact of language on overall satisfaction between point-of-purchase and post-purchase using non-parametric test. Firstly, it has compared overall satisfaction items between point-of-purchase and post-purchase for all respondents' showing that a difference exist in these items. The results also indicate that there is a difference in respondents who answered the survey in Bahasa Melayu on overall satisfaction at point-of-purchase phase and post-purchase phase but no difference was recorded for respondents who answered the survey in English on the both phases. This has opened a further investigation on the causes of lower levels of satisfaction when responses differ according to the language used. In additions, these results have shown a difference recorded for respondents who answered survey in Bahasa Melayu and English at point-of-purchase. Seemingly, when comparing the two languages at post-purchase, no difference was recorded and this also suggests further investigation for future research to study the cause of this.

## **6.7 MANAGERIAL IMPLICATIONS**

From a managerial perspective, this thesis highlights the importance of providing good quality service, particularly in selling apparel online. According to Cronin et al. (1992), service providers should know how to setup their objective clearly: whether to have customers satisfied with the business or to deliver the maximum level of perceived service quality. Therefore, this research helps the marketing practitioner by providing models that enable them to better understand their consumers on what is the best e-service attraction for them, and how to react with it in the online environment. They can also increase their levels of awareness on e-service quality, its antecedents, consequences and mediators. Since this study corresponds with previous studies (White 2010); that service quality has a significant impact on behavioural intentions and satisfaction - managers should take this into consideration for maintaining and improving competitive advantage. According to Olorunniwo et al.(2006), managers should plan operation strategies which focus on the dimensions of service quality that boost customer satisfaction

which can in turn lead to positive behavioural intentions. In other words, if customers are satisfied with the service, they will become loyal, revisit and recommend to others. Furthermore, managers can use this framework to create benchmarks against which they can evaluate their own website. By doing so, they can identify their competitive strengths and weaknesses from the customers' viewpoints regarding the e-service quality, satisfaction and also intention at the time customers make their purchase (point-of-purchase) and after customer received the products (post-purchase). This kind of information will help them to improve their online presence.

For example, managers should focus more on providing a good service on transaction capability and payment. Customers should experience the convenience of using their payment options and having multiple choices in providing proof of their payment. Further, managers can attract customers by reserving the item with a deposit payment and the waiting time between the actions and response should not be too long. Management should also offer an assortment of products with the lowest price compared with similar websites. This thesis also suggests that online marketers should create incentive programs to capture new customers or to retain existing ones. Such incentives could include discount offerings and collecting bonus points. This is supported by Kim and Kim (2004) and Gounaris et al. (2010) who stated that incentive programs like discounts for the first-time buyers and reward programs not only can create loyal customers but can also convert newcomers to become regular customers. Managers should also consider the post-purchase phase by providing customers with a better service on delivery and post-sales customer service.

## **6.8 LIMITATIONS AND FUTURE RESEARCH DIRECTIONS**

The results of this study cannot be interpreted without taking into account its limitations. Nevertheless, they open the door for future research. First, this study attempted to investigate e-service quality within the e-retail product category of apparel. However, the perceptions of customers on e-service quality might be different across product categories. Hence, research should examine different product categories to find if similarities or differences exist to the

findings in this study. Such research will shed new light into the operation of e-service quality across e-service contexts.

A second limitation was the timing between conducting Survey Two (October 2011) and Survey Three (January 2012). Respondents who participated in this study were asked to recall their recent online shopping experience after receiving the product. Therefore, the results might not fully reflect what consumers actually experienced at the post-purchase stage.

Third, the sample was among Malaysian consumers and, as a developing country, it may not be representative of the general, global population of online shoppers. The analytical results presented here thus may have limited general effect. Future research is thus needed to examine differences and similarities in developed countries or other developing countries.

Fourth, the sample obtained from this study is not balanced, especially in demographic profiles. Examination based on demographic profiles such as gender, race and education cannot be performed due to the imbalance in sample size. Further research could investigate these factors as some previous studies found that they affected levels of satisfaction (Hernandez et al. 2010; Karatepe 2011).

Finally, the comparison between point-of-purchase (Survey Two) and post-purchase (Survey Three) on overall satisfaction and behavioural intentions cannot be done using SEM because the congeneric models for behavioural intentions on the surveys did not provide the same remaining indicators.

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## APPENDICES

### Appendix 1

#### Interview Questions

##### Interview guide:

##### **Participant:**

Group 1: 5 owner of BlogSpot

Group 2: 5 owner of website

**Time:** 60 to 90 minutes

**Style of conduct:** Telephone interview or web-conferencing or in-person (wherever is necessary)

##### **Introduction:**

This study is intended to address the following purposes:

1. To obtain the information and features
2. How important for achieving satisfaction from online customers.

In my research context, a small online business is a business that is privately operated or owned by groups of people with not more than 10 employees, and which market their products online. They might be using presence media such as BlogSpot to commercialize their products or they may have hired a developer to develop their site only, but in terms of management, they will manage it by themselves.

In the context of this study, overall satisfaction refers to the three stages which are stage 1: information and alternative evaluation, stage 2: purchase and stage 3: post-purchase which consider with consider the customer's behaviour and Internet's online shoppers.

The result of the study will be used to develop further study on how these factors affect customers' satisfaction during their purchasing and will be tested with the online customers who have experienced buying online through BlogSpot or website.

#### **Part 1: Background of the business**

1. Name of the respondent
2. Name of the website
3. How long have been engaged in this online business? (Months/Years)
4. Why choosing Blogspot/Website as medium to sell your products?
5. Does your customers are from many races?

6. Does your customers stick to women only?

## **Part 2: Framework**

### ***STAGE 1: INFORMATION SEARCH AND ALTERNATIVES EVALUATIONS***

#### *1.1 Information Quality*

- 1.1.1 Do you placed info at your website/ blogshop?
- 1.1.2 What type of info do you placed on it?
- 1.1.3 Why do you placed that info on your website/blogshop?
- 1.1.4 How do you provide the info?
- 1.1.5 Do you update your info? Regularly? Often? Why you do so?
- 1.1.6 Perception: Do you think providing with the quality information will lead to the customer satisfaction? Why do you think so?

#### *1.2 Website design*

- 1.2.1 Who designed the website/blogshop? Designed internally via a package, a consultant or perhaps by a friend
- 1.2.2 Do you found color combination is important in designing your website/blogshop?  
If yes-why it is important  
If not- what makes it's not important to you
- 1.2.3 Do you found by providing navigation tool is important in designing your website/blogshop?  
If yes- why it is important  
If not- what makes it's not important to you
- 1.2.5 Perception: Do you think by providing with the usability website/blogshop will satisfy your customer? Why do you think so? Explain.

#### *1.3 Merchandise Apparels*

- 1.3.1 What criteria of your product you placed on your website/blogshop?
- 1.3.2 Why do you provide that criteria? Explain.
- 1.3.3 Does your website/blogshop offers a variety of apparel?  
If yes- why  
If not- what hinder you from this?

- 1.3.4 How are you going to attract your new customers and to retain loyal customers?
- 1.3.5 Perception: Do you believe that providing with the merchandise attributes will lead to the customer satisfaction? Explain

**STAGE 2: PURCHASE**

2.1 Transaction capability

- 2.1.1 What transaction capability do you offered in your website/blogshop?
- 2.2.2 Why do you provide it?
- 2.2.3 Perception: Do you believe providing with the transaction capability will lead to the customer satisfaction? Why? Explain.

2.2 Response

- 2.2.1 Customers will communicate with you if they are interested to buy your products. How do you response to their queries?
- 2.2.2 How long you will take to response to your customers?
- 2.2.3 What can you do to fast response?
- 2.2.4 Perception: Do you believe that delay in response can affect the customer satisfaction? Why? Explain.

2.3 Security/privacy

- 2.3.1 Do you provide security/ privacy during the purchasing on your website/ blogshop?
- 2.3.2 What type of security/privacy?
- 2.3.3 How do you convince your customers about their privacy and security info?
- 2.3.4 Perception: Do you believe that, keeping customers information can lead to the customer satisfaction? Why do believe that?

2.4 Payment

- 2.4.1 Do you provide payment mechanism on your website/blogshop?
- 2.4.2 What kind of payment do you offered on your website/blogshop?

- 2.4.3 Perception: Do you believe that providing with the better and secure payment mechanism will affect customer satisfaction? Why? Explain.

### ***STAGE 3: POST-PURCHASE***

#### 3.1 Delivery

3.1.1 Do you offer service delivery?

3.1.2 What type of delivery do you offered?

3.1.3 How do you make your customer happy with your service delivery?

3.1.4 Do you provide tracking order for your customers?

If yes-why do you do that?

If not- what hinder you from that?

3.1.5 Perception: Do you believe that providing with the better delivery will affect the customer satisfaction? Why? Explain.

#### 3.2 Customer service

3.2.1 Do you have customer service?

3.2.2 What type of customer service do you have?

3.2.3 Do you response your customer's complaint promptly? Why?

3.2.4 Perception: Do you believe that, providing with the good customer service will help online shopping customer satisfaction? Why? Explain.

### ***OVERALL SATISFACTION***

1. Can you define in your own words what customer satisfaction is?
2. Do you believe considering customer satisfaction issues can help your business sustain in the marketplace?
3. Besides providing with the good info, security/privacy, customer service and delivery, what other factor do you think will have a positive effect on customer satisfaction?

## Appendix 2a

### Phase 2 survey (Point-of-purchase) in Bahasa Melayu

#### PENGENALAN

Secara umumnya, kajian penyelidikan ini melibatkan dua peringkat pengumpulan data. Pada peringkat pertama ini, tujuan kajian adalah untuk menyiasat kepuasan pelanggan semasa mereka melakukan pembelian pakaian daripada laman web. Segala maklumat yang diberikan akan dirahsiakan tidak akan digunakan untuk tujuan lain.

Satu soal selidik susulan (peringkat kedua) akan dijalankan dalam masa tiga-enam bulan dari sekarang. Jika anda berminat dan sudi untuk menyertainya, anda diminta untuk memberikan alamat emel pada akhir soalan soal selidik ini. Anda akan dihubungi melalui alamat emel yang diberikan untuk menyertai soal selidik peringkat kedua nanti. Buat pengetahuan anda., tujuan utama alamat emel anda diperlukan adalah untuk memadankan jawapan yang anda berikan pada soal selidik peringkat pertama. Anda tidak perlu kluatir kerana selepas proses pepadanan jawapan selesai, alamat emel anda akan dihapuskan daripada sistem.

#### \* 1. Perhatian!!!

##### Pernahkah anda mengisi soal selidik ini?

Tidak (No)    Ya (yes)

#### \* 1. Kepercayaan umum mengenai pembelian secara atas talian

	Sangat tidak setuju	tidak setuju	sedikit tidak setuju	neutral	sedikit setuju	setuju	sangat setuju
1. Saya percaya bahawa pembelian atas talian adalah sangat mudah	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>				
2. Saya percaya bahawa pembelian secara atas talian adalah selari dengan stail hidup saya	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Saya percaya bahawa pembelian atas talian membolehkan saya mendapatkan harga yang berpatutan	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Saya percaya bahawa pembelian atas talian berisiko tinggi	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Saya percaya bahawa pembelian atas talian memberikan perkhidmatan yang lebih baik berbanding dengan pembelian di kedai-kedai.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



#### \* 4. Kepelbagaian Barangan

	Sangat tidak setuju	tidak setuju	sedikit tidak setuju	neutral	sedikit setuju	setuju	sangat setuju
1. Laman web ini menawarkan harga barangan yang lebih berpatutan berbanding dengan Laman web yang lain.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Laman web ini menawarkan insentif tambahan seperti diskaun dan pengumpulan mata bonus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Laman web ini menawarkan insentif tambahan dengan menawarkan hadiah melalui peraduan pelanggan	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Laman web ini menawarkan rangkaian produk yang komprehensif	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Laman web ini menawarkan banyak pilihan barangan	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>				
6. Laman web ini membenarkan saya untuk menyimpan item selama 2-3 hari	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

#### \* 1. Keupayaan Transaksi dan Pembayaran

	Sangat tidak setuju	tidak setuju	sedikit tidak setuju	neutral	sedikit setuju	setuju	sangat setuju
1. Laman web ini membenarkan pelanggan menyimpan item dengan mendahulukan deposit yang minimum	<input type="radio"/>						
2. Laman web ini menyediakan pelbagai pilihan pembayaran seperti kos penghantaran pos, pembayaran transaksi atas talian dan pembayaran tunai semasa penghantaran.	<input type="radio"/>						
3. Saya berasa selesa menggunakan pilihan pembayaran yang ditawarkan di laman web tersebut	<input type="radio"/>						
4. Saya mempunyai banyak pilihan untuk mengemukakan bukti pembayaran kepada laman web tersebut (contoh melalui email, sms dll)	<input type="radio"/>						
5. Saya tidak perlu menunggu lama untuk laman web tersebut untuk bertindak balas	<input type="radio"/>						

**\*2. Keselamatan/ Privasi**

	Sangat tidak setuju	tidak setuju	sedikit tidak setuju	neutral	sedikit setuju	setuju	sangat setuju
1. Saya berasa selamat untuk melakukan transaksi di laman Web tersebut	<input type="radio"/>						
2. Laman web tersebut mempunyai ciri-ciri keselamatan yan secukupnya	<input type="radio"/>						
3. Laman web tersebut menyediakan tema dan syarat yang jelas.	<input type="radio"/>						
4. Saya berasa maklumat peribadi saya di laman web tersebut selamat	<input type="radio"/>						

**\*3. Jangkaan Perkhidmatan Penghantaran**

	Sangat tidak setuju	tidak setuju	sedikit tidak setuju	neutral	sedikit setuju	setuju	sangat setuju
1. Laman web tersebut menawarkan banyak pilihan untuk perkhidmatan penghantaran seperti pos biasa, pos laju dan penghantaran ke rumah	<input type="radio"/>						
2. Laman web tersebut menawarkan harga yang standard untuk perkhidmatan penghantaran	<input type="radio"/>						
3. Laman web tersebut menyediakan tema dan syarat yang jelas untuk perkhidmatan penghantaran	<input type="radio"/>						
4. Laman web tersebut menawarkan perkhidmatan penghantaran percuma jika pelanggan membeli lebih daripada satu item	<input type="radio"/>						

**\*4. Jangkaan Perkhidmatan Pelanggan**

	Sangat tidak setuju	tidak setuju	sedikit tidak setuju	neutral	sedikit setuju	setuju	sangat setuju
1. Jika saya tidak berpuas hati dengan pembelian, laman web tersebut menjanjikan bayaran balik	<input type="radio"/>						
2. Jika saya tidak berpuas hati dengan produk yang dibeli, laman web tersebut menjanjikan untuk pertukaran dengan produk yang baru	<input type="radio"/>						
3. Laman web tersebut menyediakan penjejakan produk secara atas talian	<input type="radio"/>						

### \*1. Sikap

	Sangat tidak setuju	tidak setuju	sedikit tidak setuju	neutral	sedikit setuju	setuju	sangat setuju
1. Laman web tersebut sangat bagus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Saya mempunyai tanggapan yang positif terhadap laman web tersebut	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Penggunaan laman web tersebut sangat berguna untuk saya	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Menggunakan laman web tersebut untuk membeli pakaian adalah sangat efisien	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Idea untuk membeli di Internet sangat disukai oleh saya	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>				
6. Saya dapati bahawa menggunakan Internet untuk membeli di laman web tersebut sangat menghiburkan	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### \*2. Kepuasan Keseluruhan

	Sangat tidak setuju	tidak setuju	sedikit tidak setuju	neutral	sedikit setuju	setuju	sangat setuju
1. Saya berasa gembira membuat pembelian di laman web tersebut	<input type="radio"/>						
2. Secara keseluruhan, saya berpuas hati dengan pembelian pakaian di laman web tersebut	<input type="radio"/>						
3. Secara umumnya, saya gembira dengan kualiti perkhidmatan yang disediakan oleh laman web tersebut	<input type="radio"/>						

### \*3. Kelakuan Tindakan

	Sangat tidak setuju	tidak setuju	sedikit tidak setuju	neutral	sedikit setuju	setuju	sangat setuju
1. Saya akan menggunakan laman web tersebut untuk membeli pakaian pada masa hadapan	<input type="radio"/>						
2. Saya akan mengesyorkan kepada rakan-rakan dan keluarga untuk menggunakan laman web tersebut untuk membeli pakaian	<input type="radio"/>						

**1. Jantina**

Lelaki

Perempuan

**\*2. Bangsa**

Melayu

Cina

India

Lain-lain

**\*3. Status perkahwinan**

Bujang

Lain-lain

Berkahwin

**\*4. Umur**

<18 tahun

18 to 24 tahun

25 to 30 tahun

31 to 36 tahun

37 to 42 tahun

>42 tahun

**\*5. Pendidikan tertinggi**

Sek rendah

Sijil

Diploma

Ijazah

Sarjana

lain-lain

**\*6. Kekerapan anda membeli di laman web dalam masa 6 bulan lepas?**

1-2

3-5

6-10

lebih daripada 10

**\*7. Pendapatan bulanan**

RM501-

RM2001-

RM40001-

RM6001-

RM8001-

Lebih daripada RM10000

Kurang RM  
500

RM2000

RM 4000

RM6000

RM8000

RM10000

**\*8. Secara kebiasaannya, berapa banyak perbelanjaan anda untuk membeli pakaian secara atas talian? (How much normally you spent to purchase apparel online?)**

RM51-

RM151-

RM251-

RM351-

RM451-

RM551-

Lebih RM651

Kurang RM50

RM150

RM250

RM350

RM450

550

RM650

**\*9. Berapakah perbelanjaan terkini yang anda belanjakan untuk membeli pakaian secara atas talian?**

Kurang

RM51-

RM151-

RM251-

RM351-

RM451-

RM551-

Lebih

RM50

RM150

RM250

RM350

RM450

550

RM650

RM651

TERIMA KASIH KERANA SUDI MELUANGKAN MASA MENJAWAB SOAL SELIDIK INI.

(THANK YOU FOR YOUR TIME. HAVE A GREAT DAY AHEAD! )

**\* 1. Adakah anda berminat untuk menyertai soal selidik susulan yang akan dijalankan 3-6 bulan dari sekarang?**

1. Ya (jika ya, sila kemukakan alamat emel pada kotak di bawah)

Alamat emel

2. Tidak

**Appendix 2b**  
**Phase 2 survey (Point-of-purchase phase) in English**

**1. INTRODUCTION**

This research employs two stages of data collection. This is the first stage of the project where the purpose is to examine the overall satisfaction among customers at the time they have purchased apparel from the Internet. Please note that all the information given is secure, will be treated confidentially and not been used for other purposes.

A follow up survey will be run in three-six months. If you are interested and willing to participate in it, please provide us with your email at the end of the survey. You will be contacted via email to participate. Your email addresses is only required to contact you and to match your answer with the results from the first survey and the rest of your data, will be kept confidential

**\* 1. Attention!!!**

**Have you answered this survey before?**

Yes

No

**2. E-SERVICE QUALITY**

**\* 1. General Belief About Online Shopping**

	strongly disagree	disagree	slightly disagree	neutral	slightly agree	agree	strongly agree
1. I believe that shopping over the internet is easy	<input type="radio"/>						
2. I believe shopping online is compatible with my lifestyle	<input type="radio"/>						
3. I believe shopping online allows me to get a better price.	<input type="radio"/>						
4. I believe that the risk of purchasing online is very high	<input type="radio"/>						
5. I believe that Internet shopping provides better service quality than in-store shopping	<input type="radio"/>						

**\*2. Information Quality**

	strongly disagree	disagree	slightly disagree	neutral	slightly agree	agree	strongly agree
1. I believe that the website provides accurate information.	<input type="radio"/>						
2. The information provides on the website is reliable	<input type="radio"/>						
3. The information provided on the website is easily understood	<input type="radio"/>						
4. The website contains all the information that I need for the purpose of my purchase decision	<input type="radio"/>						
5. The information on the website is relevant.	<input type="radio"/>						

**\*3. Website Design**

	strongly disagree	disagree	slightly disagree	neutral	slightly agree	agree	strongly agree
1. I like the layout of the website	<input type="radio"/>						
2. The design of the website is creative	<input type="radio"/>						
3. The display pages within the website are easy to read	<input type="radio"/>						
4. The start page easily leads me to the information I need	<input type="radio"/>						
5. It is easy to move around in this website	<input type="radio"/>						
6. This website uses a good colour combination	<input type="radio"/>						
7. The website is easy to use	<input type="radio"/>						
8. The website loads quickly	<input type="radio"/>						

#### \*4. Merchandise Attributes

	strongly disagree	disagree	slightly disagree	neutral	slightly agree	agree	strongly agree
1. This website offers comparatively low prices for their merchandise compared to other websites	<input type="radio"/>						
2. This website provides extra incentives to purchasing such as discount offers and the collection of bonus points	<input type="radio"/>						
3. This website provides extra incentive to purchase through prizes from customer contests	<input type="radio"/>						
4. The range of products in this web site is comprehensive	<input type="radio"/>						
5. There are many choices for different types of merchandise on the website	<input type="radio"/>						
6. This website allows me to reserve items for 2-3 days	<input type="radio"/>						

### 3. SERVICE QUALITY

#### \*1. Transaction Capability and Payment

	strongly disagree	disagree	slightly disagree	neutral	slightly agree	agree	strongly agree
1. This website allows customers to reserve items with a minimum deposit requirement.	<input type="radio"/>						
2. This website provides several options for payment such as post office remittance, online payment and cash on delivery	<input type="radio"/>						
3. I feel comfortable using the payment options provided by the website	<input type="radio"/>						
4. I have many options to receive proof of my payment to the website (such as email, sms etc.)	<input type="radio"/>						
5. When I use the website, the waiting time between my actions and the website response is very fast	<input type="radio"/>						

**\* 2. Security/Privacy**

	strongly disagree	disagree	slightly disagree	neutral	slightly agree	agree	strongly agree
1. I feel secure doing transactions with this website	<input type="radio"/>						
2. The website has adequate security features	<input type="radio"/>						
3. This website provides clear and understandable terms and conditions	<input type="radio"/>						
4. I feel my personal information is secure on this website.	<input type="radio"/>						

**\* 3. Expected Service Delivery**

	strongly disagree	disagree	slightly disagree	neutral	slightly agree	agree	strongly agree
1. The website offers many options for the delivery service such as standard post, express delivery and home delivery.	<input type="radio"/>						
2. The website offers a standard price for the delivery service	<input type="radio"/>						
3. The website provides clear terms and conditions for delivery service	<input type="radio"/>						
4. The website offers free service delivery if the customers purchase more than one item	<input type="radio"/>						

**\* 4. Expected Customer service**

	strongly disagree	disagree	slightly disagree	neutral	slightly agree	agree	strongly agree
1. If I am not satisfied with my purchases, this website guarantees me a refund	<input type="radio"/>						
2. If I am not satisfied with the products, this website guaranteed an exchange	<input type="radio"/>						
3. The website provides online tracking for products.	<input type="radio"/>						
4. Sales personnel are ready and willing to respond to customer needs.	<input type="radio"/>						
5. There are many options on how to make contact with customer service such as chat room, email and phone	<input type="radio"/>						

**4. ATTITUDE, SATISFACTION AND BEHAVIORAL INTENTION**

**\* 1. Attitude**

	strongly disagree	disagree	slightly disagree	neutral	slightly agree	agree	strongly agree
1. This is a nice web site	<input type="radio"/>						
2. I have a positive attitude towards the website	<input type="radio"/>						
3. I think that using the website is beneficial to me	<input type="radio"/>						
4. Using the website to purchase apparel online is efficient	<input type="radio"/>						
5. I like the idea of using the Internet to shop from the website	<input type="radio"/>						
6. I find using the Internet to shop from the website is appealing	<input type="radio"/>						

**\* 2. Satisfaction**

	strongly disagree	disagree	slightly disagree	neutral	slightly agree	agree	strongly agree
1. I enjoyed purchasing using the website	<input type="radio"/>						
2. Overall, I am satisfied using the website to purchase apparel	<input type="radio"/>						
3. In general, I was pleased with the quality of the service that the website provided	<input type="radio"/>						

**\* 3. Behavioral Intention**

	strongly disagree	disagree	slightly disagree	neutral	slightly agree	agree	strongly agree
1. I will use this website for future online purchase of apparel items	<input type="radio"/>						
2. I will recommend this website to friends and family for online purchase of apparel items	<input type="radio"/>						
3. I would like to become a regular customer of this website	<input type="radio"/>						
4. I would not consider switching to another similar web site	<input type="radio"/>						
5. I will say positive things about the web site	<input type="radio"/>						

**5. INTERNET SHOPPER'S PROFILE**

**\* 1. Gender**

Male

Female

**\* 2. Race**

- Malay  Chinese  Indian  Other

**\* 3. Marital status**

- Single  Married  Other

**\* 4. Age**

- <18 years old  18 to 24 years old  25 to 30 years old  31 to 36 years old  37 to 42 years old  >42 years old

**\* 5. Highest education**

- Secondary  Certificate  Diploma  Degree  Master  PHD  Others

**\* 6. How many times have you used the online store in the last 6 months?**

- 1-2  3-5  6-10  Above 10

**\* 7. Monthly income**

- Below RM 500  RM501- RM2000  RM2001- RM 4000  RM40001- RM6000  RM6001- RM8000  RM8001- RM10000  Above RM10000

**\* 8. How much normally you spent to purchase apparel online?**

- Below RM50  RM51- RM150  RM151- RM250  RM251- RM350  RM351- RM450  RM451- 550  RM551- RM650  Above RM651

**\* 9. How much did you spent on this current purchase?**

- Below RM50  RM51- RM150  RM151- RM250  RM251- RM350  RM351- RM450  RM451- 550  RM551- RM650  Above RM651

**6. END OF SURVEY**

THANK YOU FOR YOUR TIME. HAVE A GREAT DAY AHEAD!

**\* 1. Would you like to participate in the second survey which be held in 3-6 months from now?**

- 1.Yes (if yes, please enter your email address below)  
 2.No

Email:

## Appendix 3a

### Phase 3 survey (Post-purchase phase ) in Bahasa Melayu

**PENGENALAN**

Pertama sekali, terima kasih diucapkan kepada anda kerana sudi untuk menyertai soal selidik kali kedua ini. Anda diminta untuk Mengemukakan alamat emel pada kotak di bawah. Sila ambil perhatian, maklumat yang anda berikan adalah rahsia walaupun anda mengemukakan alamat emel anda. Tujuan alamat emel diperlukan adalah untuk memandangkan jawapan yang anda berikan pada soal selidik yang pertama. Setelah selesai proses pepadanan data dilakukan, alamat emel anda akan terus dipadamkan daripada sistem. Segala maklumat yang anda diberikan hanya akan digunakan untuk tujuan penyelidikan ini sahaja.

**\*1. Alamat emel anda**

**SELEPAS PEMBELIAN**

**\*2. Perkhidmatan Penghantaran**

	Sangat Tidak setuju	Tidak Setuju	Sedikit Tidak setuju	Neutral	Sedikit setuju	Setuju	Sangat setuju
1. Barangan yang dibeli telah dihantar seperti masa yang telah dijanjikan oleh pihak laman web tersebut	<input type="radio"/>						
2. Item yang dibeli dibungkus dengan rapi oleh laman web tersebut	<input type="radio"/>						
3. Saya telah diberitahu oleh pihak laman web tersebut bila barangan yang dibeli akan dihantar oleh pihak laman web tersebut	<input type="radio"/>						
4. Saya telah menerima barangan yang dipesan seperti yang saya dipaparkan di laman web tersebut	<input type="radio"/>						

**\*3. PERKHIDMATAN PELANGGAN**

	Sangat Tidak setuju	Tidak Setuju	Sedikit Tidak setuju	Neutral	Sedikit setuju	Setuju	Sangat setuju	N/A
1. Khidmat pelanggan di laman web tersebut sentiasa membantu saya jika saya mempunyai masalah	<input type="radio"/>							
2. Semua pertanyaan dijawab dengan baik oleh laman web tersebut	<input type="radio"/>							
3. Pautan penjejakan barang secara atas talian berfungsi dengan baik di laman web tersebut		<input type="radio"/>	<input type="radio"/>					

4. Perniaga di laman web tersebut  
 mampu menguruskan aduan pelanggan dengan  
 dengan berkesan dan cepat ☐

**\*4. KESELURUHAN KEPUASAN**

	Sangat Tidak setuju	Tidak Setuju	Sedikit Tidak setuju	Neutral	Sedikit setuju	Setuju	Sangat setuju
1. Saya berasa gembira membuat pembelian di lama web tersebut	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Secara keseluruhan, saya telah berpuas hati dengan pembelian pakaian di laman web tersebut		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Secara umumnya, saya gembira dengan kualiti perkhidmatan yang disediakan oleh laman web tersebut	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**\*5. KELAKUAN TINDAKAN**

	Sangat Tidak setuju	Tidak Setuju	Sedikit Tidak setuju	Neutral	Sedikit setuju	Setuju	Sangat setuju
1. Saya akan menggunakan laman web tersebut untuk membeli pakaian pada masa hadapan	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Saya akan mengesyorkan kepada rakan-rakan dan keluarga untuk menggunakan laman web tersebut untuk membeli pakaian	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Saya berminat untuk menjadi pelanggan tetap di laman web tersebut	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Saya tidak berminat untuk menukar laman web yang lain untuk membeli pakaian	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5. Saya akan beritahu perkara yang positif mengenai laman web tersebut



1

2

3

4

5

1

2

3

4

5

6

1

2

3

4

5

6

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7

## Appendix 3b

### Phase 2 survey (Post-purchase phase) in English

INTRODUCTION								
<p>First of all, thank you for your willingness to participate in this second survey. You are requested again to provide us with your email address. Please note that your identity will be confidential even though you have provided us with your email address, which we will use to match your responses to the first survey. Once the survey is completed and the responses matched, your email address will be deleted.</p> <p>Please be aware that, all your responses will not be used for other purposes except for this research only.</p>								
<p><b>* 1. Your email address</b></p> <input type="text"/>								
POST-PURCHASE								
<p><b>* 2. Service Delivery</b></p>								
	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	
1. The product was delivered on time as promised by the website	<input type="radio"/>							
2. The items sent were properly packaged	<input type="radio"/>							
3. I was notified when the items were to be delivered	<input type="radio"/>							
4. I received what I ordered from the website	<input type="radio"/>							
<p><b>* 3. Customer Service</b></p>								
	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree	N/A
1. Customer service personnel were always willing to help me	<input type="radio"/>							
2. Inquiries were answered promptly	<input type="radio"/>							
3. The online tracking link worked well	<input type="radio"/>							
4. The business was able to handle customer complaints directly and immediately	<input type="radio"/>							
SATISFACTION AND BEHAVIORAL INTENTION								

**\*4. Satisfaction**

	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree
1. I enjoyed purchasing using the website	<input type="radio"/>						
2. Overall, I was satisfied using the website to purchase apparel	<input type="radio"/>						
3. In general, I was pleased with the quality of the service the website provided	<input type="radio"/>						

**\*5. Behavioural Intention**

	Strongly disagree	Disagree	Slightly disagree	Neutral	Slightly agree	Agree	Strongly agree
1. I will use this website for future online purchase of apparel items	<input type="radio"/>						
2. I will recommend this website to friends and family for online purchase of apparel items	<input type="radio"/>						
3. I would like to become a regular customer of this website	<input type="radio"/>						
4. I would not consider switching to another similar website	<input type="radio"/>						
5. I will say positive things about the website	<input type="radio"/>						

**END OF SURVEY**

THANK YOU FOR YOUR TIME. HAVE A GREAT DAY AHEAD!

## Appendix 4a

### Email's letter and link survey (Point-of-purchase survey)

Assalamualaikum dan salam sejahtera

Saya perkenalkan diri saya.Saya, Noorshella Che Nawi (3833101), pelajar jurusan PhD dari Victoria University, Melbourne, Australia sedang menjalankan penyelidikan mengenai **Kerangka kerja Kepuasan Pelanggan: Perniagaan Pakaian Secara Kecil-kecilan di Atas Talian di Malaysia (A Framework for Customer Satisfaction: Small Online Apparel Businesses In Malaysia).**

Saya ingin memohon jasa baik dan sokongan daripada anda untuk membantu saya dalam kajian peringkat Doktor Falsafah (PhD). Anda tidak perlu khuatir,segala maklumat yang diberikan termasuklah alamat email anda akan terus dipadamkan setelah selesai kajian ini dilalukan

#### **Serba sedikit mengenai kajian yang saya jalankan ini.**

Buat pengetahuan rakan-rakan, kajian yang saya jalankan ini adalah sebagai langkah untuk membantu peniaga-peniaga di Malaysia terutamanya yang menjalankan perniagaan pakaian secara online dalam mengenalpasti tahap kepuasan pelanggan yang membeli secara online. Ianya merupakan sebagai medium kepada pelanggan anda untuk memberikan pendapat mereka mengenai kepuasan mereka terhadap perniagaan yang anda jalankan. Buat maklumat anda juga, segala hasil kajian ini akan dijadikan sebagai panduan kepada peniaga-peniaga pakaian atas talian di Malaysia tentang bagaimana untuk meningkatkan kepuasan pelanggan merek dan hasil kajian ini juga akan diterbitkan di journal profesional dengan nama dan segala maklumat yang diberikan akan dirahsiakan.

#### **Terdapat 4 objektif yang ingin dicapai melalui soal selidik atas talian ini iaitu:**

1. Untuk membangunkan satu kerangka kerja yang menyumbang kepada kepuasan pelanggan dalam perniagaan pakaian di atas talian di Malaysia

2. untuk mengakses tahap kepuasan pelanggan terhadap perniagaan pakaian atas talian di Malaysia
3. Untuk menyelidik sama ada kelakuan pengguna (consumer behaviour) memberi kesan kepada kepuasan semasa pembelian dilakukan
4. Untuk memberi penambahbaikan dalam meningkatkan kepuasan pelanggan terhadap penjualan pakaian secara atas talian di masa hadapan.

**Apa yang pelanggan anda perlu lakukan?:**

Kajian ini terbahagi kepada **2 fasa**. Peringkat pertama memerlukan anda (responden) menjawab soal selidik pada masa anda membuat pembelian. Dalam fasa ini juga, anda akan ditanya sama ada sudi atau tidak untuk menyertai soal selidik kali kedua yang akan dijalankan 3 bulan kemudian dengan memberikan alamat email mereka. Tujuan alamat email diperlukan adalah untuk melakukan kesepadanan dengan soal selidik yang pertama kali diisi oleh mereka. Dalam fasa kedua ini, penyelidikan lebih tertumpu kepada pengalaman membeli (selepas mendapat produk). Jangan khuatir kerana email yang diberikan akan terus dipadam daripada sistem setelah pengumpulan data selesai.

Sila klik link <https://www.surveymonkey.com/s/esatisfaction> untuk menjawab soalan kaji selidik.

Segala kerjasama rakan-rakan untuk mempromosikan soal selidik ini dapat membantu saya melancarkan lagi proses pengumpulan data untuk kajian PhD saya dan dapat dipersembahkan di Melbourne. Terima kasih kerana sudi meluangkan masa membaca email saya. Jika anda ada sebarang pertanyaan, bolehla menghubungi saya di emel [misshella@gmail.com](mailto:misshella@gmail.com) atau [noorshella.chenawi@live.vu.edu.au](mailto:noorshella.chenawi@live.vu.edu.au).

Yang Benar

Noorshella Che Nawi

## Appendix 4b

### Email's letter and link survey (Post-purchase survey)

Assalamualaikum dan salam sejahtera

Terima kasih kerana memberikan maklumat email anda kepada saya. Untuk meneruskan kajian pada peringkat ke3 ini, anda perlu klik seperti di bawah

<https://www.surveymonkey.com/s/esatisfaction2>

Segala maklumat yang diberikan terutama alamat email anda akan terus dipadamkan sejeurus kajian penyelidikan ini selesai. Segala kerjasama dan sokongan yang diberikan saya dahului dengan ucapan terima kasih.

Terima Kasih

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## Appendix 5

### Final model point-of-purchase with $R^2$

